An evaluation of the City of Johannesburg's Igoli 2002 programme from 2003 to 2010

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Integrative Summary

Municipalities are the third level of government and are responsible for delivery of basic services to citizens. They carry the developmental mandate of government and are often the first point of interaction between government and citizens. Being at the front line of service delivery, the issue of fiscal stability of municipalities and their ability to deliver sustainable services is of grave importance (Carter & Ajam 2003). Unfortunately in a South African context most municipalities are not fiscally sustainable (Roos & Stander 2005).

In a study of 142 South African municipalities, it was found that poor collection of outstanding debt and irregular or wasteful expenditure were the biggest causes of fiscal stress (Roos & Stander 2005). In fact, in 2004 the difficulties appear to have reached crisis level (Lubbe & Roussouw 2005). The fiscal situation within municipalities was so bad that the South African Local Government Authority (SALGA) implemented a unit specifically to assist municipalities that were at "crisis point" (Roos & Stander, 2005 p. 165).

This research report focuses on the evaluation of Igoli 2002 which was a response to fiscal crisis within the City of Johannesburg metropolitan municipality when in 1997 the City of Johannesburg was declared insolvent. The research evaluated the long term sustainability of the Igoli 2002 programme to determine its success in addressing the issues of fiscal stress and crisis facing the municipality. The research also attempted to assess the applicability of international indicators of fiscal stress and crisis to the City of Johannesburg.

The research evaluated the Igoli 2002 programme via a financial condition analysis, against international indicators of fiscal stress and crisis and against a logic framework detailing the goals of the programme. The research found that ultimately, the Igoli 2002 intervention implemented by the City of Johannesburg was successful in improving the fiscal position and sustainability of the City.

In addition, indicators from predictive models of fiscal stress and crisis were found to be relevant to the City of Johannesburg.

Declaration:

I hereby declare that the content of this thesis is my own work completed under the guidance of my supervisors. Where information has been sourced from others it is accredited to the source via a reference within the text and also in the list of references.

…………………………
Zolani LCB Matebese

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List of acronyms:

ACIR	Advisory Commission on Intergovernmental Relations
ALCO	Assets and Liabilities Committee
CFO	Chief Financial Officer
COJ	City of Johannesburg
DRA	Division of Revenue Act
FTMS	Financial Trend Monitoring System
GAAP	Generally Accepted Accounting Practices
GFOA	Government Finance Officers Association
GRAP	Generally Recognised Accounting Practices
ICMA	International City and County Management Association
ICT	Information and Communications Technologies
IDP	Integrated Development Plan
IFRS	International Financial Reporting Standards
MFMA	Municipal Finance Management Act
MPAC	Municipal Public Accounts Committee
MPRA	Municipal Property Rates Act
MSA	Municipal Systems Act
MTEF	Medium Term Expenditure Framework
OECD	The Organization for Economic Cooperation and Development
PFMA	Public Finance Management Act
PPPFA	Preferential Procurement Policy Framework Act
SALGA	The South African Local Government Authority

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Section One: Evaluation Report

1. Abstract

This research report focuses on the evaluation of Igoli 2002 which was a response to fiscal crisis within the City of Johannesburg metropolitan municipality when in 1997 the City of Johannesburg was declared insolvent. The research evaluated the long term sustainability of the Igoli 2002 programme to determine its success in addressing the issues of fiscal stress and crisis facing the municipality. The research also attempted to assess the applicability of international indicators of fiscal stress and crisis to the City of Johannesburg.

A mixed methods analysis was conducted and the Igoli 2002 programme was evaluated via a financial condition analysis, against international indicators of fiscal stress and crisis and against a logic framework detailing the goals of the programme.

The research found that ultimately, the Igoli 2002 intervention implemented by the City of Johannesburg was successful in improving the fiscal position and sustainability of the City. In addition, indicators from predictive models of fiscal stress and crisis were found to be relevant to the City of Johannesburg. The research concluded by recommending that additional research be conducted into further adapting international indicators of fiscal stress and crisis to local conditions as an early warning system for municipalities.

1.1 Introduction

With Municipalities responsible for delivery of basic services to citizens and holding bonds valued at R12.3 billion (Moneyweb 2011), the issue of fiscal stability and possible defaults or insolvencies of municipalities is a grave one (Carter & Ajam 2003).

In a study of 142 South African municipalities, it was found that poor collection of outstanding debt and irregular or wasteful expenditure were the biggest causes of fiscal stress (Roos & Stander 2005). In fact, in 2004 the difficulties appear to have reached crisis level (Lubbe & Roussouw 2005). The fiscal situation within municipalities was so bad that the South African Local Government Authority (SALGA) implemented a unit specifically to assist municipalities that were at “crisis point” (Roos & Stander, 2005 p. 165).

This research report focuses on the evaluation of a response to fiscal crisis within the City of Johannesburg metropolitan municipality when in 1997 the City of Johannesburg was declared insolvent.

Johannesburg as a regional area has a geographical area of 1650 square kilometres, is home to 290 000 formal enterprises and 74% of corporate headquarters in South Africa (Segbers 2007). Economic activity within Johannesburg contributed 17% to National Gross Value Added (GVA), 15% to National employment and 9% of African GVA in 2005 (Segbers 2007).

The City of Johannesburg metropolitan municipality (City of Johannesburg) was created in the year 2000 by amalgamating five geographically and racially based municipalities into a single “Unicity” (Allan, Gotz & Joseph 2001, p.5). The municipality employs 30 000 workers and provides an array of services to about 3 900 000 citizens (COJ 2010; BMR 2009).

The City of Johannesburg projected expenditure of R27 Billion for the 2010 fiscal year and is responsible for regulating economic development policy, City safety, electricity

and water distribution, sanitation and public health amongst other mandated public goods.

All of the above factors position the City of Johannesburg to play an indispensable role in the lives of its constituents and makes the City of Johannesburg strategically important to South Africa.

Public finance can be described as the financial and economic activities related to "governmental spending, taxing and borrowing decisions" (Finkler, 2010 p. 3). This description also contends that the main function of government is to provide public goods and services to a constituency with income generated from the citizen. However, at local government level in a number of countries, there appears to be increasing difficulty generating sufficient revenue to effectively provide these public goods and services (Kopanyi, Wetzel & El Daher 2004).

Research has shown (Carter & Ajam 2003; Watson, Handley & Hassett 2005) that poor management practices in public administrations such as municipalities, imprudent policies and systems failures combine with socioeconomic factors such as declining tax revenue and rising per capita service delivery costs to cause fiscal stress and crisis.

It is therefore imperative to study the conditions that cause these instances of fiscal stress and crisis in municipalities in order to determine indicators that signal possible fiscal stress and crisis in the future and to improve overall municipal financial health.

In this research report the sustainability of the institutional response to fiscal crisis put in place by City of Johannesburg was evaluated. An attempt was also made to assess the applicability of the causal factors of fiscal stress and crisis as identified in previous research to the City of Johannesburg. The research focused on the period from 2003 when the intervention was concluded to 2010 after the City of Johannesburg had again faced a situation of fiscal stress.

1.2 Literature Review

The research focused on evaluating the success of a programme heavily focused on a fiscal turnaround in the City of Johannesburg metropolitan municipality. The literature review therefore focuses on providing a concise overview of the relevant literature regarding the field of public finance and the concepts of fiscal stress, fiscal crisis and financial condition analysis.

Within the South African context; fiscal sustainability and the generation of surplus fiscal resources is a primary aim of government in order to expand the delivery of services to all citizens of the country (Beall, Crankshaw & Parnell 2002). This is especially significant given the country's past and the social and geographic realities of being an emerging economy

The organization for Economic Cooperation and Development (OECD) describes public financial management as "the achievement of overall fiscal discipline whilst allocating resources to priority needs, efficient and effective allocation of public services" (OECD 2001, p.8). One may further simplify that description to suggest that public finance can be described as the "financial and economic activities related to governmental spending, taxing and borrowing decisions" (Finkler 2010, p. 3).This description by Finkler (2010) also contends that the main function of government is to provide public goods and services to a constituency with income generated from the citizen.

A key concept in public finance and a significant differentiator between public and private sector financial management is that in the private sector, profits are the organization's goal (Finkler 2010). In public institutions, finances are a means to an end; that end being the enaction of policies and programmes approved and prioritized to enable the provision of public and social goods (Knubel 2009; Finkler 2010).

1.2.1 Legislative framework

The management of public funds is highly regulated in South Africa (Madue 2007). The Constitution of the Republic in sections 215 and 216 specifies that public finances must be managed in a transparent, systematic, standards based, uniform and economically viable manner for the benefit of the public (Republic of South Africa 1994). Flowing from this, the Government has legislated specific and detailed practices to give effect to this constitutional requirement.

The Public Finance Management Act (PFMA) and the Municipal Finance Management Act (MFMA) are the prime legislative tools to give effect to the constitutional requirements regarding public finance.

The PFMA; Act 1 of 1999 was enacted specifically to modernise and regulate South African public financial management and apply a uniform set of concepts, terminologies and practices to this area (Madue 2007). The act repeals the provincial and national exchequer acts and the reporting by public entities act of 1992.

The act firstly recognizes the move from financial controls which were prevalent in the Generally Recognised Accounting Practices (GRAP) to the Generally Accepted Accounting Practices (GAAP) which focuses on financial management (Madue 2007). The changes from GAAP to International Financial Reporting Standards (IFRS) which occurred in 2005 emphasizing such aspects of function over form accounting, effective control and reclassification of operational versus financial leases are also reflected in the wording of the PFMA which means that the act and by extension the institutions that it regulates are compliant with the most modern and rigorous accounting standards currently in practice (Du Plooy et al. 2005).

The MFMA contains all the provisions of the PFMA but differs from the PFMA in that it is specific to municipalities and deals not only with financial management issues but also

separation of powers between the political and administrative spheres of the municipality.

1.2.2 Fiscal Stress and Crisis

Martin (1982, p.1) defined fiscal stress as the existence of “an imbalance between revenues and expenditures, not due to seasonal fluctuations in revenue collections, where the municipality is living beyond its means and is fiscally strained”. Martin (1982) is echoed by Pagano and Moore (1985, p. 23) who define the condition as “an imbalance between a city’s revenue-raising capacity and its expenditure needs”.

Scorsone and Bateson (2012, p.2) suggested the definition of fiscal crisis as “the existence of a scenario where a municipality is likely to be unable to raise revenues that are equal to or exceed expenditures”. The MFMA defines insolvency of a municipality as a state when “The municipality is either in serious or in persistent material breach of its financial obligations or obligations to provide basic services due to a crisis in its financial affairs, or the municipality admits that it is unable to comply with its obligations or to meet its financial commitments” (Republic of South Africa 2003, p.132).

Given the definition by Martin (1982, p.1) above, one key aspect to note regarding fiscal stress is the issue that the imbalance between revenues and expenditure is: “a state not due to seasonal fluctuations in revenue collection or other singular events”. This then suggests that the state of fiscal stress is one that is consistent over multiple accounting periods (Kloha, Weissert & Kleine 2005).

Research by Martin (1982), Ladd and Yinger (1991), Rubin (1982) and Howell and Stamm, (1979) shows that the causal factors of fiscal stress are numerous and varied. When faced with a scenario of fiscal stress studies show; Rose and Page (1982), Howell and Stamm (1979), Khan and Hildreth (2004) that there are typically two responses favoured by officials. Either attempts to raise additional revenues are initiated or severe cost cutting measures are utilized.

In each case citizens are affected; in the case of additional revenue the issues of willingness to pay and carrying capacity of the revenue base arise whilst cost cutting almost invariably leads to a decrease in the scope or the quality of services provided to the citizens (Deal 2007).

In extreme examples the revenue base can refuse to accept the increases (Beall, Crankshaw & Parnell 2002) or engage in service delivery protests to demand that the municipality provide the services it is mandated to; instances of which are becoming increasingly common (McDonald & Pape 2002). In each of these instances, erosion of goodwill between the municipal officials and the citizens can be observed (McDonald & Pape 2002) and it appears likely that the increase of fiscally stressed municipalities will erode goodwill further.

The situation at the City of Johannesburg in 1997 highlighted in the introduction satisfies the criteria for both fiscal crisis as defined by Scorsone and Bateson (2012) and the MFMA definition of insolvency (Republic of South Africa 2003). However, the researcher was not able to find any data to verify whether there was a situation of fiscal stress prior to the crisis and if so how long it may have lasted.

1.2.3 Financial condition analysis

Berne describes financial condition analysis as: "the probability that a government will meet both (a) its financial obligations to creditors, consumers, employees, taxpayers, suppliers, constituents and others as they become due and (b) its service obligations to constituents both currently and in the future" (1992, p.7).

Because a municipality has a number of external factors that influence its ability to generate and expend revenue, analysis of financial statements does not offer a holistic view of the fiscal condition of that municipality. As such, the financial condition analysis has become the standard method for assessing the fiscal condition of municipalities and other public institutions (Finkler 2010).

The financial condition analysis expands the assessment of municipal fiscal conditions by adding factors such as revenue base, expenditures per capita, infrastructure states, management capacity, ability to borrow and economic and political climates (Granof & Wardlow 2003). Granof and Wardlow (2003) created a model indicating factors to consider when analysing a municipality's fiscal condition

1.3 Research Method

1.3.1 Purpose of research

The research sought to evaluate whether the Igoli 2002 organizational response implemented by the City of Johannesburg after 1997 was successful in improving fiscal health over the period of the study. In addition, the research aimed to assess the applicability of internationally developed models showing predictive factors leading to the states of fiscal stress and crisis to the City of Johannesburg. If the predictive factors are applicable it may mean that localization of these international models is possible which may assist South African municipalities to intervene before crisis points are reached.

1.3.2 Research methodology

For this research project, the evaluation research methodology was utilized. This type of research is appropriate when determining the effectiveness of a particular program within a social context according to Babbie (2008). The intent of this specific project was not to define a needs or cost-benefit assessment but rather to produce a program evaluation to determine the effectiveness of the Igoli 2002 organizational response implemented by the City of Johannesburg after the insolvency event of 1997.

A summative evaluation was chosen as the method of evaluation for Igoli 2002. Summative evaluations can also be described as outcomes assessments or ex post evaluations. Such evaluations occur post implementation and assess the impact of the programme, intended and unintended outcomes and goal achievement with the rigour and objectivity required to make a value judgement (Scriven 1980; Calder 1995).

This type of research is concerned with identifying the effects and results of the program once implementation is complete and evaluating the results against the goals of the programme or other agreed standards set out during the program design (Wollmann 2006; Owen & Rogers 1999). This is generally termed the classic variant of evaluation research and is the most widely used (Wollmann 2006).

A summative evaluation was appropriate for this research project as it would be able to evaluate the data pertaining to fiscal sustainability in the city of Johannesburg and produce a result to either validate or invalidate the claims of Igoli 2002's success by the then Mayor Amos Masondo.

1.3.3 Research questions

The research examined and evaluated the interventions (Igoli 2002) made by the City of Johannesburg after the 1997 insolvency event and was guided by the following questions:

1. Was the Igoli 2002 organizational response implemented by the City of Johannesburg after 1997 successful in improving fiscal health over the period of the study?

2. Are causal indicators of future fiscal stress and crisis that have been identified in previous research applicable to the City of Johannesburg?

The first research question sought to evaluate the success of the changes to policies, practices and systems put in place by the City of Johannesburg as part of Igoli 2002 after the insolvency event of 1997. In order to do this the research needed to identify the institutional response to the insolvency event, categorise the various aspects of the response and define measurable indicators to track over the period of the study.

The indicators selected for tracking were then benchmarked against accepted practices for public financial management and quantitative indicators were analysed for positive or negative trends over the period of study.

The second question sought to assess the applicability of internationally developed models showing predictive factors leading to the states of fiscal stress and crisis to the City of Johannesburg. If the predictive factors are applicable it may mean that localization of these international models is possible and the research may be deemed to have added value to the research area.

1.3.4 Significance of the study

The purpose and significance of the research was to analyze the organizational response; Igoli 2002, to an event of fiscal crisis; the insolvency of 1997. This was done in order to determine the sustainability of the Igoli 2002 programme over time as fiscal stress and crisis can recur dependent on the underlying causes (Forrester & Spindler 1990). In the case of the City of Johannesburg, another incident of fiscal stress occurred in 2009.

The research also sought to assess the applicability of predictive indicators of fiscal stress and crisis to the City of Johannesburg. If the predictive factors are applicable it may mean that localization of these international models is possible and the research may be deemed to have added value to the research area

1.3.5 Research Limitations

The research attempted to evaluate the success of the Igoli 2002 intervention over time and to assess the applicability of predictive indicators leading to financial stress and crisis but was limited in that it does not present resolutions to financial stresses or crises. In addition, whilst the data sought was public data, given the period under study; the age of the data and its sensitivity presented challenges in data collection. The main challenge was locating officials who had knowledge of the period from 1997 until 2002 and were willing to participate in the research.

1.4 Results

1.4.1 Institutional Response

In mid 1997, the City of Johannesburg "had to concede that it could not pay its creditors and was technically insolvent" (COJ, 2006 p.11). Multiple factors led to this state of affairs: amounts owing to the City stood at R2.5 billion; there was no surplus, significant overdrafts and multiple creditors (Beall, Crankshaw & Parnell 2002). In addition, there was a tax revolt by the revenue base, a lack of strategic planning to address the situation and inadequate fiscal management and budgeting (Beall, Crankshaw & Parnell 2002).

This situation was dire, as when presented with a R300 million bulk electricity bill by Eskom, the City could not honour it. In response, the City implemented a new strategy to address the issues facing the organization.

The institutional response of the City of Johannesburg to the insolvency event in 1997 was to introduce the "Igoli 2002" plan which had the following core components (Allan, Gotz & Joseph 2001; COJ 2006):

Organizational review: The first step of the institutional response was to merge the 8 existing councils into a single "unicity" to facilitate better administration and management and reduce duplication of roles, systems and policies (Allan, Gotz & Joseph 2001; COJ 2006).

The organizational review also created the post of the Executive Mayor changing the mayoral post from a largely ceremonial one into a role with wide executive and decision making powers (Allan, Gotz & Joseph 2001; COJ 2006). Out of all the above however, perhaps the single most impactful measure taken was the creation of a centralised budget and finance department. This allowed for a single point of management and control of the City of Johannesburg's cash flows, policies and practices (Allan, Gotz & Joseph 2001; COJ 2006).

Financial review: The key goals of the financial review imposed by Igoli 2002 were to firstly eradicate the accumulated deficit and then to produce a single operating and capital budget that reduced wastage and operating costs whilst improving efficiencies and at the same time ensuring service delivery to targeted areas (Allan, Gotz & Joseph 2001; COJ 2006).

Systems review: The combination of disparate billing and accounting systems and policies was the main goal of the systems review. The Igoli 2002 plan launched a separate project tasked only to integrate the billing and database systems and policies with a view to establishing congruence in the billing and accounting process and increasing ratepayer confidence (Allan, Gotz & Joseph 2001; COJ 2006).

Oversight review: A significant aspect of Igoli 2002 was the establishment of political committees to monitor all aspects of the running of the administration. Committees were created to monitor revenue collection, assets and liabilities, organizational risks, monetary policy and accounts (Allan, Gotz & Joseph 2001; COJ 2006).

Asset Privatization: Lastly the Igoli 2002 plan privatized certain assets that were deemed outside of the metro's core of services. Metro gas and the Rand airport were sold as was non strategic land and housing stock. In addition, certain departments such as the ICT and fleet management departments were outsourced along with the fixed assets associated with these departments (Allan, Gotz & Joseph 2001; COJ 2006).

In summary the Igoli 2002 programme had the following goals:

- Integrate the five councils into one political and administrative entity
- Reduce the accumulated deficit and return the organization to fiscal health
- Integrate and standardize the fiscal policies
- Integrate and standardize the financial systems
- Introduce extensive governance and transparency
- Privatize non strategic assets and functions

- Improve service delivery mechanisms

The Institutional response described above was hailed as a success as by 1999, although the programme had not concluded; the deficit had been eradicated, the administrative structures were overhauled and increased transparency and governance was provided by the political leadership (Allan, Gotz & Joseph 2001; COJ 2006). However, the researcher contends that to truly measure the success of the initiative it must be tracked over time.

A sentence contained in the book released by the municipality defining the intervention supports this: “without continued, realistic financial planning and the necessary fiscal discipline, Johannesburg could find itself in a similar crisis again” (Allan, Gotz & Joseph 2001, p.194). To measure the levels of success the researcher utilized the following evaluation criteria:

1.4.2 Evaluation of Fiscal health between 2003 and 2010

Babbie (2008) notes that when performing evaluation research, it is critical to have an agreed measurement as the dependent variable before beginning the research. As noted earlier, the research used the used elements of the financial condition analysis as the dependent variable for the quantitative component. Fiscal indicators were also selected to give context to the quantitative data. The full list of indicators is detailed in section three.

The research also analyzed the primary predictive models and research dealing with fiscal stress and crisis by Kloha, Weissert and Kleine (2005) Park (2004), Watson, Handley and Hassett (2005), Baldassare (1988), Martin (1982), Ladd and Yinger (1991), Rubin (1982), Howell and Stamm (1979) and Scorsone and Bateson (2012) to find indicators that were significant and could possibly be applicable to the City of Johannesburg. A logic framework was also created in order to assist with the holistic evaluation of Igoli 2002 based on the identified goals of the programme.

The data from the document analysis, the quantitative analysis and the indicator analysis was used to answer the question of whether the goals listed above were achieved in the short, intermediate and long terms.Detailed information on the indicators used both in the following tables and in the logic framework is available in section 3 of the report from pages 89 to 99.

Table 1.1: Fiscal indicators for the City of Johannesburg[1 2 3]

Indicator	2003	2004	2005	2006	2007	2008	2009	2010
Collection rate	90%	93%	90%	92%	87%	85%	93%	88%
Debt per capita	R1555	R2277	R1548	R1912	R2122	R2663	R2898	R3145
Employee expenses per capita	R991	R950	R805	R1200	R1113	R1355	R1552	R1674
Total expenditure per capita	R3444	R3709	R3500	R4516	R3747	R5139	R5956	R6852
Total expenditure growth	8%	9%	13%	5%	5%	15%	14%	16%
Total revenue growth	13%	19%	11%	7%	7%	15%	24%	12%
Annualized inflation rate	6%	1%	3%	5%	7%	12%	7%	4%
Total revenues per capita	R3521	R4109	R3797	R5055	R4194	R5330	R6723	R7449

1: The City of Johannesburg financial year runs from July of one year until June of the next. The research classified the financial years as the year beginning in the calendar year i.e.: The 2003 financial year is the 2003/2004 financial year in the City of Johannesburg's financial records.

2: Figures in the above tables have been rounded off to the nearest whole number. Ratios are expressed in percentages; therefore 0.64:1 is expressed as 64% and 2.02:1 is expressed as 202%.

3: Analysis of the results is available from pages 19 to 25

Table 1.2: Fiscal indicator descriptions

Indicator	Description
Collection rate	Calculated by analyzing the actual receipts of income against the billed amounts
Debt per capita	Calculated by dividing the short and long term debt by the population after subtracting cash and equivalents
Employee expenses per capita	Calculated by dividing the employee costs of the municipality by the population
Total expenditure per capita	Calculated by dividing the total expenditure of the municipality by the population
Total expenditure growth	Calculated by subtracting the expenditure in the latest accounting period from the expenditure of the previous period
Total revenue growth	Calculated by subtracting the revenue in the previous accounting period from the revenue of the latest accounting period
Annualized inflation rate	Annual rate of inflation captured by Statistics SA
Total revenues per capita	Calculated by dividing the total revenue amount by the population

Table 1.3: Fiscal ratios for the City of Johannesburg

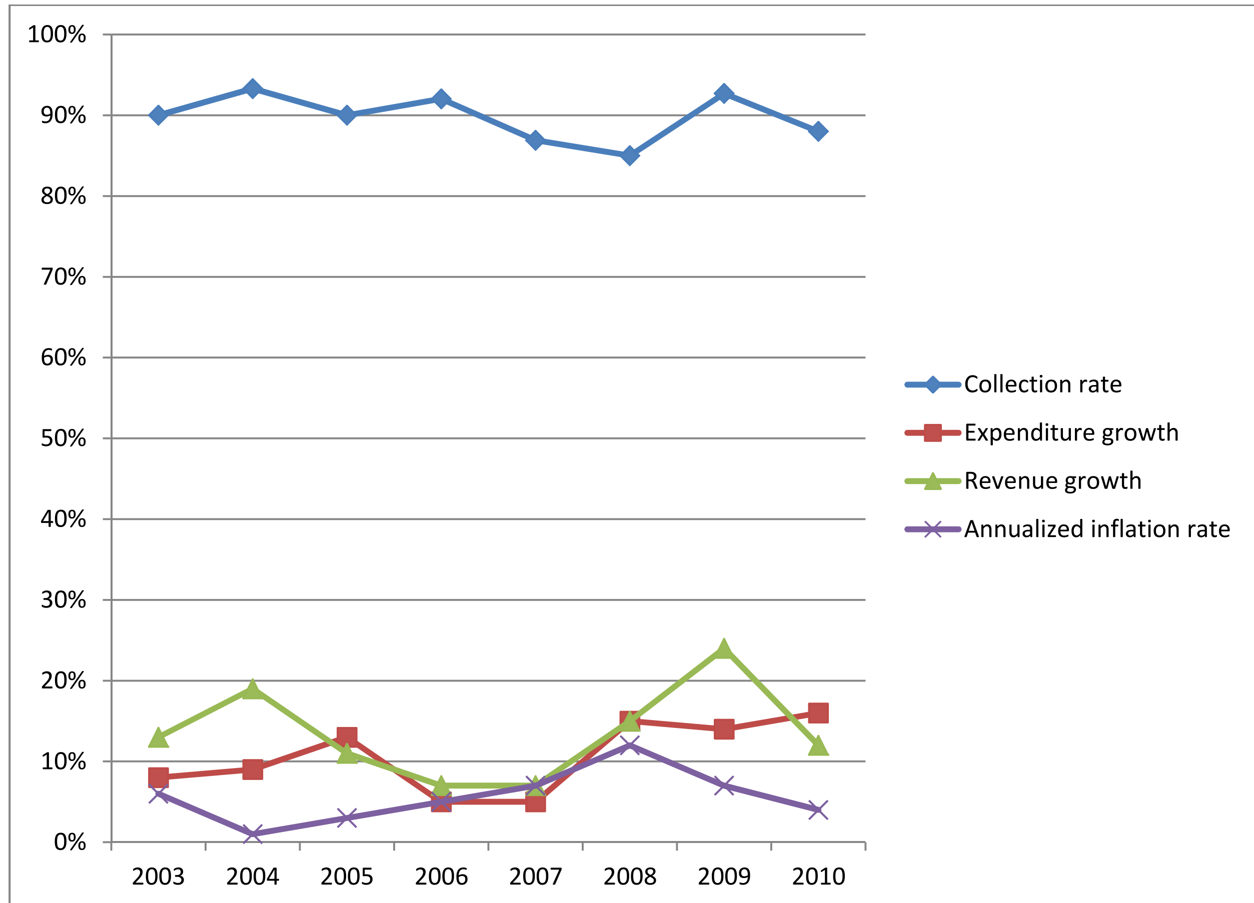
Ratio	2003	2004	2005	2006	2007	2008	2009	2010
Cash Flow/Total Debt	192%	164%	236%	257%	209%	186%	202%	235%
Current assets/Current liabilities	104%	88%	106%	84%	71%	66%	61%	78%
Current debt/Total debt	10%	9%	13%	2%	2%	12%	4%	3%
Debt/Asset	38%	38%	25%	22%	26%	26%	25%	25%
Debt/Revenue	44%	55%	41%	38%	51%	49%	54%	42%
Employee expenses/Operational expenses	28%	26%	23%	27%	27%	27%	26%	25%
Interest coverage	20	21	19	18	20	16	15	18
Interest/Expenditure	5%	5%	6%	6%	6%	6%	7%	6%
Quick ratio	103%	86%	105%	82%	69%	64%	61%	74%
Solvency ratio	117%	164%	187%	198%	202%	195%	185%	181%
Total expenses/Total revenues	98%	90%	92%	89%	89%	96%	88%	91%

Table 1.4: Fiscal ratio descriptions

Ratio	Description
Cash Flow/Total Debt	Calculated by dividing the organization's cashflows by long and short term debt
Current assets/Current liabilities	Calculated by dividing the organization's current assets by its current liabilities
Current debt/Total debt	Calculated by dividing the organization's current debt by its total debt
Debt/Asset	Calculated by dividing the organization's assets by its debt
Debt/Revenue	Calculated by dividing the organization's revenue by its debt
Employee expenses/Operational expenses	Calculated by dividing the organization's total expenses by its employee expenses
Interest coverage	Calculated by dividing the organization's earnings before interest and taxes by the interest amount
Interest/Expenditure	Highlights the percentage of expenditures that are put towards paying off interest on debt finance
Quick ratio	Calculated by adding cash and near cash items and dividing by the current liabilities
Solvency ratio	Calculated by adding the organization's post tax net income and depreciation and dividing the result by the long and short term liabilities
Total expenses/Total revenues	Calculated by dividing the organization's revenue by total expenditure

Discussion of quantitative results:

Figure 1.1: City of Joburg revenue indicators between 2003 and 2010



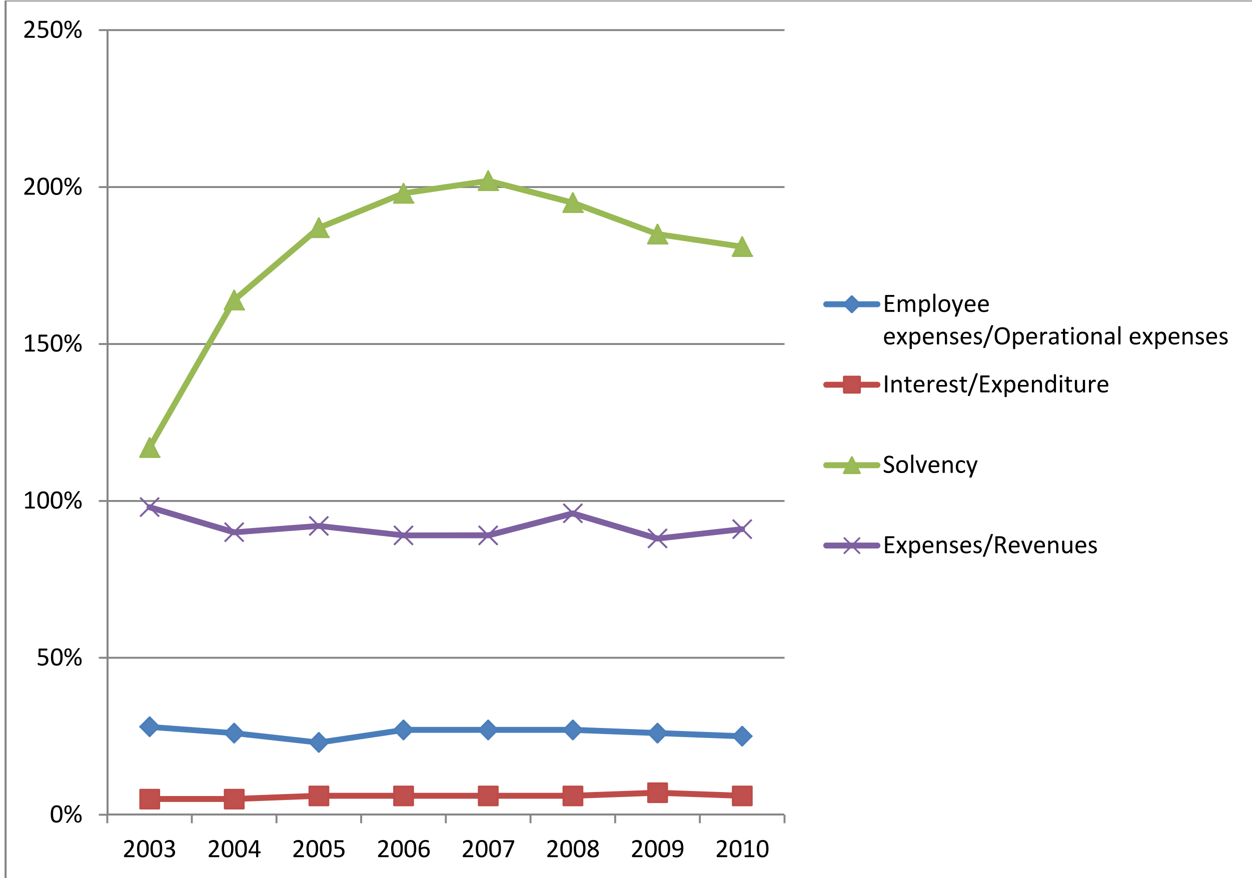
Revenue collection is of critical importance to a municipality. Often, incidences of fiscal stress and crisis may be linked directly to issues with revenue collection (Forrester & Spindler 1990). It is important to note that a significant contributing factor to the insolvency event of 1997 was the tax revolt by ratepayers (Beall, Crankshaw & Parnell 2002). A tax revolt also occurred in 2009 leading to fiscal stress (Mawson 2011).

Revenue collection is a factor that is within the municipality's control as it is linked to credit management and collections policies set by the municipality (Forrester and Spindler 1990). Efficiency improvements in this area therefore are both impactful and less difficult to implement than revenue enhancements.

The collection figures in the results for the City of Johannesburg from 2003 to 2010 indicate that the city was successful in arresting further development of the symptom of non payment. A consistently high collection rate of over 90% with a flat trend line through the period of the study suggests good collections and credit management sustained for the period of measurement.

The City's revenue growth and expenditure growth tracked each other closely for the period of measurement and with the exception of 2006 and 2007 both revenue and expenditure growth indicators were consistently above annualized inflation. Seeing as employee expenses and interest costs remained fairly constant, the closeness of these indicators suggests that the City utilized the additional revenues in improving service delivery.

Figure 1.2: City of Joburg expense ratios between 2003 and 2010



The City's expenditure to revenue indicator affirms the previous conclusion drawn from the revenue and expenditure growth indicators. Finkler (2010) contends that administrators in public entities are more concerned with delivery of services than generation of surpluses and as such expenditure is likely to match revenues generated.

The expense indicator in this instance bears out this contention. The public financial manager's attitude towards profit noted earlier in the literature review is also verified by this indicator as expenditure only lags revenue by a small percentage over the period of study (Knubel 2009; Finkler 2010).

The City has also done well to ensure expenditure on employee related costs is kept well within the 30% guideline recommended by the National Treasury (National Treasury 2001-2008). This indicator also trended almost flat throughout the period of study suggesting sustained management of this expenditure item.

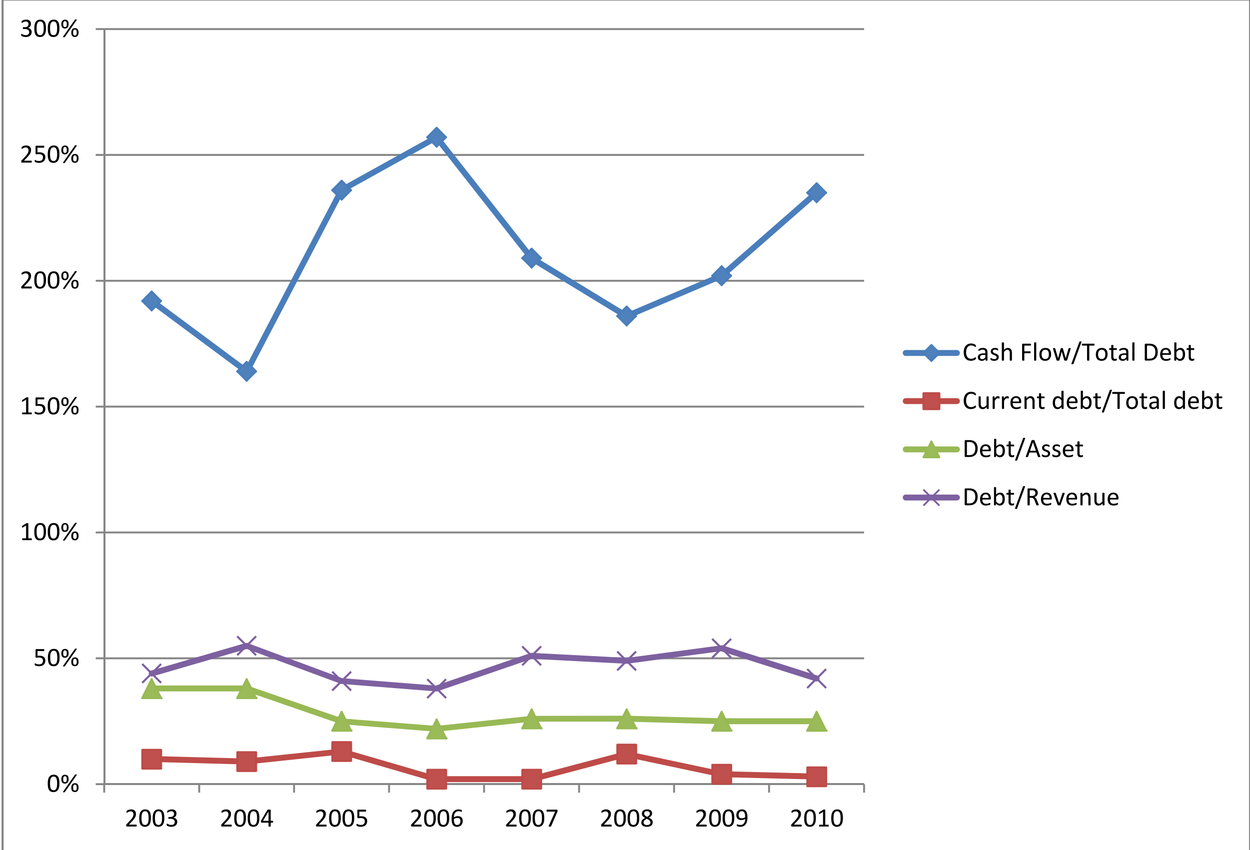
The interest expense indicator also trended flat throughout the period of study. This is especially interesting as the City's debt burden increased significantly from R4.9 Billion in 2003 to R12.2 Billion in 2010. This suggests prudent debt management and accurate forecasts of revenue growth.

The growth in the burden of debt however may be seen as worrying as funds raised from debt financing should be expended on capital assets with a long life i.e. road networks (Coombs & Jenkins 1994; Musgrave 1963). If the expenditure is directed elsewhere it raises questions of intergenerational inequity wherein future taxpayers continue to pay for an asset that is not in use.

The solvency indicator revealed a slow upward trend to a high of 202% in 2007 before trending downward to settle at 181% in 2010. The ratio is very high compared to solvency ratios seen in private finance (Finkler 2010) but this is explained by the extremely high revenues generated by the City of Johannesburg. In this instance, the long term stability of the City looks very positive.

Overall, the expense and solvency indicators tracked by the study revealed a sustained, balanced and prudent approach to expenditure over the period. This is in sharp contrast to the events leading to the 1997 insolvency event.

Figure 1.3: City of Joburg debt ratios between 2003 and 2010

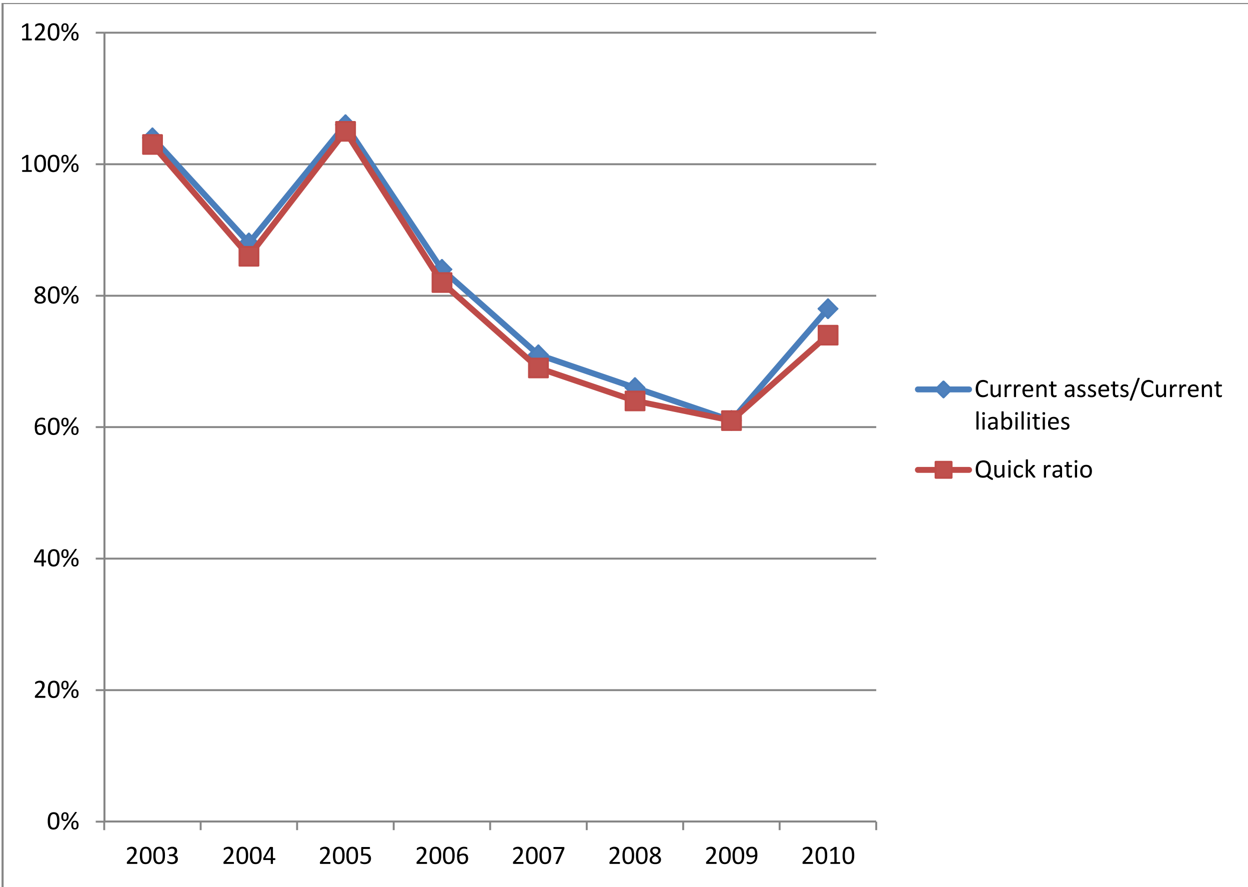


As noted in the previous section, the interest cost was well managed through the period of the study. This conclusion is borne out by the low percentage of current to total debt. This approach is in line with best practice in municipal debt management whereby prudent fiscal management rather than regulatory compliance is the main driver of budget responsibility (Dvorakova 2006; Dafflon & Beer-Toth 2009).

The debt to asset ratio declined slightly from 2005 but trended flat through to 2010. The debt to revenue ratio climbed above 50% in some instances but appeared on a downward trend at the close of the period of study.

An important point to note is the ratio of cash flow to total debt which was fairly volatile over the period of the study but still never fell below 160%. This shows that the City generated significant cash flows over the period and as this has been suggested as the single most important ratio determining fiscal health (Correia et al. 2007); the indicator suggests that the City was in fact very healthy from a fiscal perspective throughout the period of measurement.

Figure 1.4: City of Joburg asset ratios between 2003 and 2010

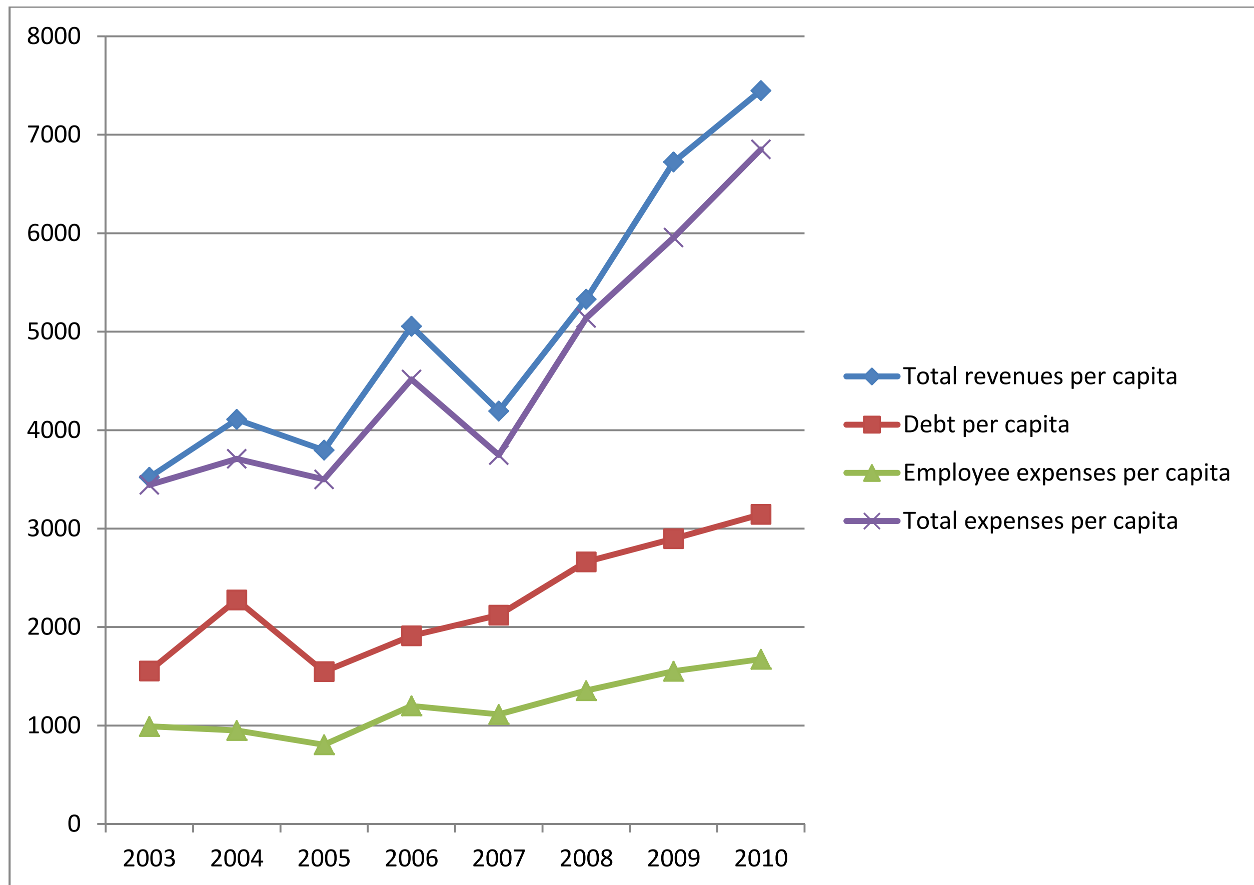


One key factor revealed by the research was that the current and quick ratios declined significantly over the period of the study. The downward trend bottomed out at 61% in 2009 and was quickly improved to 78% by 2010.

This is not in line with National Treasury guidelines which suggest a minimum current ratio of 120% (National Treasury 2001-2008) and best practice which suggests a ratio of

198% (Swanevelder 2005). As such even the improved ratio in 2010 is still much less than the guideline and best practice. This however may be more illustrative of the cash flow management practices in place than a liquidity problem especially when viewed in line with the solvency and cashflow indicators discussed earlier.

Figure 1.5: City of Joburg per capita indicators between 2003 and 2010



The per capita indicators were volatile over the period of measurement. A significant spike in revenue and expenditures occurred from 2007 to the close of the measurement period in 2010. The sharply rising revenue per capita indicator may be cause for concern however. Especially given the fact that not all of the City's residents pay rates and taxes; the actual figure for taxpaying residents per capita is likely higher than the top indicator of R7449 in 2010.

This issue was also raised in the interviews by interviewee J who noted:

> *"I am worried about the ability of ratepayers to keep absorbing tariff increases. We do require more revenue but ratepayers are stretched already"*

The revenue per capita figure is ameliorated by the equitable share grant which forms part of the City of Johannesburg's revenue (COJ 2009) but it is still concerning in terms of the carrying capacity of the City's revenue base. It is unclear if this is a strategic priority for the City however; to quote Interviewee K:

> *"Not to put it so bluntly but the City is in a naturally monopolistic position. The ratepayers are required by law to comply with the rates and services charges that they are levied with. Obviously as the City we are cognizant of those who cannot afford to pay but there are mechanisms to address that"*

The researcher suggests that the City of Johannesburg needs to address this issue before it becomes critical, especially given the incidences of tax revolt in the past (Allan, Gotz & Joseph 2001) and the current reactions of the public to additional taxes such as e tolls (D' Angelo 2011).

The debt per capita indicator also showed a steady upward trend but as noted in the previous section the interest payment, debt to revenue and current debt to total debt ratios have remained constant showing that borrowing is being tightly managed.

In sum, the quantitative results of the study show that post 1997, the City of Johannesburg has managed its finances in a prudent, balanced and responsible manner.

The figures suggest that the intervention made by Igoli 2002 was successful and sustained over the period of measurement. Notwithstanding that, the ratios suggest that care needs to be taken to ensure continued fiscal health into the future.

The emerging themes from the in-depth interviews are briefly presented in this section. The interviewees were referred to as Interviewee A - K in order to keep identities confidential. All interviewees were senior officials in the finance functions of the City of Johannesburg with knowledge of the events between 1997 and 2009. The interview guide is included as Annexure A with the list of interviewees included as Annexure B. The interview guide was divided into three broad areas:

1. Current fiscal issues and risks facing the City of Johannesburg.
2. Historical fiscal challenges faced by the City of Johannesburg in 1997/2009.
3. Mechanisms and processes to recognize and address fiscal challenges.

These areas of focus were selected in order to:

- Understand the current fiscal risks facing the city and understand the context behind what is shown in the quantitative analysis. This assists with evaluating the long term impact of Igoli 2002.
- Understand the underlying reasons which led to the crisis in 1997. This assists with the contextual understanding of the incidence of fiscal stress in 2009.
- Understand what mechanisms have been implemented to sustain fiscal health into the future.

Current fiscal issues and risks facing the City of Johannesburg

The interviewees raised a number of concerns regarding the current fiscal sustainability of the City of Johannesburg: Political transition, policy uncertainty and systems issues were highlighted as being amongst the key issues. In addition credit rating agency downgrades and the world economic crisis were cited as factors that could become significant in terms of their knock on effects:

Interviewee A notes:

> *"Obviously right now a lot of capital projects are funded by debt. Investors rate the City on a number of factors including political stability at national and local*

level, liquidity, track record and current debt burden. The recent downgrade of the City by the Ratings agencies has been a problem for us"

Interviewee D agrees:

"In the absence of a large bond market for municipalities we have to be extremely careful with our working capital management."

Businesses have also been noted commenting that doing business in Johannesburg is becoming very expensive. A significant percentage of the residents of the City are also reaching retirement age. To quote interviewees G and H:

Interviewee G:

"A large portion of the revenue base is business; what we call platinum customers. In recent engagements a number of them have been complaining that the City is becoming very expensive to do business in. In fact some of them actually took us to court over their recent valuations and the associated rates that would be levied"

Interviewee H:

"We are concerned that most or the residential revenue base consists of lower income ratepayers. The higher income residential customers are also approaching retirement age and this might have the effect of changing the profile of our revenue base in a few years time."

The changes between the RSC levies and the equitable share grant were also noted as being a serious risk as the two intergovernmental funding structures are not aligned and the new structure left a funding gap.

The segmentation of the budgeting and revenue collection functions was also noted as a possible risk as the budgeting function is not able to influence collections. Interviewee E noted that one of the primary goals of Igoli 2002 was to centralize the various finance

functions to allow for more cohesion but noted “this seems to be falling away as the organization keeps splitting functions into separate departments and we are losing efficiencies”

These risks appear to be mitigated currently by the fact that the City of Johannesburg does not have natural competitors as an organization and management structures appear to be taking cognizance of the environmental risks noted above and formulating responses to them.

Historical fiscal challenges faced by the City of Johannesburg in 1997/2009

The challenges the City faced in 1997 and 2009 can be traced back to severe organizational and systems inefficiencies according to the interviewees that participated in the research and had knowledge of the periods.

The fiscal crisis in 1997 was brought to a head by the non payment by the City of Johannesburg of bulk electricity bills. This however was just a symptom (Allan, Gotz & Joseph). The underlying issues were the lack of organizational synergy from political, fiscal and administrative perspectives, Interviewee I notes: “By 1997 everything was a mess. Trying to get cooperation between the regional councils and the metropolitan council was impossible”

Interviewees C and F identified process incompatibility, non aligned systems and the tax revolt as major issues: According to interviewee C:

> *“You had in 1997 one structure that was responsible for payments and four other structures responsible for collecting revenues. The systems did not talk to each other, the people did not necessarily talk to each other and there were all kinds of organizational dysfunction. It was fundamentally flawed.”*

Interviewee B also indicated that:

> *"There was no incentive for the regional councils to balance their budgets as this was done collectively. Everybody just spent and spent according to their revenues and capital allocations thinking they would be covered elsewhere. It was crazy!"*

Interviewee F notes:

> *"It was very difficult to manage at that time. You really had to rely on interpersonal relationships to get things done. We were not helped by the politicians who then decided to raise the rates in the more affluent areas by up to 200%. The Citizens would not accept that and they just refused to pay."*

From the above comments and the literature from the period it appears that the fiscal crisis of 1997 was inevitable. Poor organizational design incorrectly allocated revenue and budgeting functions. Incompatible systems and policies made organizational management clumsy and the lack of transparency and governance added to the problem (Allan, Gotz & Joseph). The above issues were exacerbated by a clear case of moral hazard where the regional councils were able to overspend without consequence and subsequently did so. When the tax revolt happened and caused a sustained decline in revenues it meant that at some point fiscal crisis was inevitable.

The City of Johannesburg in 1997 displayed all the indicators of fiscal crisis as defined in the research: Abrupt economic change from the tax revolt, inadequate fiscal controls and management, political changes and policy uncertainty and crucially the inability or unwillingness to address the underlying causal issues of fiscal crisis (Park 2004; Scorsone & Bateson 2012).

The billing system issues experienced by the City of Johannesburg received a lot of blame for the 2009 liquidity risks. Changes from an antiquated system to the new SAP system (code named Phakama) were not properly managed and led to major inconsistencies in customer data and incorrect billing on an industrial scale.

Popularly termed the “Johannesburg billing crisis” this issue led to a significant and sustained decrease in revenue as ratepayers lodged claims and queries and would not pay amounts due until their claims were addressed (Mawson 2011; Huddleston 2011).

To quote interviewee H

> *“This Phakama issue was a serious problem for collections. Ratepayers were refusing to pay and you cannot blame them when the bills were so obviously wrong.”*

In addition to the systems issues, the interviewees noted that the liquidity ratios had been consistently poor over multiple accounting periods and that the budgeting function did not take this into account for subsequent periods.

Interviewee J notes:

> *“If you know you have a liquidity gap then you must budget accordingly in order to resolve it. We did not do that.”*

The additional capital spending on world cup infrastructure in readiness for the 2010 world cup was an additional factor in 2009.

Interviewee K notes:

> *“We had massive capital projects that we needed to conclude. This was not a problem by itself but the issue was that National government was supposed to share the costs and they were very slow to transfer the funds for these.”*

The issues in 2009 that caused a situation of fiscal stress can be summed up as systems inefficiencies leading to a tax revolt. Coupled with extraordinary capital spending it is easy to understand how the situation arose.

Again and as with the incidence of crisis in 1997; this is in line with the previous research done (Martin1982; Ladd & Yinger 1991; Rubin 1982; Howell & Stamm 1979) and the indicators in the following section which suggest that instances of fiscal stress and crisis can be predicted beforehand and require a response from the officials charged with managing the organization's finances.

The interviewees all agreed that the City of Johannesburg has performed well in terms of initiating responses to the historical challenges highlighted above and that current processes in place are sufficient to address current fiscal risks.

The initiation of the assets and liabilities committee (ALCO), the revised ratio management process and improved cashflow and debt management were all mentioned as significant measures to reduce fiscal risks. The group wide performance monitoring system, the improved reporting system and escalation paths were also noted as contributors to reducing fiscal risks.

The interviewees were generally positive about the organizational responses to the fiscal risks faced and future fiscal stability. There did not appear to be any serious risks that they felt were on the horizon and each interviewee felt that they were empowered to address any fiscal risks relevant to them before the risks brought the City to the states of fiscal stress or crisis.

The researcher was able to find indicators that are applicable to the City of Johannesburg from the available models and research. In fact the visual depiction of the absence or presence of the selected indicators gives a dashboard view of the likelihood of the municipality entering a state of fiscal stress or crisis. The visual representation for the City of Johannesburg over the period of the study is presented in Table 1.5

Table 1.5: Fiscal indicators for the City of Johannesburg

Indicator	1997	2003	2004	2005	2006	2007	2008	2009	2010
Abrupt economic changes	✓	✗	✗	✗	✗	✗	✗	✗	✗
Administrative inefficiencies	✓	✓	✓	✗	✗	✗	✗	✗	✗
Extraordinary Capital Spending	✓	✗	✗	✗	✗	✓	✓	✓	✓
Fiscal mismanagement	✓	✗	✗	✗	✗	✗	✗	✗	✗
Inadequate collections strategy	✓	✗	✗	✗	✗	✗	✗	✓	✓
Inadequate governance	✓	✓	✓	✗	✗	✗	✗	✓	✓
Judgement awards	✗	✓	✗	✗	✓	✓	✗	✗	✓
Multi term deficit	✓	✗	✗	✗	✗	✗	✗	✗	✗
Political term change/uncertainty	✓	✗	✓	✗	✓	✗	✗	✓	✗
Reduction of grant revenue	✗	✗	✗	✗	✓	✗	✓	✗	✗
Speculative investment strategies	✗	✗	✗	✗	✗	✗	✗	✗	✗
Structural service demand/protest	✗	✗	✗	✗	✗	✗	✓	✓	✓
Systems inefficiencies	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tax revolt	✓	✗	✗	✗	✗	✗	✗	✓	✓
Wider economic recession	✗	✗	✗	✗	✗	✓	✓	✓	✓

✓ : Indicator exists. Negative outlook.

✗: Indicator does not exist. Positive outlook.

The review of the predictive models of fiscal stress and crisis was very positive in generating applicable indicators. A number of these indicators were found to be relevant the City of Johannesburg. As noted in the literature review; in a number of other municipalities, creation of an index of fiscal indicators has proved valuable to improving fiscal performance via accounting and fiscal system upgrades, policy reengineering, and external impact awareness amongst other recommendations (Deal 2007).

The issues with the indices and models developed internationally is that they are not easily generalized (Maher 2011). Further, their applicability in a South African context is limited given the data sets employed. By assessing the applicability of indicators from these indices and models against the City of Johannesburg what the research shows is that it is possible to generate a model to predict fiscal stress and measure fiscal and social performance within the City of Johannesburg.

The possibility of extrapolating that model to other municipalities is an exciting thought but would have to be confirmed with further research. In addition to the applicability of the selected indicators to the City of Johannesburg, it is easy to construct a visual model or dashboard to communicate levels of fiscal performance or the presence or absence of causal indicators for fiscal stress and crisis.

Compilation of the indicators into a dashboard view allows for information to easily be communicated to officials and personnel responsible for political oversight (Rivenbark, Roenigk & Allison 2009). The development of dashboard views easily communicating complicated information has proved to be of value in municipal environments (Mead 2002; Rivenbark, Roenigk & Allison 2009).

Dashboard views allow for non financial personnel to understand at a glance the information conveyed in the underlying fiscal indicators. This is especially useful as communicating the fiscal position of a municipality is exactly what its annual report and financial statements attempt to do (Rivenbark, Roenigk & Allison 2009).

Applying the dashboard view to the City of Johannesburg the shows at a glance which years were likely to be difficult and which when there was a likelihood of fiscal stress.

The table is borne out by the ratios and indicators presented in the previous tables: 1.1 and 1.3. and comparative analysis shows that for instance 2005 was an exceptional year for the City, the indicators are almost all positive. This is confirmed by the ratios which show the most positive figures for the period under study; the cash flow ratio was extremely healthy, the cash flow, current and quick ratios similarly were at their highest point and the solvency ratio is at its third highest point of the period under study.

The same holds true for years where there was a predominance of negative indicators. In 2009 when there were 7 negative indicators out of the 15 selected the ratios were similarly poor; the current and quick ratios fell to their lowest points over the period of study and whilst the solvency ratio remained good the interest cover ratio fell to its lowest point of the period under study.

Applying the indicators over the period of study it is clear that the short and medium term impacts of the Igoli 2002 programme were positive. From 2003 to 2007 the indicators remain firmly positive. From 2008 however there is a sustained increase in the number of negative indicators. This is borne out by the ratios in the quantitative results and it suggests that the long term impact of Igoli 2002 could be at risk and therefore care should be taken to ensure fiscal health and sustainability into the future.

A logic framework was further developed to evaluate the extent to which the outcome required by each of the Igoli 2002 goals below had been achieved in the short medium and long term. The findings are briefly presented below.

1. Integrate the five councils into one political and administrative entity: This goal was achieved. By the close of the year 2000 the City of Johannesburg metropolitan municipality had been formed. All the regional councils had been

dissolved, a new Mayor was appointed and the administrations were unified under a single administrative head (Allan, Gotz & Joseph 2001; COJ 2006).

2. Reduce the accumulated deficit and return the organization to fiscal health: This goal was achieved in the short and medium terms. The deficit was reduced by the end of 1999 and the City appeared on the way to fiscal health (Allan, Gotz & Joseph 2001; COJ 2006). The Igoli 2002 goal was only partially achieved in the long term as recent issues have cast doubt on the long term fiscal health of the City of Johannesburg as shown by the incidence of fiscal stress in 2009 and ongoing liquidity issues (Mawson 2011).

3. Integrate and standardize the fiscal policies: This goal was achieved. All finance departments were centralized under the central budget office and a uniform set of fiscal policies was developed (Allan, Gotz & Joseph 2001; COJ 2006).

4. Integrate and standardize the financial systems: This goal was not achieved. Whilst a move to a central billing system was completed, it has never been without issues. The City decided to move to a new system in 2004 and initiated implementation of the Phakama project in 2006 but to date issues still persist (Allan, Gotz & Joseph 2001; COJ 2004-2010).

5. Introduce extensive governance and transparency: This goal was achieved. The implementation of the new council and the introduction of the MFMA required implementation of numerous governance and oversight structures. Committees such as the Section79 committees, the monetary policy and accounts committee (MPAC) and the group risk advisory committee ensure tight governance and increased transparency (Allan, Gotz & Joseph 2001; COJ 2006).

6. Privatize non strategic assets and functions: This goal was achieved within the first year of the initiative. The ongoing stability of employee costs suggests that

the organizational efficiencies required in the medium and long terms have also been achieved.

7. Improve service delivery mechanisms: This goal was achieved. The City of Johannesburg created focused functional entities to manage service delivery and the expenditure per capita has steadily risen suggesting continued investment in service delivery (Allan, Gotz & Joseph 2001; COJ 2003-2010).

The analysis of the logic framework reveals that the Igoli 2002 goals have been realised with the notable exclusion of the systems integration goal. The long term fiscal health objective was only partially achieved but nevertheless, as discussed in the quantitative results the outlook is cautiously optimistic.

Logic Framework

Table 1.6: Logic Framework results

Inputs		Outputs	Immediate Outcomes <3Yrs	Intermediate Outcomes >3Yrs	Long Term Outcomes >5yrs	Impact
1.	Financial review	Deficit reduction plan	Reduce accumulated deficit	Return the organization to fiscal health	Sustained fiscal health	
2.	Organizational review Strategic analysis	Institutional overhaul plan	Five councils integrated into one political and administrative entity	Single, efficient Council	Single, efficient Council	
3.	Fiscal policy review	Fiscal policy implementation plan	Integrated and standardized fiscal policies	GRAP/GAAP /MFMA compliant fiscal policies	IFRS /MFMA compliant fiscal policies	
4.	Systems review Integration costing	Systems integration plan	Integrated and standardized financial systems	GRAP/GAAP /MFMA compliant financial systems	IFRS /MFMA compliant financial systems	Fiscally sustainable, Efficient, service delivery focused organization
5.	Functional area governance review Legislative review	Governance improvement plan	Extensive governance and transparency	Extensive governance and transparency	Extensive governance and transparency	
6.	Organizational review Strategic analysis	Privatization plan	Privatized entities	Organizational efficiencies	Organizational efficiencies	
7.	Service delivery backlog definition Backlog elimination costing	Service delivery improvement plan	Improved service delivery mechanisms and footprint	Improved service delivery mechanisms and footprint	Improved service delivery mechanisms and footprint	

Goal achieved	Goal partly achieved	Goal not achieved

1.5 Discussion and Conclusion

This research study was conducted as an evaluation of the organizational response, Igoli 2002, initiated by the City of Johannesburg after the insolvency event of 1997. The main goals of the research were to evaluate the success of the systems, policy and practice changes implemented after the 1997 insolvency event to determine whether or not they were successful and to attempt to find out if indicators from predictive models of fiscal stress and crisis were localizable.

The research began by reviewing the relevant literature regarding evaluation research, fiscal stress and crisis and financial condition analysis. Interviews were then conducted with officials who had knowledge of the areas of research to generate context for the quantitative findings.

A logic model was then produced and analysed to further determine the level of success of Igoli 2002.

The research found that the fiscal policy, practices and systems implemented by the City of Johannesburg were successful in improving the fiscal position and sustainability of the City. In addition, indicators from predictive models of fiscal stress and crisis were found to be relevant to and a dashboard was produced for the City of Johannesburg which correlated with the quantitative results.

In conducting the research the researcher noted that certain goals from the Igoli intervention still remain outstanding. Most notable of these is the failure of the City of Johannesburg to complete the implementation of an integrated billing system. In addition, questions were raised during the research about the long term fiscal sustainability of the City.

Whilst the overall outlook was positive and the results from a qualitative and quantitative perspective show that the Igoli initiative was successful, care needs to be taken to ensure future fiscal sustainability.

The issue of the revenue base profile changes must be examined with a view to mitigating the risk of an aging revenue base which is not being renewed. The carrying capacity of the revenue base was another indicator that warrants further examination. This is especially relevant as the Citizens of Johannesburg have twice shown that they are prepared to withhold payments in protest at the actions of the municipality.

It is recommended that the City of Johannesburg prepare a new long term intervention similar to Igoli 2002 to address the organizational challenges and risks that it faces currently. Additional research is also recommended to develop a local model which may predict fiscal stress and crisis for the city of Johannesburg and which may be extrapolated to other municipalities to assist officials to intervene before they reach a crisis point.

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Section Two: Literature Review

2 Overview

The objective of this section is to provide a detailed overview of the relevant literature regarding the field of public finance and the concepts of fiscal stress, fiscal crisis and financial condition analysis. The section begins by introducing the concept of public financial management and reviews the relevant legislature applicable to public financial management in South Africa. The section also introduces the concept of financial condition analysis as a diagnostic method for public fiscal management. The section then closes by detailing the Igoli 2002 response to the fiscal crisis of 1997 by the City of Johannesburg.

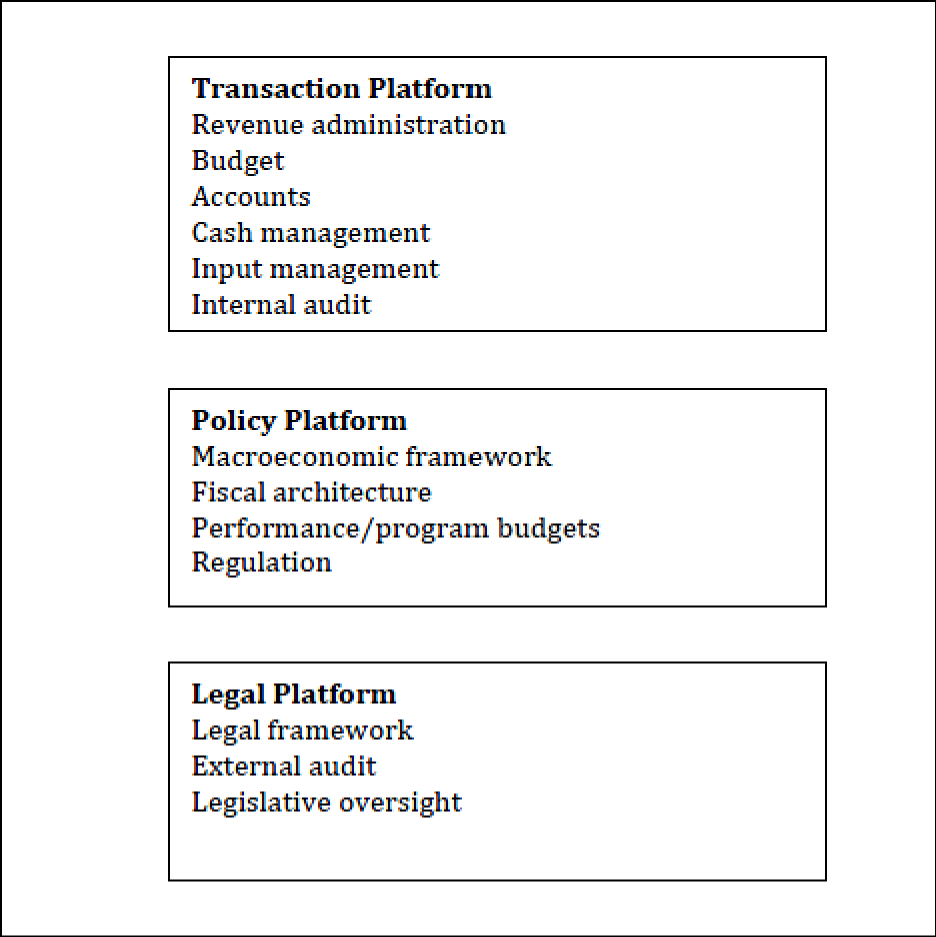
2.1 Public Financial Management

The organization for Economic Cooperation and Development (OECD) describes public financial management as “the achievement of overall fiscal discipline whilst allocating resources to priority needs, efficient and effective allocation of public services” (OECD 2001). One may further simplify that description to suggest that public finance can be described as the “financial and economic activities related to governmental spending, taxing and borrowing decisions” (Finkler 2010, p. 3).This description by Finkler (2010) also contends that the main function of government is to provide public goods and services to a constituency with income generated from the citizen.

A key concept in public finance and a significant differentiator between public and private sector financial management is that in the private sector, profits are the organization’s goal (Finkler 2010). In public institutions, finances are a means to an end; that end being the enaction of policies and programmes approved and prioritized to enable the provision of public and social goods (Knubel 2009; Finkler 2010).

This can be illustrated by the three platforms of public finance developed at the Kennedy school of business at Harvard University which suggests that all public financial management activities are governed by one of these three platforms (Penrose & Peterson 2001):

Figure 2.1: The platforms of public finance management



Source: Penrose & Peterson 2001

2.1.1 Fiscal policy

The fiscal policy platform is where the priorities and expenditure agenda of public finance are set (Finkler 2010). As it is usually not possible to provide every aspect of public goods to every citizen, prioritization must occur wherein the public institution determines what will be provided, how it will be provisioned and the means of payment for doing so (Mohr et al. 2004; Finkler 2010). Fiscal policy also determines the details of how a public institution will manage its finances; taxation, revenue collection, budget management and procurement are all set at a policy level (Finkler 2010).

In the South African context, fiscal policy is generally set by the National Treasury or the regulatory framework governing public finance (Mohr et al. 2004). National Treasury plays the role of fiscal architect by overseeing "regulation, oversight, revenue administration, debt and cash management, budget release management, and monitoring and evaluation macro policies" (PEFA 2010, p.11).

Latitude is given however within these frameworks, for public institutions to specify exact details of their approaches to implementation of these frameworks (Mohr et al. 2004) providing that these details are aligned with the general macroeconomic and macro fiscal policies set by the National treasury.

As an example to the above, the Municipal finance management act (MFMA) specifies that a municipality must develop an integrated development plan (IDP) which includes an annual budget and a medium term expenditure framework (MTEF) (Republic of South Africa, MFMA 2003). It does not however prescribe what the municipality should expend within the budget and MTEF period.

2.1.2 Fiscal legislation platform

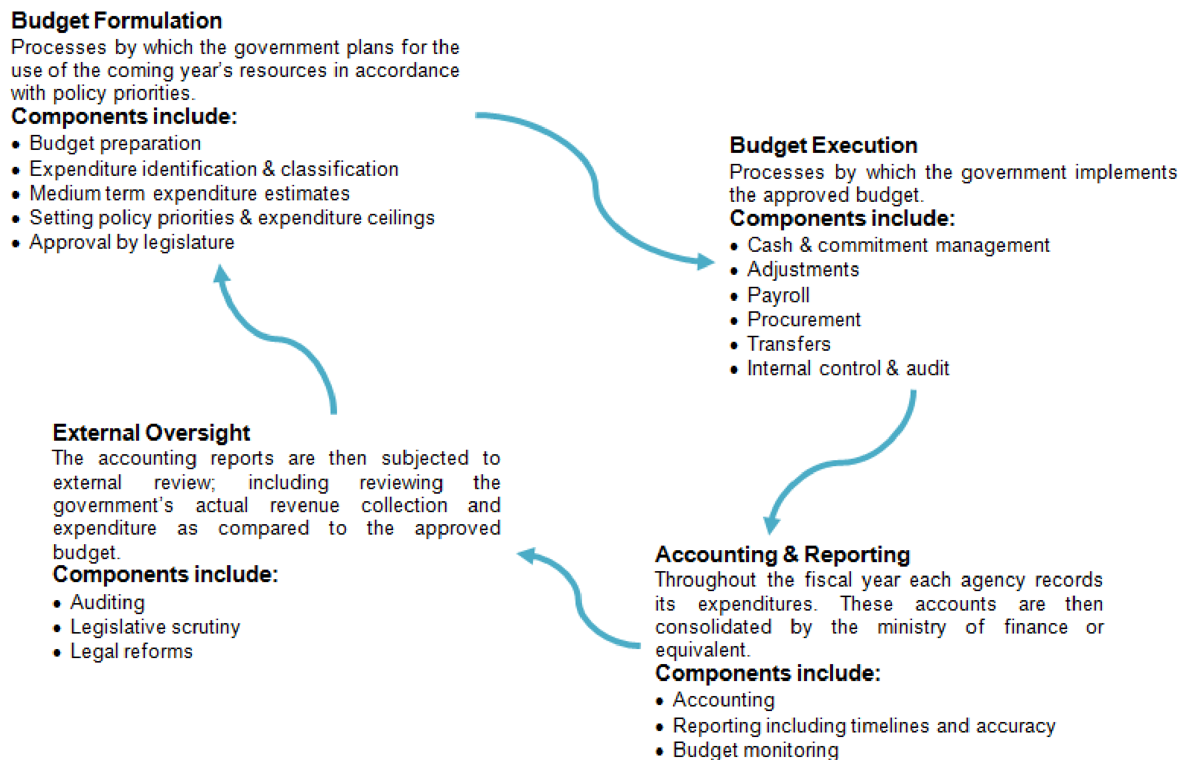
Beneath the fiscal policy platform there is a legal platform that defines the public finance landscape. Acts of parliament and associated regulations such as the public finance management act (PFMA), the Municipal finance management act and the Division of

revenue act (DVRA) have legislated how public finances should be managed. These legislative and regulatory requirements are in line with best practice such as King 2 & 3 for annual reporting and GAAP/IFRS for accounting (Madue 2007)

2.1.3 Fiscal transactional platform

The fiscal transactional platform is the area where the daily work of public financial management occurs. Budgets must be formulated and managed in line with priority policies and regulations, financial resources must be expended, suppliers and employees must be paid and all transactions must be accounted for and reported (Finkler 2010). These activities are all outlined in figure 2.2 below detailing the budget formulation, expenditure, reporting and oversight cycle:

Figure 2.2: An illustrative example of a public budgeting cycle



Source: OECD 2001

2.1.4 Contrasting Public & Private Financial Management

One key element illustrating the differentiation between public and private financial management is the attitude toward profit (Knubel 2009). Public institutions do not exist to make a profit. These institutions exist to provide public goods which could not be possibly or plausibly provided by the citizenry themselves; examples are public safety and electricity generation (Finkler 2010). Private organizations on the other hand exist primarily to increase value to their shareholders via making profits (Finkler 2010).

Instead of primarily being concerned with measures of financial excellence; stock price, net profits, etc; public institutions are concerned with service delivery excellence. Metrics therefore are vastly different (Knubel 2009; Finkler 2010). A public official would likely be more interested in services delivered per capita than the above financial indicators.

This is not to suggest that public institutions need not be concerned with prudent fiscal management and discipline but rather that it is not the single most important concern. A business that is run inefficiently will ultimately cease to exist, for public institutions the level and scale of services delivered will suffer (Knubel 2009; Finkler 2010).

That being said, specifically within the South African context; fiscal sustainability and the generation of surplus fiscal resources is a primary aim of government in order to expand the delivery of services to all citizens of the country (Beall, Crankshaw & Parnell 2002). This is especially significant given the country's past and the social and geographic realities of being an emerging economy.

An additional differentiator is the lack of availability of specific performance measures to detail the delivery of services to citizens. Within the private sector, performance management is based on specific, measurable targets and metrics. The lack of these creates difficulty in objectively judging the performance of public institutions (Knubel 2009).

Finally, a key aspect of difference is the possibility of changes of political administration. As policy drives the fiscal performance and activities of public institutions; a change of political administration can cause a change of policy with the attendant changes to fiscal activities and priorities (Knubel 2009).

In the City of Johannesburg context, the above research is borne out in almost textbook fashion. The view of profit as a means to enable service delivery is a sustained theme through the annual reports of the City (COJ 2002-2010). The policy framework as a driver of budget provisioning is also a key theme and all other activities can be traced back to the public finance platforms defined by Penrose and Peterson (2001)

2.2 Legislative Aspects of Public Financial Management (RSA)

The management of public funds is highly regulated in South Africa (Madue 2007). The Constitution of the Republic in sections 215 and 216 specifies that public finances must be managed in a transparent, systematic, standards based, uniform and economically viable manner for the benefit of the public (Republic of South Africa 1994).
Flowing from this, the Government has legislated specific and detailed practices to give effect to this constitutional requirement.

The Public Finance Management Act (PFMA) and the Municipal Finance Management Act (MFMA) are the prime legislative tools to give effect to the constitutional requirements regarding public finance. Officials in state institutions are expected to comply with other legislation however, ranging from the Preferential Procurement Policy Framework Act (PPPFA), the Division of Revenue Act, the Municipal Systems Act (MSA), and The Municipal Property Rates Act (MPRA).

The research focused on evaluating the success of a programme heavily focused on a fiscal turnaround in the City of Johannesburg metropolitan municipality. In South Africa the prime law regulating public and municipal financial affairs is the Public Finance Management Act (PFMA) (Republic of South Africa 1999). The researcher therefore

opted to focus heavily on the PFMA with a sub-focus on the MFMA as the PFMA precedes the MFMA and regulates financial affairs of all public institutions whereas the MFMA specific only to municipalities and in fact refers back to the PFMA in certain sections.

2.2.1 Public Financial Management Act

The PFMA; Act 1 of 1999 was enacted specifically to modernise and regulate South African public financial management and apply a uniform set of concepts, terminologies and practices to this area (Madue 2007). The act repeals the provincial and national exchequer acts and the reporting by public entities act of 1992.

The act firstly recognizes the move from financial controls which were prevalent in the Generally Recognised Accounting Practices (GRAP) to the Generally Accepted Accounting Practices (GAAP) which focuses on financial management (Madue 2007). The changes from GAAP to International Financial Reporting Standards (IFRS) which occurred in 2005 emphasizing such aspects of function over form accounting, effective control and reclassification of operational versus financial leases are also reflected in the wording of the PFMA which means that the act and by extension the institutions that it regulates are compliant with the most modern and rigorous accounting standards currently in practice (Du Plooy et al. 2005).

The Act firstly establishes the National Treasury as the department with the overarching responsibility for fiscal affairs of the Republic and all institutions of state (Republic of South Africa 1999). The act then goes on to define best practices in accounting and financial management and legislates that these practices must be adhered to. Salient practices legislated by the act are specified below:

- An administrative head of department is now required to appoint a qualified CFO
- Fiduciary duties are imposed on senior and political leadership of state institutions
- Institutions of state must operate basic financial systems and internal controls

- Institutions of state must issue monthly and annual reports within specified timeframes
- Reports issued by institutions of state must be verified by the Auditor General
- Institutions of state must report in a prescribed format
- Institutions of state must not over or under spend their budgets
- Institutions of state must not engage in fruitless, wasteful or unauthorized spending of resources
- Loans, bonds and other borrowing are regulated and maximum repayment periods are prescribed
- Financial misconduct is criminalized

The PFMA is a significant legislative tool which, if complied with would result in best practice public financial management permeating through all institutions of state. The biggest issue with the act is the scale of non compliance (Coveney et al. 2003). It is argued that by definition of the term, best practice is not immediately able to be implemented as there is a gap between intended practice and actual practice. It is also argued that the required skills to implement PFMA at an institutional level are extremely scarce (De Clercq 2001; Khosa 2003) and as such it will take time for the PFMA to achieve wide institutional compliance.

2.2.2 Municipal Financial Management Act

The MFMA contains all the provisions of the PFMA but differs from the PFMA in that it is specific to municipalities and deals not only with financial management issues but also separation of powers between the political and administrative spheres of the municipality.

2.2.3 Other Legislation

The PPPFA regulates the procurement and procurement reporting practices of state institutions. The MPRA establishes a revenue base and ensures uniformity of rates collection throughout the country. The systems act delineates the structure of

municipalities and the division of revenue act regulates the grants each municipality receives as a share of national income.

The City of Johannesburg is required to comply with all the legislation as listed above in addition to other legislative and regulatory requirements imposed by national and provincial government. It must be noted that the PFMA came into effect during the implementation of Igoli 2002 and the MFMA shortly afterwards. The PFMA required additional inputs into the Igoli 2002 programme in order to ensure compliance whilst the programme could not have been tailored to the MFMA but was generally compliant (Allan, Gotz & Joseph 2001).

2.3 Fiscal Stress and Crisis

Martin (1982, p.1) defined fiscal stress as the existence of "an imbalance between revenues and expenditures, not due to seasonal fluctuations in revenue collections, where the municipality is living beyond its means and is fiscally strained". Martin (1982) is echoed by Pagano and Moore (1985, p. 23) who define the condition as "an imbalance between a city's revenue-raising capacity and its expenditure needs".

Scorsone and Bateson (2012, p.2) suggested the definition of fiscal crisis as "the existence of a scenario where a municipality is likely to be unable to raise revenues that are equal to or exceed expenditures". The MFMA defines insolvency of a municipality as a state when "The municipality is either in serious or in persistent material breach of its financial obligations or obligations to provide basic services due to a crisis in its financial affairs, or the municipality admits that it is unable to comply with its obligations or to meet its financial commitments" (Republic of South Africa 2003, p.132).

The situation at the City of Johannesburg in 1997 highlighted in the institutional response section satisfies the criteria for both fiscal crisis as defined by Scorsone and Bateson (2012) and the MFMA definition of insolvency (Republic of South Africa 2003).

The researcher was not able to find any data to verify whether there was a situation of fiscal stress prior to the crisis and if so how long it may have lasted.

2.3.1 Fiscal stress

Given the definition by Martin (1982, p.1) above, one key aspect to note regarding fiscal stress is the issue that the imbalance between revenues and expenditure is: “a state not due to seasonal fluctuations in revenue collection or other singular events”. This then suggests that the state of fiscal stress is one that is consistent over multiple accounting periods (Kloha, Weissert & Kleine 2005).

Research by Martin (1982), Ladd and Yinger (1991), Rubin (1982) and Howell and Stamm, (1979) shows that causal factors of fiscal stress are numerous and varied:

- Reduction of revenues from national or provincial grants and loss of tax revenues due to demarcation or legislative changes is a very significant factor.
- Negative socio economic factors such as loss of industry, contraction of the economy, recessions and declining economic development play a significant part.
- Inconsistent or inadequate fiscal management and budgeting techniques are a recurring factor especially when coupled with inadequate checks and balances.
- Inexperienced, poorly educated or unprofessional staff in key positions is a factor.
- Lack of strategic plans to manage costs and an inability to recognize warning indicators such as continuing deficits, recurring short term loans for expenditure augmentation play a role.
- Lack of action and political will when warning indicators are present. Disturbingly, in the studies mentioned; officials were generally not caught by surprise when the state of fiscal stress was realized; no action however had been taken to correct the underlying issues.
- Delegation of controls to lower level management which may allow for financial mismanagement and corruption is a significant factor.

- An inability or unwillingness of the revenue base to pay amounts due. In south Africa this has been termed the “culture of non payment” (Lubbe & Roussouw 2005, p.1)

A number of the indicators above correspond with the situation in 1997 at the City of Johannesburg (Allan, Gotz & Joseph 2001). There was a tax revolt by the revenue base, lack of strategic planning to address the situation and inadequate fiscal management and budgeting (Beall, Crankshaw & Parnell 2002). As noted earlier though, there was no data available to determine the length of the fiscal stress period.

The Advisory Commission on Intergovernmental Relations (ACIR) in a study of 30 cities found that there are a number of indicators which signal impending fiscal stress and listed them as shown in figure 2.3:

Figure 2.3: indicators of fiscal stress

1. Operating fund where current expenditures exceed revenues
2. Consistent overage of expenditures over revenues for several years
3. Excess of current liabilities over current assets
4. Short-term operating loans outstanding at the end of the fiscal year
5. High property tax rates coupled with high delinquency in property tax collections
6. Sudden substantial decrease in assessed property values unexpectedly
7. Under-funded pension funds
8. Poor budgeting, accounting and reporting techniques

Source: ACIR (1973)

The Commission noted however that defining fiscal stress in terms only of public institutions financial abilities to meet a budget was a limited measure and suggested that a multi-stakeholder view was required. Such a view would take into account a wide range of factors such as service delivery to citizens and ability to meet bondholder obligations.

Kloha, Weissert and Kleine (2005) developed a model of indicators to predict fiscal stress. The index utilized 9 indices with scales of 0-9 to gauge fiscal performance of municipalities. The index takes population growth, per capita spending, internal financial data and external economic factors into account. Applied to a number of municipalities in the USA it proved successful as an indicator of fiscal stress and a multi-year performance predictor.

The reports generated by the index have assisted in improving fiscal performance in a number of municipalities via accounting and fiscal system upgrades, policy reengineering, and external impact awareness amongst other recommendations (Deal 2007). Unfortunately the index is not easily generalized (Maher 2011) and its applicability in a South African context is limited given the data sets employed. What the index does show however is that it is possible to generate a model to predict fiscal stress and measure fiscal and social performance of municipalities.

The secondary research question for this research project has specific relevance to the above section: The researcher extracted indicators from multiple models to assess their applicability to the City of Johannesburg over the period of the study. Applicability to the City of Johannesburg could suggest that a local model may be developed to predict fiscal stress and crisis in municipalities based on extractable and localizable indicators from the existing models.

2.3.2 Impacts of fiscal stress on communities

When faced with a scenario of fiscal stress studies show; Rose and Page (1982), Howell and Stamm (1979), Khan and Hildreth (2004) that there are typically two responses favoured by officials. Either attempts to raise additional revenues are initiated or severe cost cutting measures are utilized.

In each case citizens are affected; in the case of additional revenue the issues of willingness to pay and carrying capacity of the revenue base arise whilst cost cutting

almost invariably leads to a decrease in the scope or the quality of services provided to the citizens (Deal 2007).

In extreme examples the revenue base can refuse to accept the increases (Beall, Crankshaw & Parnell 2002) or engage in service delivery protests to demand that the municipality provide the services it is mandated to; instances of which are becoming increasingly common (McDonald & Pape 2002). In each of these instances, erosion of goodwill between the municipal officials and the citizens can be observed (McDonald & Pape 2002) and it appears likely that the increase of fiscally stressed municipalities will erode goodwill further.

2.3.3 Fiscal crisis

Given the definition of fiscal crisis by Scorsone and Bateson as: “the existence of a scenario where a municipality is likely to be unable to raise revenues that are equal to or exceed expenditures” (2012 p.2). The research in this case linked it to the MFMA definition of insolvency which states: The municipality is either in serious or in persistent material breach of its financial obligations or obligations to provide basic services due to a crisis in its financial affairs, or the municipality admits that it is unable to comply with its obligations or to meet its financial commitments.” (Republic of South Africa 2003, p.132).

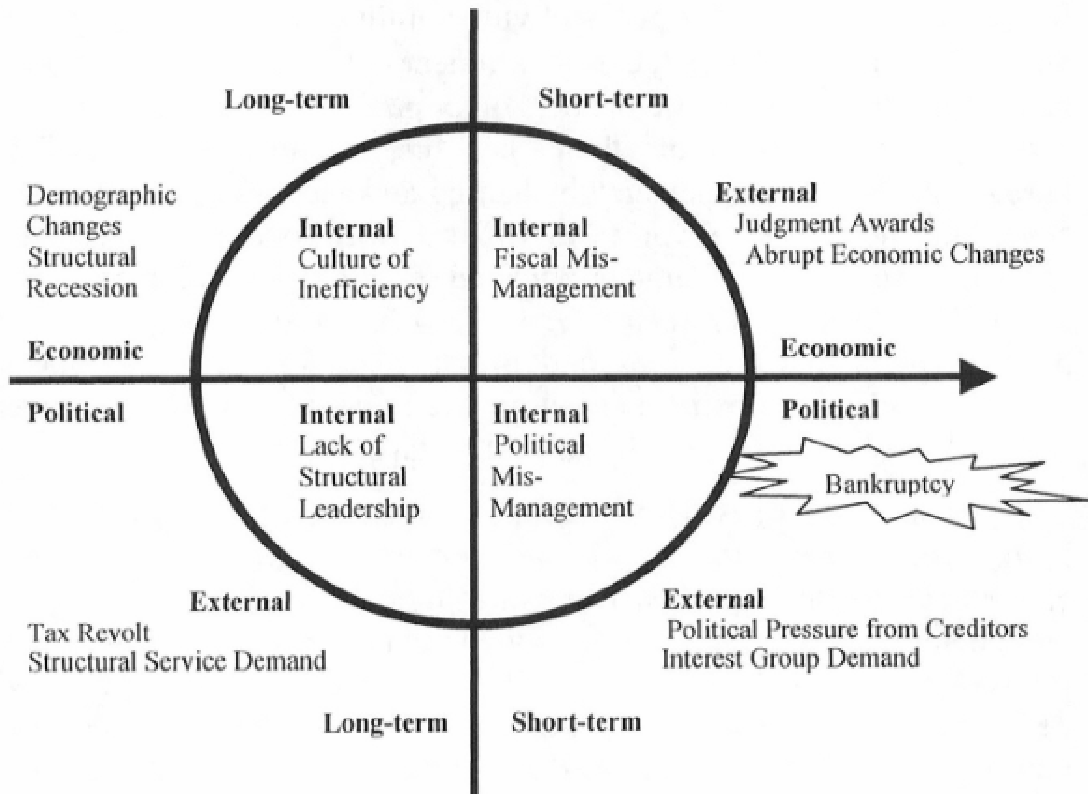
In each of the above scenarios, the municipality would not be in a position to honour its obligations to creditors, employees or the Citizenry. Studies by Park (2004), Scorsone and Bateson (2012), Watson, Handley and Hassett (2005) and Baldassare (1988) have identified the following as causal factors in escalating situations of fiscal stress to fiscal Crisis:

- Poor or inadequate standards of fiscal oversight and accountability
- Unsound fiscal policy
- Poor provincial monitoring of fiscal conditions
- Popular short term policies with negative long term consequences
- Inadequate auditing procedures

- Inadequate liability insurance
- Failure to privatize non-essential, specialized services
- Investments in uninsured bonds
- Engaging in speculative investment strategies
- Fiscal mismanagement and corruption
- Declining revenue base
- Natural or Man-Made Disasters
- Lack of strategic consideration of contingent liabilities

Park (2004) went further and developed a predictive model to detail causes of fiscal crisis from short term, long term, internal, external, political and economic perspectives as detailed below:

Figure 2.4: A model of municipal bankruptcy:



Source: Park (2004)

The model developed by Park (2004) suggests that a significant number of fiscally challenged or insolvent municipalities will have experienced a combination of the issues detailed in the model and the lack of intervention on these causal issues was a critical factor in their descent into fiscal crisis.

What is shown by the research reviewed above is that the states of fiscal stress and fiscal crisis generally do not develop as an immediate instance. Indicators are available to highlight areas of concern. The research also shows that in general, there is awareness of the issues raised by the indicators in the various models; it is the lack of action once the indicators are present that leads to fiscal stress and crisis.

2.4 Financial Condition Analysis

Berne describes financial condition analysis as: "the probability that a government will meet both (a) its financial obligations to creditors, consumers, employees, taxpayers, suppliers, constituents and others as they become due and (b) its service obligations to constituents both currently and in the future" (1992, p.7).

Because a municipality has a number of external factors that influence its ability to generate and expend revenue, analysis of financial statements does not offer a holistic view of the fiscal condition of that municipality. As such, the financial condition analysis has become the standard method for assessing the fiscal condition of municipalities and other public institutions (Finkler 2010).

The financial condition analysis expands the assessment of municipal fiscal conditions by adding factors such as revenue base, expenditures per capita, infrastructure states, management capacity, ability to borrow and economic and political climates (Granof & Wardlow 2003). Granof and Wardlow (2003) created a model indicating factors to consider when analysing a municipality's fiscal condition as detailed below:

Figure 2.5: A City's Economic Condition: Comprehensive analysis

EXHIBIT 15-2 a City's Economic Condition: a Comprehensive Analysis

I. General Approach

A. Review the current economic, political, and social environment in which the city operates.

B. Identify and assess the impact of key factors likely to affect then city's economic, political and social environment in the future (e.g,the next five years)

C. Assess the city's current status as revealed in a comprehensive annual financial report (taking into account the city's reporting practices and policies)

D. Forecast the city's fiscal status for the next five years taking into account the previously identified environmental changes and the city's likely response to them.

II. Current state of and trends in the City's operating Environment

A. Population

1. Age of population
2. Income Level
3. Education and skill level
4. Other relevant demographic factors

B. Economic Environment

1. Wealth and Income of citizenry (e.g. per capita net worth and income)
2. Major industries (and stability)
3. Unemployment rates
4. Value of property per capita
5. Sales tax base
6. Elasticity of revenues

C. Political Climate

1. Formal structure of government
2. Extent of political competition
3. Competence of city officials
4. Overall citizen satisfaction with the expectations of government
5. "Liberal" or "conservative" citizen view as to role of government
6. Relations with state government and other local governments (e.g. those of surrounding and overlapping entities)

D. Social Conditions

1. Crime Rates
2. Other measures of social well-being

III. Changes Likely to affect the City's operating environment and its finances

A. Demographics and geographic boundaries
   1. Impact on infrastructure
   2. Highways and streets
   3. Utilities
   4. Impact on operating revenues
   5. Impact on operating expenses

B. Nature and scope of government services to be formed

C. Nature and scope of enterprises activities carried out(e.g. possibility of single-member election districts)

D. Political climate (pro or anti business)

E. Form and organization of government (e.g. possibility of single-member election districts)

F. Political attitudes and Intergovernmental relationships
   1. Changing views towards the role of government
   2. Relations with legislature
   3. Extent of state and Federal assistance
   4. Additional costs imposed by overlapping governments (e.g. school districts)

G. Technology (i.e. changes that will affect the government both directly such as increased use of computers and indirectly-such as interactive TV means of transmitting electricity)
H. Social changes (e.g. changes in family structure resulting in need for more government facilities to provide care for elderly)
I. Commerce and Industry
    1. Major employers (including stability and likelihood of relocating)
    2. Impacting on revenues (e.g. property taxes) and expenditures (e.g. infrastructure improvements)
J. Wealth and Income of population
K. Other economic changes (e.g. those affecting the electric power and health care industries)

IV. <u>Insight into a City's financial position, as revealed by accounting and reporting practices</u>

A. Overall quality of disclosures
B. Auditor's opinion
C. Management's discussions and analysis
D. GFOA certificates
E. Key accounting policies
    1. Reporting Entity
    2. Number, type and character of (reason for) funds
    3. Revenue and expenditure or expense recognition
    4. Accounting charges
F. Budget Related accounting –related practices
    1. One-shot additions to revenue s or reductions in expenditures
    2. Unusual budget-balancing transactions (e.g. interfunds transfers)
    3. Changes in budget related practices (such as delaying payments or speeding up tax collections)

IV. Insight into a City's financial position, as revealed by accounting and reporting practices

A. Overall quality of disclosures
B. Auditor's opinion
C. Management's discussions and analysis
D. GFOA certificates
E. Key accounting policies
   1. Reporting Entity
   2. Number, type and character of (reason for) funds
   3. Revenue and expenditure or expense recognition
   4. Accounting charges
F. Budget Related accounting –related practices
   1. One-shot additions to revenue s or reductions in expenditures
   2. Unusual budget-balancing transactions (e.g. interfunds transfers)
   3. Changes in budget related practices (such as delaying payments or speeding up tax collections)
   4. Use of off balance sheet debt (e.g. leases, long term contracts) and revenue debts
   5. Use of long term debts to finance operating expenditures
   6. Increased use of short-term debt to cover contemporary cash shortages.

V. Calculating and interpreting financial and economic indicators

A. Fiscal capacity and effort

1. Revenue from own sources/median family income
2. Revenue from own source/total appraised value of property
3. Total sales subject to tax/total retail sales
4. Sales and property tax sales

B. Trends in fund balance

C. Trends in mix of revenues

D. Trends in stability of revenues

1. Intergovernmental revenues /total operating revenues
2. Property tax revenues/total operating revenues
3. Total sales subject to tax/total retail sales
4. Sales and property sales rates
5. Uncollected property rates

E. Trends in spending patterns

1. Number of employees per capita
2. Nondiscretionary expenditures /total expenditures
3. Percentage breakdown of total expenditures by function

F. Trends in liquidity

1. Adequacy of fund balance: unreserved fund balance /operating revenues
2. Adequacy of working capital: cash, long term investments and receivables/currents liabilities

G. Trends in Burden of debt

   1. Debt Margin
   2. Debt service as a percentage of total general fund and debt service expenditures
   3. Debt per capita
   4. Debt as a percentage of taxable property
   5. Maturity structure

H. Trends in pension and other post –employment benefits

   1. Unfunded actuarial accrued liabilities
   a. Funded ratios (pension assets compared to actuarial liabilities)
   b. Unfunded liabilities compared to property annual payroll
   2. Percentage of annual pension costs actually contributed.

I. Bond ratings

J. Trends in amounts of new borrowing

K. Overlapping credit

L. Trends in capital expenditure

   1. By type
   2. By geographic area
   3. Reason behind trends
   4. Commitments and planned expenditures per capita improvements plan

VI. <u>Fiscal forecast</u>

A. Overview of how trends and exogenous variable will affect the key fiscal indicators in the next five years (taking into account how the city will likely respond to them)

B. Pro forma financial statements of general and other key functions

VII. **Summary and conclusion**

A. Will the city have the financial wherewithal to provide the services expected of it in the future (e.g. the next five years)

B. What are the key risks and uncertainties facing the city that might impact its ability to provide these services?

1. How can the city best manage the risks
2. What should be the key concerns of the city managers, especially those directly concerned with finances?

Source: Granof & Wardlow (2003)

These factors are then combined to create ratio sets with emphasis on the specific area intended for analysis. The benefit of this type of analysis is that it creates a more holistic picture of a municipality or public institution's fiscal status (Finkler 2010).

There is also a significant disadvantage of utilizing financial condition analysis because not all the information required is available in annual financial statements. The information therefore is not necessarily audited and may contain inconsistencies with the data in the financial statements.

Furthermore, one must pay careful attention to the ratios utilized if intending to do a comparative analysis to ensure that the ratios are consistent across the sample that is being compared (Finkler 2010). Despite these issues, careful ratio selection and access to verified data allow this to be a powerful tool in an analyst's toolkit.

Within the context of this research project, a number of ratios were extracted from the annual financial statements of the City of Johannesburg. The ratios covered debt management, solvency, liquidity and revenue collection. Indicators were also extracted covering per capita revenues and expenses and service delivery.

2.5 Institutional Response: Igoli 2002

The institutional response of the City of Johannesburg to the insolvency event in 1997 was to introduce the "Igoli 2002" plan which had the following core components (Allan, Gotz & Joseph 2001; COJ 2006):

Organizational review: The first step of the institutional response was to merge the five existing councils into a single "Unicity" to facilitate better administration and management and reduce duplication of roles, systems and policies (Allan, Gotz & Joseph 2001; COJ 2006). The merge into a Unicity replaced the two tier governance system that had previously shared different powers and functions with little success. The merge also addressed the problem of fragmentation and geographically based decision making where decisions were made for the benefit of parts of the City rather than a holistic approach.

The post of the Executive Mayor was created changing the mayoral post from a largely ceremonial one into a role with wide executive and decision making powers (Allan, Gotz & Joseph 2001; COJ 2006). This change also unified the political and strategic decision making by collapsing the five mayoral roles into one.

The organizational review process also included the restructuring of the metro into unified functional areas; each council had existing administrations which had to be amalgamated under a central administrative body. Igoli 2002 also led to the creation of ring fenced, focused utilities for electricity and water and the separation of certain functions such as road maintenance into separate agencies.

Out of all the above however, perhaps the single most impactful measure taken was the creation of a centralised budget and finance department. This allowed for a single point of management and control of the City of Johannesburg's cash flows, policies and practices (Allan, Gotz & Joseph 2001; COJ 2006).

Financial review: The key goals of the financial review imposed by Igoli 2002 were to firstly eradicate the accumulated deficit and then to produce a single operating and capital budget that reduced wastage and operating costs whilst improving efficiencies and at the same time ensuring service delivery to targeted areas.

Multiyear budgeting was introduced for the first time to allow for improved planning, standardized reporting and budgeting formats were created and improved stakeholder engagement was prioritized in creating the budget. Again as a first, councillors the executive and citizens directly participated in the budget process (Allan, Gotz & Joseph 2001; COJ 2006).

Another significant priority was the development of a reporting system that allowed diagnostic information to be accessed through the year to allow for early warning of negative fiscal indicators. In addition, the improvement of payment levels and reduction of accumulated debtors was a primary goal for sustainability into the future (Allan, Gotz & Joseph 2001; COJ 2006).

To reduce the deficit, a three year financial operating plan was introduced to realize savings of R799 million over the three years in order to clear the deficit that had accumulated. A revenue collection drive was also launched to improve collection rates and address systemic revenue problems.

Systems review: The combination of disparate billing and accounting systems and policies was the main goal of the systems review. The Igoli 2002 plan launched a separate project tasked only to integrate the billing and database systems and policies with a view to establishing congruence in the billing and accounting process and increasing ratepayer confidence (Allan, Gotz & Joseph 2001; COJ 2006).

This systems review included a Y2K readiness component to ensure that the integrated systems put in place were Y2K compliant (Allan, Gotz & Joseph 2001; COJ 2006).

Oversight review: A significant aspect of Igoli 2002 was the establishment of political committees to monitor all aspects of the running of the administration. Committees were created to monitor revenue collection, assets and liabilities, organizational risks, monetary policy and accounts. This allowed for improved transparency and the introduction of good governance which had not previously existed (Allan, Gotz & Joseph 2001; COJ 2006).

Asset Privatization: Lastly the Igoli 2002 plan privatized certain assets that were deemed outside of the metro's core of services. Metro gas and the Rand airport were sold as was non strategic land and housing stock. In addition, certain departments such as the ICT and fleet management departments were outsourced along with the fixed assets associated with these departments. The privatization initiative raised an amount of R300 Million which was a significant contribution to the eradication of the deficit (Allan, Gotz & Joseph 2001; COJ 2006).

In summary the Igoli 2002 programme had the following goals:

1. Integrate the five councils into one political and administrative entity
2. Reduce the accumulated deficit and return the organization to fiscal health
3. Integrate and standardize the fiscal policies
4. Integrate and standardize the financial systems
5. Introduce extensive governance and transparency
6. Privatize non strategic assets and functions
7. Improve service delivery mechanisms

The Igoli 2002 initiative was hailed as a success as by 1999 the deficit had been cleared and the organizational changes had been effected. The research project attempted to validate or invalidate the claims of success by reviewing the fiscal performance of the City of Johannesburg over time.

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Section Three:Research Methodology

3 Introduction

As detailed in the previous sections, the research sought to evaluate whether the Igoli 2002 organizational response implemented by the City of Johannesburg after 1997 was successful in improving fiscal health over the period of the study.

In addition, the research sought to assess the applicability of internationally developed models showing predictive factors leading to the states of fiscal stress and crisis to the City of Johannesburg. If the predictive factors are applicable it may mean that localization of these international models is possible which may assist South African municipalities to intervene before crisis points are reached.

In the previous section, the literature regarding the fields of public financial management, fiscal stress and crisis and the legislative environment within which South African municipalities and state institutions operate was reviewed and discussed. This section details the methodology utilized to review the policies, practices and systems put in place by the City of Johannesburg after 1997 and expands on the research questions, the framework and the tools utilized by the research.

3.1 Objectives of the Research

The research examined and evaluated the intervention (Igoli 2002) made by the City of Johannesburg after the 1997 insolvency event and was guided by the following questions:

1. Was the Igoli 2002 organizational response implemented by the City of Johannesburg after 1997 successful in improving fiscal health over the period of the study?

2. Are causal indicators of future fiscal stress and crisis that have been identified in previous research applicable to the City of Johannesburg?

The first research question sought to evaluate the success of the changes to policies, practices and systems put in place by the City of Johannesburg as part of Igoli 2002 after the insolvency event of 1997. In order to do this the research identified the institutional response to the insolvency event, categorised the various aspects of the response and defined measurable indicators to track over the period of the study.

The indicators selected for tracking were then benchmarked against accepted practices for public financial management and quantitative indicators were analysed for positive or negative trends over the period of study.

The second question sought to assess the applicability of internationally developed models showing predictive factors leading to the states of fiscal stress and crisis to the City of Johannesburg. If the predictive factors are applicable it may mean that localization of these international models is possible and the research may be deemed to have added value to the research area.

Based on the above, the research was conducted inductively. This type of reasoning moves from the particular to the general according to Babbie (2008) and one may gather data without a specific hypothesis to confirm or reject but rather observe patterns which allow the data to speak for itself.

3.2 Research Framework

A paradigm can be described as a system of thought or a conceptual framework (Terreblanche, Durheim & Painter 2006; Kuhn 1977; Olsen, Lodwick & Dunlap 1992). Paradigms generally consist of a value statement or world view and ontology, epistemology and methodology (Terreblanche, Durheim & Painter 2006).

The research paradigm used for this study is the post positivist paradigm which holds that all human knowledge is based on conjecture rather than being absolute (Phillips & Burbules 2000) with a critical realism ontology. In essence, in terms of the paradigm adopted: human engagement with the world is based on meanings constructed by other humans. Sense is made out of these meanings by gathering and understanding the context of these meanings and therefore knowledge is socially constructed (Cresswell 2010).

The critical realism ontology suggests "Reality is assumed to exist but to be only imperfectly apprehendable because of basically flawed human intellectual mechanisms and the fundamentally intractable nature of phenomena" (Denzin & Lincoln 1994, p. 110).

The transactional/subjectivist epistemology suggests that the researcher's values, beliefs and ideologies cannot be separated from the research and that the researcher and subject are linked as co creators of qualitative knowledge (Guba & Lincoln 1994; Cresswell 2010).

The research will have both qualitative and quantitative aspects to allow for understanding of multiple factors; economic, social and political, leading to financial stress or crisis which may affect a municipality thus assisting in tracking fiscal health over the period of the study.

3.3 Research Design

The research utilized the evaluation research methodology for the study. This type of research is appropriate when determining the effectiveness of a particular programme within a social context according to Babbie (2008). The intent of this specific research project was not to define a needs or cost-benefit assessment but rather to produce a summative program evaluation to determine the effectiveness of Igoli 2002, an intervention made by the City of Johannesburg after the insolvency event of 1997. A

value judgement may then be arrived at in terms of the success or lack thereof of this intervention.

3.3.1 Evaluation research

Evaluation research is defined succinctly by Weiss as: "the *systematic assessment* of the *operation* and/or the *outcomes* of a programme or policy, in this case Igoli 2002, compared to a set of *explicit* or *implicit standards,* as a means of contributing to the *improvement* of the programme or policy" (Weiss 1998, p. 4). Childers (1989, p. 251) further expands by noting "The differences between evaluative research and other research centre on the orientation of the research and not on the methods employed".

Evaluation research may be summed up as an applied research type that began to be widely used as a means to measure the impact of particular social programmes and interventions (Rossi & Wright 1984; Babbie 2008). The growth and increased recognition of this research type may in part be attributed to the increase in the number of publically and privately funded social initiatives with an attendant requirement for rigorous, objective evaluation of the impact of these programmes (Wolmann 2003; Babbie 2008).

Evaluation research as a separate research discipline gained popularity in the 1960's with the advent of numerous social initiatives such as the "war on poverty" undertaken by the US government (Rossi & Wright 1984; Wolmann 2003; Babbie 2008). The unprecedented large scale social reforms and experiments advocated by proponents of social experimentation such as David Campbell and US President Lyndon Johnson created a requirement for a means to measure and evaluate these initiatives (Wolmann 2003; Babbie 2008).

Evaluation research also gained popularity in Europe at this time driven by post war reformist agendas and policies (Levine 1981; Derlien 1990). This boom in social and policy reform led to the rise of a "growth industry" (Wolmann 2006, p.7) of contractual

evaluation research to evaluate and improve these policies and initiatives and maximise programme efficiency.

In the mid 1970's Evaluation research was required to reinvent itself (Wagner & Wollmann 1986; Derlien 1990). The costly, resource intensive evaluation programmes that had become the norm could no longer be supported in a world where contracting economies and increased oil prices had caused a recession (Wagner & Wollmann 1986; Derlien 1990). The field turned to evaluations that were focused on cost reduction and cost benefit analyses (Gordon & Morse 1975).

From the 1990's however, Evaluation research gained new impetus as a new wave of policy reforms and certain significant and high profile evaluations such as the PISA study by the OECD re-established the saliency of evaluation research as a means for policy improvement (Wolmann 2006).

The global acceptance of evaluation research appears to have now been entrenched with a number of countries establishing associations to govern the practice and implementation of evaluation projects (Furubo & Sandahl 2002; Leeuw 2004). These associations intend to further the practice and methods of evaluation, establish and promote best practices, conduct research and act as a knowledge base for evaluation (Furubo & Sandahl 2002).

3.3.2 Evaluation research types

This research type may have started as and indeed become synonymous with programme evaluations but it is now a more varied and widely used research method. The umbrella term: evaluation research now covers outcomes assessment, benchmarking, performance auditing, appreciative inquiry and numerous other disciplines where there is a requirement for objective and rigorous assessment of an initiative (Rossi & Wright 1984; Wolmann 2003; Babbie 2008).

Review of the relevant literature reveals three types of evaluation research based on timing of the research, the stage of the programme or it may be based on the form of the research or the orientation of the research.

In terms of research timing, there are three distinct stages (Wollmann 2003):

Ex Ante/ Pre assessment

With ex ante or pre assessment, the evaluation happens prior to programme implementation in order to assist programme designers to anticipate the impacts and effects of their programme. This may be done to assist in the choice between different programmes or in order to ensure that the programme is designed in the most rigorous, effective manner possible (Wollmann 2006; Owen & Rogers 1999) examples include needs assessments, environmental impact assessments and policy previews. Within the context of Igoli 2002 the data confirms that there was an aspect of ex ante assessment concluded i.e. needs assessments in the design of Igoli 2002. There is no indication however that there was a formal ex ante assessment programme.

Ongoing/Monitoring

With ongoing or monitoring evaluations, the research is carried out whilst the programme is in the implementation stage. These studies attempt to identify effects and interim results of the programme in order to identify interventions that may be made to correct, improve or otherwise positively change the program (Wollmann 2006; Owen & Rogers 1999). This type of research can be termed interventionist or action research (Wollmann 2006). As above, regular monitoring of the Igoli 2002 intervention occurred and goal achievement was tracked on a regular basis but no formal monitoring research occurred.

Ex post/ Outcomes assessment

This type of research is concerned with identifying the effects and results of the programme once implementation is complete and evaluating the results against the

goals of the programme or other agreed standards set out during the programme design (Wollmann 2006; Owen & Rogers 1999).

This is generally termed the classic variant of evaluation research and the most widely used (Wollmann 2006). A formal, ex post assessment was carried out at the conclusion of Igoli 2002. The assessment found that the Igoli 2002 programme was a success and achieved all the goals set at the inception of the programme. What this research project aimed to do was to validate or invalidate the long term success of the programme.

Evaluation research may also take a formative or a summative approach. **Formative evaluations** occur during the implementation stage of the programme and assess the impact the programme has and its alignment to implementation design with a view to continuous improvement, quality assessment and control (Scriven 1980). These evaluations are focused on gathering data that allows for improvement of the programme by the designers or decision makers (Wollmann 2006). This form of assessment was obviously not available in the context of this research project.

On the other hand, **summative evaluations** occur post implementation and assess the impact of the programme, intended and unintended outcomes and goal achievement with the rigour and objectivity required to make a value judgement (Scriven 1980; Calder 1995). This form of evaluation was selected for this research project in order to make a value judgement regarding the success of the Igoli 2002 programme over time.

Babbie and Mouton (2001) contend that the orientation of the evaluation provides a means of classification and further add that evaluations may be judgement, improvement or knowledge oriented where the goals and methodologies of each would vary.

For a **judgement oriented evaluation** the goal would be to identify the goal attainment of the programme. Were goals successfully met? Did the programme achieve the intended outcomes? (Babbie & Mouton 2001). This type of evaluation is summative,

formal and allows for value judgements to be made regarding the programme under review (Scriven 1980; Calder 1995). This research project was oriented in this fashion. An **improvement oriented evaluation** is more formative with the goal being to assess areas of programme strength and weakness, areas of improvement, unintended consequences and ecosystem dependent criteria (Babbie & Mouton 2001). What would work in one country or organization may not work as well in another (Wollmann 2006). On the other hand, a **knowledge oriented evaluation** is conducted to generate knowledge, improve theory and increase quality assurance of a programme (Babbie & Mouton 2001). This type of evaluation could be used when designing a similar programme or as part of general research.

In summary, the researcher chose to conduct a summative, judgement oriented evaluation of Igoli 2002 to determine the levels of goal attainment or erosion over the time period of the study. The research undertaken by this particular study falls within the classic variant of evaluation research. The study sought to evaluate whether the Igoli 2002 organizational response implemented by the City of Johannesburg after 1997 was successful in improving fiscal health over the period of the study. This was a summative, judgement based review to identify the goals of the programme and assess whether the desired outcomes were achieved over the period under study.

The time frame regarding the research began in the year 2003 once the institutional intervention was fully implemented and concluded in 2010 after the secondary incidence of fiscal stress at the City of Johannesburg. Measurement was done yearly providing for 8 points of reference at the end of each financial year.

3.3.3 Evaluation research weaknesses

In the early history of evaluation research, programmes were experimental, generally utilized a theory based framework, random sampling and assignment to control and subject groups and highly quantitative (Babbie 2008; Wollmann 2006). These types of designs specified that the researcher maintain distance from the subjects under study to aid objectivity (Shadish et al. 1991).

Whilst this type of design allows for summative evaluation it is cost intensive and does not aid in methodological improvement within programmes (Wollmann 2006). As the field has evolved; more qualitative, methodologically diverse and responsive evaluation research has become the norm (Rossi & Wright 1984). These diverse approaches may sacrifice the levels of objectivity in order to reduce costs and improve the applicability of an evaluation (Wollmann 2006).

The above reignites the long running debate between the quantitative and qualitative schools of thought in the field of social research. As an evaluation is generally required to assess the attainment and impact of a programme's goals and objectives, it is then necessary to specify these at the outset of the evaluation (Wollmann 2003). In so doing, the research may sacrifice objectivity by linking the importance of variables in a programme resulting in a confirmation bias (Wollmann 2003).

Additionally, in order to objectively identify a causal relation between changes in the observable, real world and a programme under study, only a quantitative, quasi-experimental research design would yield acceptable results (Campbell & Stanley 1963). These types of designs are generally not applicable to the evaluations required in the real world (Wollmann 2006).

Further, generating acceptable, measurable metrics for goals and intentions is exceedingly difficult and it is almost impossible to create "ceteris paribus" conditions required for such studies (Wollmann 2006). As such, in a departure from pure research practices; goals, variables and measures are set by agreement and explicitly stated at the outset of the evaluation (Babbie 2008).

Particularly pertaining to summative evaluation, this practice of stating agreed goals and measuring same can be problematic (Spaulding 2008). The departure from control groups and experimental design means that the summative evaluation is only measuring the outcome of the programme under conditions of change.

To reach a scientific conclusion the programme should be measured under both conditions of change and conditions of non change (Campbell & Stanley 1963). In addition, factors outside of the programme being evaluated and unintended consequences are not measured and may also have affected the outcome (Spaulding 2008).

Despite the above weaknesses, qualitative and less experimental research designs are less costly, more readily applicable to real world conditions and allow for more contextual evaluations (Babbie 2008).

As an example; the Igoli 2002 intervention being evaluated occurred in the past, it would not have been possible to select a control group or utilize a more experimental or quantitative design. If a scientific conclusion was required it would not be possible to conclude this evaluation.

The study therefore continued with the evaluation research method chosen and sought to maintain research objectivity via the four tests of quality according to Riege (2003); Confirmability, credibility, transferability and dependability.

3.3.4 Data Collection

The methods of data collection were via document analysis followed by interviews with selected personnel in the financial and revenue departments of the City of Johannesburg. The document collection and interviews was informed by the program logic model evaluation process. Logic frameworks are visual interpretations of the relationship between inputs, outputs, outcomes and impacts. They allow for inference of causal relationships and can be a powerful tool in programme evaluations. A logic framework was created in order to assist with the holistic evaluation of Igoli 2002 based on the identified goals as listed below:

1. Integrate the five councils into one political and administrative entity

2. Reduce the accumulated deficit and return the organization to fiscal health
3. Integrate and standardize the fiscal policies
4. Integrate and standardize the financial systems
5. Introduce extensive governance and transparency
6. Privatize non strategic assets and functions
7. Improve service delivery mechanisms

The data from the document analysis, the quantitative analysis and the indicator analysis was used to answer the question of whether the goals listed above were achieved in the short, intermediate and long terms.

Figure 3.1: Logic Framework: Igoli 2002

Inputs	Outputs	Immediate Outcomes <3Yrs	Intermediate Outcomes >3Yrs	Long Term Outcomes >5yrs	Impact
Financial review	Deficit reduction plan	Reduce accumulated deficit	Return the organization to fiscal health	Sustained fiscal health	Fiscally sustainable, Efficient, service delivery focused organization
Organizational review Strategic analysis	Institutional overhaul plan	Five councils integrated into one political and administrative entity	Single, efficient Council	Single, efficient Council	
Fiscal policy review	Fiscal policy implementation plan	Integrated and standardized fiscal policies	GRAP/GAAP /MFMA compliant fiscal policies	IFRS /MFMA compliant fiscal policies	
Systems review Integration costing	Systems integration plan	Integrated and standardized financial systems	GRAP/GAAP /MFMA compliant financial systems	IFRS /MFMA compliant financial systems	
Functional area governance review Legislative review	Governance improvement plan	Extensive governance and transparency	Extensive governance and transparency	Extensive governance and transparency	
Organizational review Strategic analysis	Privatization plan	Privatized entities	Organizational efficiencies	Organizational efficiencies	
Service delivery backlog definition Backlog elimination costing	Service delivery improvement plan	Improved service delivery mechanisms and footprint	Improved service delivery mechanisms and footprint	Improved service delivery mechanisms and footprint	

Documents were sought to confirm various aspects of the logic framework and interviews attempted to confirm patterns related to the aspects of the logic framework as highlighted below:

Table 3.1: Logic Framework: Data collection

Document collection		
Framework component	Documents	Interviews
Background	Yes	Yes
Inputs	Yes	Yes
Activities	Yes	Yes
Outputs	Yes	Yes
Outcomes	Yes	Yes
External influences	No	Yes

The researcher exercised caution in the selection of documents to ensure validity in line with the contention by Yin (2008) that documents should preferably be public records or other official documents not prepared for purposes of the research.

The documents analyzed were financial reports from the year 2003 until the year 2010, institutional policies governing fiscal management at the City of Johannesburg and reports to the oversight committees for the fiscal affairs of the City. In addition, field notes were generated by the researcher to assist with further understanding of the research topic in line with techniques suggested by Burgess (1991).

The financial reports were prepared with the input of the auditor general and can therefore be evaluated as being objective and valid. The institutional policies and oversight reports are vetted before submission to the council or oversight committees and can similarly be evaluated as being objective and valid.

Face to face interviews were also performed as a method of data collection. The interview questions were designed in line with the requirement to elicit information via a conversation along a guided path rather than questions allowing for simplified or standardized answers thereby qualifying as qualitative rather than survey interview questions (Babbie 2008; Yin 2008).

Purposive sampling was utilized to conduct the interview component of the research. This targeted City of Johannesburg staff in the financial and revenue departments who had knowledge of the fiscal policies, practices and systems in place in either 1997 or 2010. The interviews were targeted at chief financial officers and heads of department in the finance and revenue departments. Convenience sampling was utilized to select the individuals who were the most knowledgeable about the events being studied or the policies and systems in place in either 1997 or 2010.

A list of fifteen individuals was compiled by the researcher based on the titles held by the individuals, organizational knowledge and mentions in the annual reports of the City of Johannesburg. An introductory email was sent out detailing the study and requesting the subject's participation in the research. Responses were received from eleven of the individuals and appointments were arranged to conduct the interviews.

As participation in the research was required to be completely voluntary, no attempt was made to follow up with the subjects who did not respond. All the subjects interviewed were assured that complete confidentiality would be maintained and that they would not be identified by name or title in the study. The interview questions are attached as annexure A and the list of interviewees is attached as annexure B.

3.3.5 Data Analysis

The documents collected for review were coded and then captured into a research database as suggested by Yin (2008). Once the data were populated in the database, the researcher then triangulated the data from the primary documents, the interview transcripts and the field notes. This was an important step as Denzin (1989), Guba & Lincoln (1985) and Yin (2008) have all stressed the need for triangulation of data between multiple sources to allow for data credibility and to ensure data veracity.

The data gathered from the interviews was transcripted and thematic analysis was used to identify recurring themes and observations. The researcher then utilized the memoing technique as described by Babbie (2008) as a stimulant to thought processes and to thoroughly interact with the data. These techniques allowed for core concepts to emerge and for relationships between these concepts to be explored. The analysis process is further highlighted by the matrix below:

Table 3.2: Logic Framework: Data analysis

Data analysis					
Framework component	Igoli review	Existing research	Financial reports	Interviews	Other COJ reports
Background	✓	✓	✗	✓	✗
Inputs	✓	✓	✗	✓	✓
Outputs	✓	✓	✗	✓	✓
Outcomes	✗	✗	✓	✓	✓
External influences	✓	✗	✗	✓	✗

✓ : Method utilized

✗: Method not utilized

Recurring themes and observations were then triangulated against the documents collected for verification of facts and assertions. The researcher then utilized the lesson drawing technique theorized by Rose (1993) to examine the policies and practices of the City of Johannesburg across the time period of the study.

In essence, Rose (1993) notes that understanding of how policies operate and the conditions they operate under allows for replication in other instances. This then allows for the transfer of knowledge across time, countries and industries (Page 2000).

After the above analyses, the data were analyzed against the qualitative and quantitative indicators selected for evaluation and against the Igoli 2002 programme logic framework detailed in the previous section. For the quantitative and qualitative indicators the data was analyzed to answer the following questions:

- Does this indicator exist over the period of the study?
- Is the indicator positive or negative over the period of the study?
- What is the relationship (if any) of this indicator to other selected indicators?
- What impact does this indicator have on the city of Johannesburg?
- Does this indicator suggest possible fiscal stress and/or crisis at the city of Johannesburg?

For the Igoli 2002 programme logic framework the data was analyzed to answer the following questions:

- Were program activities implemented as planned?
- Were the defined goals achieved?
- What progress was made in achieving short, medium and long term outcomes?

The research noted that without measuring all external factors to the programme and progress under conditions of change and non change, scientific proof of causality for goal achievement cannot be established. Therefore, as a mitigation measure the results of the different analyses were compared to ensure that there was congruence across the results of analysis.

3.3.6 Evaluation Criteria

Babbie (2008) notes that when performing evaluation research, it is critical to have an agreed measurement as the dependent variable before beginning the research. As noted earlier, the research used the used elements of the financial condition analysis as the dependent variable for the quantitative component. Fiscal indicators were also selected to give context to the quantitative data.

The ratios and indicators defined below are aggregated to produce a financial condition analysis for the City of Johannesburg over the period of the study. A logic framework has also been produced to assist with evaluating the Igoli 2002 programme according to its stated goals as highlighted in the previous section.

Quantitative Indicators:

The research utilized the financial condition analysis to track certain indicators and ratios regarding finance and service delivery over the period of the study. The indicators, ratios and descriptions are listed below:

Indicators:

1. Collection rate: The collection rate of a municipality is calculated by analyzing the actual receipts of income against the billed amounts. The target for the City of Johannesburg was over 90% for the period under study (COJ 2003- 2010).

2. Debt per capita: Debt per capita is calculated by dividing the short and long term debt by the population after subtracting cash and equivalents that could be applied to the debt (Finkler 2010). Per capita data is provided in the annual report as an extract from the local census statistics or the community surveys done by Statistics South Africa.

3. Employee expenses per capita: This is calculated by dividing the employee costs of the municipality by the population (Finkler 2010). Per capita data is provided in the annual report as an extract from the local census statistics or the community surveys done by Statistics South Africa.

4. Total expenses per capita: the total expenses per capita indicator is calculated by dividing the total expenditure of the municipality by the population. Per capita data is provided in the annual report as an extract from the local census statistics or the community surveys done by Statistics South Africa.

5. Total expenditure growth: Total expenditure growth is calculated by subtracting the expenditure in the latest accounting period from the expenditure of the previous period and expressing the resulting figure as a percentage (Finkler 2010). This can be useful in tracking expenditure growth against population growth and inflation.

6. Total revenue growth: Total revenue growth is calculated by subtracting the revenue in the latest accounting period from the revenue of the previous period and expressing the resulting figure as a percentage (Finkler 2010). This can be useful in tracking revenue growth against population growth and inflation.

7. Total revenues per capita: This indicator is calculated by dividing the total revenue amount by the population. As above, per capita data is provided in the annual report as an extract from the local census statistics or the community surveys done by Statistics South Africa

Ratios:

1. Cash Flow/Total Debt: Cashflow ratios can indicate the viability of a municipality. An entity that has inadequate cashflow is at significant risk of fiscal stress and crisis. This indicator has been identified as one of the best indicators of financial stability (Correia et al. 2007).

2. Current assets/Current liabilities: This indicator is a liquidity ratio which is useful in determining the ability of the municipality to meet its day to day expenses (Correia et al. 2007).

3. Current debt/Total debt: this indicator measures the percentage of short term to long term debt and is useful to indicate the balance of funding sources as short term debt is usually more expensive (Finkler 2010).

4. Debt/Asset: The debt to asset ratio is useful in determining the proportion of the municipality's assets that are financed by debt (Finkler 2010).

5. Debt/Revenue: The debt to revenue ratio is calculated as the total liabilities divided by the total revenue and is expressed as a percentage. This indicator is important as it highlights the percentage of revenue that is utilized to pay for debt (Finkler 2010).

6. Employee expenses/Operational expenses: this ratio indicates the level of operational expenditure on salaries and employee costs expressed as a percentage of total operational expenditure. This indicator allows for insight into the appropriateness of staffing levels and costs for the municipality (ICMA 1980).

7. Interest coverage: The interest coverage ratio indicates the extent to which there is a risk of not satisfying interest payments given a decline in revenue. This is calculated by dividing earnings before interest and taxes by the interest amount (Finkler 2010).

8. Interest/Expenditure: This indicator highlights the percentage of expenditures that are put towards paying off interest on debt finance. This is important as all monies used to satisfy the interest payments are not available for operational expenditure. High interest to expenditure ratios can significantly impact a municipality's fiscal flexibility (ICMA 1980).

9. Quick ratio: sometimes called the acid test, this liquidity ratio is calculated by adding cash and near cash items and dividing by the current liabilities. This allows for projection of the municipality's ability to meet current liabilities over the short term (ICMA 1980).

10. Solvency ratio: The solvency ratio is one of the most critical indicators of long term fiscal sustainability (Finkler 2010). The ratio is calculated by adding the post tax net income and depreciation and dividing the result by the long and short term liabilities.

11. Total expenses/Total revenues: The indicator of total expenses as a percentage of revenues gives an idea of the surplus or deficit that a municipality is generating. In other words, what percentage of revenues is spent to cover expenses? This is a simple indicator which at a glance reveals the fiscal position of the municipality for that accounting period. Trend analysis of this indicator should show a positive trend for a fiscally stable entity (ICMA 1980).

Qualitative Indicators:

The research analyzed the primary predictive models and research dealing with fiscal stress and crisis by Kloha, Weissert and Kleine (2005) Park (2004), Watson, Handley and Hassett (2005), Baldassare (1988), Martin (1982), Ladd and Yinger (1991), Rubin (1982), Howell and Stamm (1979) and Scorsone and Bateson (2012) to find indicators that were significant and could possibly be applicable to the City of Johannesburg.

The research also analyzed the main implementation models for financial condition analysis to find applicable indicators. The models analyzed were the Financial Trend Monitoring System (FTMS) developed by the ICMA (International City and County Management Association) in 1980, the Brown 10 point test developed in 1993 and the dashboard model developed by Rivenbark, Roenigk, and Allison in 2009.

Indicators were aggregated from both the predictive and the financial condition analysis models and the researcher selected 15 indicators; listed below, which appeared to be applicable to the City of Johannesburg and which could have significant impact on the fiscal performance of a municipality or public entity. Analysis of these indicators over the time period of the study adds additional data to answer the research questions.

1. Abrupt economic changes: The departure of a significant tax paying entity or other such abrupt changes or disruption in the municipal economy can lead to serious fiscal difficulties if not recognized and acted on (Kloha, Weissert & Kleine 2005).

2. Administrative inefficiencies: Administrative inefficiencies or organizational dysfunction is a serious indicator of potential fiscal issues in the long run. As noted in chapter 2; in a number of cases of fiscal stress or crisis, administrators were aware of the issue but did not take adequate steps to avoid it, Martin (1982), Ladd & Yinger (1991).

3. Extraordinary Capital Spending: In a number of cases of municipal bankruptcy, the situation of fiscal crisis is preceded by extraordinary capital expenditure (Deal 2007). Lipscomb county, Orange county and the City of Johannesburg are all examples of the above (Deal 2007; Allan, Gotz & Joseph 2001).

4. Fiscal mismanagement: Fiscal mismanagement and/or corruption also signal significant risk of fiscal stress and crisis. Left unchecked over the long term this indicator has the potential for the most damage to a municipality's finances (Park 2004; Scorsone & Bateson 2012).

5. Inadequate collections strategy: Especially in the local context, the issue of inadequate collections is a serious risk to fiscal stability. The local "culture of non payment" (Lubbe & Roussouw 2005, p.1) unemployment and the widespread poverty in South Africa require a balanced and focused collection strategy.

6. Inadequate governance: Poor governance structures enable fiscal mismanagement, corruption and poor fiscal practice. The imposition of the P/MFMA locally was an attempt to address this issue but compliance remains a challenge (McDonald & Pape 2002). Clean audit findings are a good indicator of compliance to both P/MFMA and good governance.

7. Judgement awards: The imposition of costs for judgements awarded can also have a serious effect on the fiscal stability of a municipality (Deal 2007). Whilst these are generally not unforeseen and can be provided for by means of contingent liabilities etc, large judgements can significantly curtail the service delivery activities of a municipality.

8. Multi term deficit: The existence of a multi term deficit in itself is an indicator of fiscal stress and point to underlying causes that must be addressed (Kloha, Weissert & Kleine 2005).

9. Political term change/uncertainty: as noted in Chapter 2, political changes or uncertainty can affect the policy making ability of a municipality or change existing policies that are in place. The significance of this to fiscal stability cannot be understated (Park 2004).

10. Reduction of grant revenue: If a municipality is reliant on grant revenue instead of producing its own revenue via utilities or other business activities this can immediately affect fiscal stability (Lubbe & Roussouw 2005).

11. Speculative investment strategies: Investment strategies that inherently carry high levels of risk can be a contributor to fiscal stress and crisis. The bankruptcy of Orange County in 1994 was largely due to the speculative nature of their investments (Khan & Hildreth 2005).

12. Structural service demand/protest: The demand for services and a disproportionate response in order to provide services and appease citizens can be a significant indicator of fiscal stress. Conversely the existence of service delivery protests indicates that services are not being delivered to a specific area thereby suggesting that the fiscal resources of the municipality are inadequate to do so (McDonald & Pape 2002).

13. Systems inefficiencies: The crisis at the City of Johannesburg in 1997 and again from 2009 had inefficient or unsynchronized billing systems as a major contributing factor (Allan, Gotz & Joseph 2001). Inefficient systems and policies act as a disincentive for citizens to pay rates and taxes due thereby having an immediate knock on effect on fiscal stability (ICMA 1980).

14. Tax revolt: The refusal of citizens to pay rates and taxes due is different from the culture of non payment. In this case, citizens are protesting by withholding payments rather than not paying due to economic factors. The existence of this indicator suggests dissatisfaction with the municipality and was a major factor in the events of 1997 and 2009 at the City of Johannesburg (Allan, Gotz & Joseph 2001).

15. Wider economic recession: Events in the wider economy can also affect the fiscal stability of a municipality; the world economic crisis from 2008 was recognized as a factor pressuring collections in the City of Johannesburg (COJ 2008) but economic recessions may affect the fiscal stability of any municipality (Khan & Hildreth 2005).

Data Quality

Data quality for the study was maintained via the four tests of quality for qualitative research using criteria proposed by to Riege (2003) that includes confirmability, credibility, transferability and dependability:

In terms of confirmability, all raw data generated during the collection stage was preserved. As noted above, a research database was created wherein all documents, background documentation, interview transcripts and field notes were kept. This is also compliant with the confirmability requirements imposed by Yin (2008) and Guba & Lincoln (1989). Credibility was achieved by ensuring that all subjective facts were verified through multiple sources of evidence where possible. As noted above, the technique of data triangulation allowed for the researcher to verify the veracity of subjective facts by confirming them via multiple sources i.e. data from annual reports was triangulated with reports to council and previous annual reports to ensure consistency.

In terms of transferability, dense descriptions were used to ensure transferability of the research. In essence the researcher attempted to be as verbose as possible and to add as much context as possible to the data notes. It is accepted that transferability is difficult within the field of qualitative research (Guba & Lincoln 1989; De Vos et al. 2002; Trochim 2002). The researcher therefore complied with the principle of adding relevant context and descriptors, triangulating the data and allowing the transferring researcher to make the value judgement on transferability (Guba & Lincoln 1989; De Vos et al. 2002) Finally, in terms of dependability, this was ensured by keeping aware of the researcher’s biases and theoretical positions. Yin (2008) suggests that qualitative research be performed as though one were being observed or audited. The researcher attempted to perform the research in line with this.

Research quality for quantitative data was maintained by firstly, ensuring validity of the primary data where only quantitative data from annual financial statements were used as primary data. These statements are vetted by the auditor general to ensure reliability and objectivity. Secondly, quality was ensured by utilizing standard and systematic formulae where calculation of results was required. Finally, quality was achieved by using documents that are in the public domain as recommended by Yin (2008). To this end, the researcher ensured that documents analyzed were all public records or documents vetted for council or by the Auditor General.

Paying careful attention to research quality is a mitigating factor against contentions that may be levelled at researchers conducting qualitative research Yin (2008) and makes up for perceived weaknesses in the evaluation research method as detailed earlier. For commercial implementation of such research, an external quality audit may be conducted to ensure the validity of the findings.

3.4 Research Limitations

The research attempted to evaluate the success of the Igoli 2002 intervention over time and to assess the applicability of predictive indicators leading to financial stress and crisis but was limited in that it does not present resolutions to fiscal stress or crisis. The research was also limited by the focus on the City of Johannesburg only. As such the generalizability of the results must be studied further.

In addition, whilst the data that was sought is public data, given the period under study; the age of the data and its sensitivity presented challenges in data collection and suitability of interview candidates. Patton (2002) also notes that with regard to interviews, data gathered may be skewed by the personal bias and/or the emotional state of the interviewee. This is unavoidable but still remains a limitation.

3.5 Ethical Issues

According to Babbie (2008, p.345) “All forms of social research raise ethical issues”. Specific to the research conducted, respondents’ identities were kept confidential and all respondents who participated did so voluntarily. Any recordings or transcripts were obtained with the consent of the respondents and the research findings will be made available to respondents for comment, to the public domain for authentication and to the organization for reference purposes.

The researcher is an employee of the City of Johannesburg and therefore this is disclosed in order to alert readers to the possibility of bias.

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Appendix A: Interview Questionnaire:

Interview questionnaire:

1. What are the primary fiscal challenges faced by COJ
2. How do you believe these came about
3. What do you believe the most accurate measures of fiscal health of a municipality are?
4. What is your view on the FCA?
5. What policies/methods does COJ have to regularly assess fiscal health
6. Do you have any knowledge of the fiscal challenges faced by COJ in 1997 and/or 2010
7. How did the city respond
8. How would you describe the initial response to the fiscal issues?
9. Do you believe the response was successful? If so why? if not why?
10. Do you think the province and national govt should become involved in a fiscal crisis at municipal level? If so, at which point?
11. What lessons can be learned from COJ's experiences in 1997 and 2010
12. What policies/methods does COJ have to alert officials to possible fiscal stress?
13. In the event of such an alert, what procedure would be followed?

Appendix B: Interviewee list:

Interviewee:	Function:
Interviewee A	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee B	A senior official in the finance department with knowledge of the 1997 issues of fiscal crisis
Interviewee C	A senior official in the rates department with knowledge of the 1997 issues of fiscal crisis
Interviewee D	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee E	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee F	A senior official in the finance department with knowledge of the 1997 issues of fiscal crisis
Interviewee G	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee H	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee I	A senior official in the finance department with knowledge of the 1997 issues of fiscal crisis
Interviewee J	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress
Interviewee K	A senior official in the finance department with knowledge of the 2009 issues of fiscal stress