Discussion paper

Municipal Bonds for Infrastructure Development in South Africa

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Foreword

This discussion paper has been written in the spirit of "Action Research"[1]. Action Research aims at solving an acute social problem by guiding a reflective process of suitable knowledge creation in a system or community of practice. This type of research invites stakeholders for active participation in a social change process. There are thus two processes in inter-connection and inter-action:

Knowledge creation ↔ social change.

The more general problem that we deal with in this discussion paper is the funding of local public infrastructure in South Africa. There seems to be limited funding; and the given funding seems to be not as fair, equitable, efficient or effective as possible. The more specific question we ask is:

"How can this problem be solved by municipal bonds?"

This piece of Action Research has been developed in a cooperation between SALGA and GIZ. Other stakeholders have been included. My thanks go to all of them.

However, a specific sustainable solution has not yet been found and implemented from that. The Action Research process thus needs to go on. All stakeholders are still cordially invited to participate.

What are municipal bonds?

A municipal bond is a standardized debt instrument, a debt security, issued by a municipal entity.

In the following categories, bond standards may be set:

- Type of issuer: The issuer can be any type of municipal entity, as also for instance a school council or a local public water board.
- Number of issuers: A bond can be issued by one (single) or several (joint or pooled) municipal entities. In the latter case, the joint issuers need to find arrangements on how they share the
    - Rights and obligations,
    - Revenues and expenditures,
    - Assets and liabilities, and

[1] For more see: Burns (2007); Greenwood/ Levin (2007).

    - Risks

  that arise out of the joint bond venture.
- Principal: The principal should be fixed to an amount that is:
    - high enough so that the relative transaction costs are kept reasonably low; and
    - low enough so that also lower income citizens can afford to buy a municipal bond.

  The total amount of debt can be varied (in multiples) by the number of municipal bonds issued.
- Maturity: A major distinction is made between short term municipal bonds (so called "notes") and long term ones. The criterion for notes is one year of maturity, as a maximum. Municipal entities normally use these notes for bridge financing – so when they expect to collect some revenue, soon, but need the cash, now. Long-term bonds are normally integrated into infrastructure projects. A term of 10 or 30 years is still very common.
- Coupon: The price for borrowing is the interest. Bonds express their interest claims in coupons. For municipal bonds, a coupon for every half a year is a common standard, too.
- Securitization: There are two main principles of securitization:
    - General obligation: Principal and interest are secured by the "full faith and credit" of the borrower, including all its assets and revenues, as there are for municipalities, in particular: charges, fees and property rates.
    - Project obligation: Principal and interest are secured by the assets and revenues that are generated by the specifically funded (infrastructure) project. The lender is given a priority right on these. All other assets and revenues of the borrower are excluded from that obligation.
- Use of funds: Here, we distinguish between the following two types:
    - Free use: The issuer can spend the principal for whatever purpose.
    - Specific use: The bond stipulates the purposes that the principal is spent for. In a "green" bond, for instance, the principal is dedicated to specific local public projects with a positive ecological impact [see next subsection].
- Taxation: Municipal bonds are taxable or tax exempt. This distinction can be made with respect to different tax authorities and different tax types. One reason for a bond to be tax exempt is that the benefits that the bond holder generates for the municipality or other public entities are not fully covered by the interest payment.
- Special options: Municipal bonds can offer different options to the borrower or to the lender to change the status of the bond during the tenure. For instance, if the municipal bond is callable, the borrowing municipal entity is allowed to redeem it, before (stipulated) maturity. Certain standards may be in place as to when and to what degree the municipal bond can be redeemed.

What makes a municipal bond essentially different from a similarly standardized corporate bond, is the special status of the issuer. – Just to remember:

A municipality has its own territory. On this territory, the local community gives it a mandate. From that mandate, specific powers and functions are derived. To justify its powers and fulfil its functions, the municipality has to follow specific rules and processes. In an intergovernmental system, these powers and functions, rules and processes become related to other public entities of the same or a different public sphere.

Hence, due to this special status, the following aspects can become rather relevant for a municipal bond:

- Economic and social development and planning: The issuance of a municipal bond should be part of a broader and consistent socio-economic plan by the municipality.
- Positive externalities: A major task of local government is to provide those goods to the community which generate significant positive externalities, as it is typically the case for infrastructure. The specific problem with those goods is to generate sufficient own revenue.
- The power to tax: In order to internalize externalities, the government is given the power to tax. However, citizens might still find ways to avoid or evade taxes.
- Intergovernmental grants: If also other spheres of government profit from municipal infrastructure delivery, it seems easy to justify that they contribute to the cost recovery. However, different entities may have different norms, different incentives, preferences, endowments and information. Hence, there may be an increased risk of misallocation of resources.
- Public participation: According to democratic principles, a municipal entity needs to integrate the community into their decision making. The process may thus diverge in form, content and speed from the expectations of a bond market.
- Social cohesion: The effectiveness of infrastructure funding and delivery may be highly correlated with the degree of social cohesion in the respective municipality.

All these aspects will thus determine the municipal bond market outcomes.

The essential outcomes are:

- Price;
- Fluctuation of price;
- Liquidity/ transaction volumes;
- Yield/ return.

To make municipal bonds successful on the market, it needs a highly detailed, structured, skilful and diligent management process.

The main players and measures in such a process typically are:

- Municipal issuer: The municipality first finds out what its financial capital needs are. The respective figures may be derived from its general socio-economic planning.

Then, it checks to what degree these needs could best be covered by municipal bonds. It integrates those figures into its budgetary planning process.
To implement its borrowing plans, the municipality may be required to get the consent from its community. A very explicit consent could be given in a specific referendum. The reason for the requirement would be that municipal borrowing particularly affects the financial plannings of the citizens. In one way or the other, they will have to carry the costs in the future.
If consent is given, the municipality can start to promote the issuance of its bonds. This is in particular done via an "official statement"; which is equivalent to a "prospectus" in the case of corporate issuance. Thus, the official statement informs about the financial status and plans of the municipality, in general and in specific. In specific, it informs about:
    - the terms and conditions of borrowing;
    - how the borrowed money will be spent;
    - how the debt is going to be repaid.

Thus, a contract is drafted between the municipality and potential bond buyers/ lenders.
If a full contract is successfully concluded, the bonds issued, the municipality has to provide its creditors and other stakeholder with relevant news. In a standard way, this will be done via Special Bond Reports or Material Event Notices.

- Municipal advisor: The municipal advisor is an expert for municipal bond management who tries to promote the particular interests of the municipal issuer. Thus, she analyses the relevant financial state of the issuer, explains the issuance process to them and advises them on how to optimally proceed. One major part of the advisory deals with the management of the stakeholder relationships.
- Bond counsel: The bond counsel mainly consists of legal experts. The municipality establishes it to deal with legal matters, related to the bond issuance. Thus, the counsel performs in particular the following tasks:
    - To monitor compliance with all applicable laws and regulations;
    - In particular, to interpret and apply tax regulation;
    - To draft relevant legal documents, as the loan agreement, for example;
    - To document and register relevant legal actions;
    - To anticipate and advice on (potential) legal issues.
- Credit rating agency: A credit rating agency (CRA) assesses the credit-worthiness of the municipal issuer, in general, or the issued bond, in particular. The credit-worthiness describes the ability of the issuer to redeem the bond. For its assessment, the CRA uses standardized information, categories and methods. It may give an outlook and recommendations on how the credit-worthiness could be improved.
- Underwriter: The underwriter is the administrator of the issuance and the distribution of the bonds. This organization serves as a coordinator between demand and supply on the bond market. It thus analyses given market conditions and derives terms and conditions for a bond that could be market suitable or even optimal. To strengthen its commitment, the underwriter in some cases assumes parts of the

issuance risk. This means that it will keep those bonds which could not be sold under the terms and conditions suggested by it.

- Broker: The broker is the organizer and executor of the bond transaction. Since municipal bonds can be highly complex products, their transactions may still incur a lot of measures. After the commitment to a transaction, several different exchanges have to be made. There are different obligations for buyer and seller, which may be fulfilled in different points in time. These obligations incur transaction risks. The broker uses his special technical, human and organizational capacities to optimally manage these risks. The transaction results will be documented – in accordance with legal requirements.

This management process is guided by an extensive system of laws and regulations, by market conventions and by the specifically developed capacities of the actors.

The "Green Bond" as a Special Type

A green bond is a special type of bond; in which the use of the principal is earmarked for "green" investments.

Green investments are characterized by their positive ecological impact. Such an impact can come in two ways:

1. The investment repairs damages that have already been made to the environment.
2. The investment avoids ecological damages or incurs less than an alternative, non-green investment.

Each of these two ways confronts the investor with a specific challenge:

- In way 1, it will be more difficult for them to generate specific revenue.
- In way 2, they will face higher costs than a non-green investor.

At the end, the green investment will generate a lower specific return than a non-green investment. Hence, the green investment needs some extra source of revenue for compensation. For a public investor, this extra source can be a tax; for a local public investor, the property tax, in particular. If the investor borrows money to fund their green investment, they can try to carry over some of the minus/ deficit in specific return to the lender.

The specific advantages of green bonds are:

- They give access to a specific group of capital lenders with a special preference for green investments.
- They increase public awareness of and participation in green investments.
- They give green investments a standardized financial structure.

- They require green investments to undergo a standardized monitoring and evaluation process.
- They strengthen the investor's environmental commitment.

The specific disadvantages are:

- It needs additional conceptualization, monitoring, evaluation and reporting.
- The bond management is more intensive and demanding.
- The administrative costs are higher.
- The borrowers are less flexible in their investment decisions.
- There is a special risk of "green washing"; which means that the borrower or the lender uses the bonds excessively to improve their green image.

To give a particular example:

In 2014, the City of Johannesburg (CoJ) became the first South African municipality to issue a green bond (COJG01). Being a member of the "C40 Cities Climate Leadership Group", the CoJ had planned this issuance so as to "respond comprehensively to climate change through mitigation and adaptation investments."[2] In particular, the proceeds were earmarked for projects on "Bio Gas to Energy", "Solar Geyser" and "Dual-Fuel Buses". The bond had a nominal principle of R1.458, an interest rate of 10.18%, a tenure of 10 years and an issue price of 100%. The issuance took place at the Johannesburg Stock Exchange (JSE). The bond was over-subscribed by 50%. It thus realized a positive spread (lower interest) against a benchmark green bond and non-green bond, issued before by the same city. – To date, the CoJ has served its respective debt as contracted.

What are Their Strengths and Weaknesses?

The strengths and weaknesses of municipal bonds can more easily and adequately be detected, analysed and evaluated in comparison with their main alternative. This alternative is normally municipal bank lending. The three main differences between these two types of lending are:

1. Bundling: In municipal bond lending, activities are less bundled; which means, there are more different and independent actors involved in the process.
2. Competition: Municipal bond lending tends to be more competitive, because there are more actors involved; and processes, services and products are more standardized.

[2] Tau (2014).

3. Control: Municipal bonds spread their effects more widely. It therefore needs a wider network of control to make the effects beneficial. Such a network needs to be carried by some stronger institutions. [3]

Thus, the following points can be considered as the basic, potential strengths of municipal bonds:

- They promote specialization; which promotes greater knowledge.
- They create competition; which leads to improvements of services, in quality and price.
- They enforce public disclosure; which forms a basis for a fruitful public discussion and an effective public control.
- They are marketable/ liquid; which gives individual lenders more flexibility in their revenue, expenditure, asset, liability and risk management.
- They are dividable and distributable; which makes an overall reduction of risks more efficient.

The basic weaknesses of municipal bonds might be:

- Their terms and conditions are less specified, less flexible.
- The relationship between debtor and creditor is more anonymous, less trustful, less intensive and less fruitful.
- There are less synergies arising out of different activities in the planning and implementation process.
- There are more transaction costs, as for example:
  - Municipal advisor fees and expenses;
  - Bond counsel fees and expenses;
  - Underwriter’s discount;
  - Bond insurance premiums;
  - Rating agency fees;
  - Registration costs.

How much these basic, potential strengths can be realized and the basic, potential weaknesses mitigated, depends on the following factors:

- Financial market conditions: The better the conditions are on the overall financial market, the stronger municipals bonds can become as one of the options. Essential conditions are:
  - number and structure of participants,
  - values and preferences of participants,
  - information technology,
  - transaction costs, and
  - regulation.

[3] See GIZ (2012); Kim (2016).

- Institutional structure of and around the municipality: A municipality is embedded into a wider institutional structure (laws, regulations, conventions). The ways, in which it is allowed to practice bond borrowing, depend on this structure. Inner and outer structure should be compatible.
- Individual and institutional capacities: It depends on the specific capacities, the respective knowledge and skills, how well the municipality can practice bond borrowing.
- Financial state of municipality: Bond borrowing becomes easier, when the municipality is in a good financial state, in particular, when it has a strong own-revenue basis and extensive, attachable assets.
- Type of infrastructure to be funded: A municipal infrastructure project can be more easily funded via bonds, when the project is technically and financially rather less complex and rather routine or standardized.

How have Municipal Bonds been Doing in the USA?

The History

To learn about municipal bonds, it seems particularly worthwhile to look at the country that has the strongest tradition in the use of that funding instrument. Apparently, this is the USA.

American municipalities started to issue bonds in the early 19th century. Officially, the first bond – a general obligation bond – was issued by the City of New York, in 1812, to fund a canal project. In the following decades, the issuance of municipal bonds expanded as municipal infrastructure building did. A first focus of infrastructure development was laid on education facilities. After the civil war (1861 to 1865), the focus was shifted to railroads; which lead to a first special boom of municipal bond borrowing. With the depression of 1873, many municipalities got into trouble with their payment obligations. Thus, the first special boom came to a halt. As a consequence, several states tighten their regulations on municipal borrowing. When the U.S. economy recovered, the municipal bond market also regained a positive dynamic.[4]

Today, the U.S. municipal bond market is – apparently – the most extensive and structurally developed, worldwide. On that market, more than 50 000 municipal entities have issued bonds. The variety of bond types has become so broad that it is now particularly challenging to grasp the complexity of the market. The total value of these bonds amounts to around USD 3.7 trillion. Millions of domestic or foreign investors keep or trade these securities.

[4] See Wikipedia (2017-01): Municipal …; Neighborly Learning Center (2015/ 04/ 20), ch. 2; Temal (2001).

Many of them by specific mutual (MF) or exchange traded funds (ETF). The trading is facilitated by around 28 000 registered professionals.[5]

Market Regulation: The Municipal Securities Rulemaking Board (MSRB)

In the history of the U.S. bond market, there were many instances in which the market behaviours and outcomes seemed to be far less than optimal. Moreover, the market seemed not to be able to correct itself to a sufficient degree.

Therefore, in 1975, the U.S. Congress founded the Municipal Securities Rulemaking Board (MSRB). Its first mandate became to regulate financial companies or agents that underwrite or trade municipal securities. In 2010, the Congress considerably extended that mandate by the regulation of financial agents that offer advice to municipal entities on the issuance of bonds.

Thus, the MSRB's mission now is "to protect investors, municipal entities and the public interest by promoting a fair and efficient municipal securities market." [6] From this mission, the following main current tasks have been derived:

- To establish rules for fair and socially efficient behaviour of dealers and municipal advisors;
- To improve market transparency and knowledge by own research, by the collection and dissemination of relevant market information;
- To demonstrate positive leadership and to strengthen its impact;
- To educate a wider public in relevant matters of the municipal bond market.

The MSRB is supervised by the Securities and Exchange Commission (SEC). It funds itself through fees and assessments on registered municipal securities dealers and municipal advisors.[7]

The Electronic Municipal Market Access (EMMA®) Platform

The Electronic Municipal Market Access (EMMA) platform is a central tool by the MSRB in fulfilling its mission; which is in particular, to improve the transparency of the municipal bond market and the knowledge of the participants.

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[5] See MSRB (2016): Annual ...
[6] MRRB (2016): The MSRB and ..., p. 2.
[7] See MSRB (2016): The MSRB and ...

The EMMA website has been designed and created to assist, primarily, investors to:

- Find out which municipal bonds are traded under which terms and conditions;
- Compare and evaluate the different bonds;
- Monitor bond investments.

The website thus provides:

- Official statements;
- Continuing disclosures (special bond reports, material event notices, etc.);
- Escrow deposit agreements for advance refinancing of outstanding bonds;
- Audit reports;
- Ratings;
- Real-time municipal bond trade price information;
- Interest rates;
- Daily statistics on trading activity;
- Default notices, taxability notices, notices of rating changes;
- Investor education materials (glossary, videos, fact sheets, webinars and podcasts).

For the public, all these provisions are offered for free. They can be received under the address:

http://emma.msrb.org

And there are still more provisions in planning, as for instance:

- Mark-ups in municipal bond transactions;
- Transactions indicators that occur on alternative trading systems (ATSs);
- Bank loan information;
- Email reminders for issuers when their recurring disclosures are about to be due.

Market Performance: The S&P Municipal Bond Index

The "S&P Municipal Bond Index" is a broadly and comprehensively constructed, market value-weighted index that seeks to measure the performance of the U.S. municipal bond market. First of all, it is thus a mathematical construct that gives condensed information about the value of a general, or an average bond on that market. The construction of that index is rule-based, but also allows for discretionary corrections in the case of abnormal market conditions. The index consist of a broad-based main index and, in addition, several sub-indices. Some of them are:

- The S&P Municipal Bond General Obligation (GO) Index;
- The S&P Municipal Bond Revenue Index;
- The S&P Municipal Bond Insured Index;

- The S&P Municipal Bond Investment Grade Short Intermediate Index;
- The S&P Municipal Bond High Yield ex Puerto Rico Index;
- The S&P Intermediate Duration Municipal Yield Index.

Basically, every bond that is traded on the U.S. bond market could be included into that main index. However, in order to really qualify, it also needs to pass at least the following criteria:

- Exemption from U.S. federal income tax;
- Held by a mutual investment fund;
- Daily pricing;
- Specific class code designation;
- Denomination in USD;
- Minimum par amount of USD 2 million;
- Minimum term to maturity of one calendar month.[8]

In our context, it seems particularly interesting to analyse the index figures below. We compare the S&P Municipal Bond Index with two others, specifically related indices; which are:

- The "S&P U.S. Treasury Bond Index": It is also a broadly and comprehensively constructed, market value-weighted index that seeks to measure the performance of the U.S. Treasury Bond market.
- The "S&P 500® Bond Index": This one has been designed as a corporate bond-counterpart to the S&P 500. It is also value-weighted and thus seeks to describe the performance of the U.S. corporate bond market.

Table 1: Calendar Year Performance, Total Returns, 2007 to 2016;

	2007	2008	2009	2010	2011
S&P Municipal Bond Index	2.81%	-5.09%	14.63%	2.45%	10.63%
S&P U.S. Treasury Bond Index	8.44%	12.20%	-3.06%	5.38%	7.57%
S&P 500 Bond Index	4.78%	-3.52%	17.02%	8.72%	7.77%

[8] See S&P Dow Jones Indices (2016/ 09): S&P Municipal Bond Index Methodology.

	2012	2013	2014	2015
S&P Municipal Bond Index	7.42%	-2.55%	9.26%	3.32%
S&P U.S. Treasury Bond Index	1.56%	-1.95%	3.65%	0.81%
S&P 500 Bond Index	9.17%	-1.02%	7.47%	-0.38%

Source: S&P Dow Jones Indices (2017/ 01): Index Finder.

Table 2: Return, risk and yield[9] indicators:

	10 years annualized return	10 years risk (std. dev.)	yield to maturity	yield to worst
S&P Municipal Bond Index	4.20%	0.89	3.24%	2.56%
S&P U.S. Treasury Bond Index	3.42%	0.95	1.67%	1.67%
S&P 500 Bond Index	5.44%	0.96	3.32%	3.29%
	as to 2016/12/30	as to 2016/12/30	as to 2017/01/10	as to 2017/01/10

Source: S&P Dow Jones Indices (2017/ 01): Index Finder.

The main results out of both tables are:

- In these 10 years, the S&P Municipal Bond Index generated an annualized return of 4.20%; the risk was 0.89; it reached a high of 14.63% in 2009, after a low of -5.09% in 2008.

[9] The yield to worst (YTW) is the lowest potential yield that can be received on a bond without the issuer actually defaulting. The YTW is calculated by making worst-case scenario assumptions on the issue by calculating the return that would be received if the issuer uses provisions, including prepayments, calls or sinking funds. This metric is used to evaluate the worst-case scenario for yield to help investors manage risks and ensure that specific income requirements will still be met even in the worst scenarios.

- In the same period, the S&P U.S. Treasury Bond Index had an annualized return of 3.42%; a risk of 0.95; a high of 12.20% in 2008, before a low of -3.06% in 2009.
- The S&P 500 Bond index performed with an annualized return of 5.44%; a risk of 0.96; a 10 years high of 17.02% (2009); and a low of -3.52% (2008).
- At this point in time, the S&P Municipal Bond Index promises a yield to maturity of 3.24%; the S&P U.S. Treasury Bond Index of 1.67%; the S&P 500 Bond Index of 3.32%.
- In the case that issuers take the most unfavourable options with respect to the holders, the yields (to worst) would be: 2.56%, 1.67% and 3.29%, respectively.

Some tentative conclusions from these and other sources[10] would be:

- U.S. municipal bonds offer a fairly attractive risk-return profile.
- One strong component of their return is tax exemption.
- Their default rate is relatively low.
- Their return profiles differ considerably from those of other types of securities, as for instance Treasury or corporate bonds. Thus, they are highly expedient for portfolio diversification/ risk reduction.
- In comparison to Treasury bonds, their prices are much less influenced by monetary policy.
- In comparison to corporate bond, they lack profitability.
- The U.S. municipal bond secondary market is still less liquid than other comparable markets.

How are They Doing in South Africa?

Regulation

In South Africa, there are two main sources of regulation for municipal bonds:

- The Constitution (1996);
- The Municipal Finance Management Act (MFMA) (No. 56 of 2003).

The Constitution states in section 230A, "Municipal Loans":

(1): "A Municipal Council may, in accordance with national legislation—

(a) raise loans for capital or current expenditure for the municipality, but loans for current expenditure may be raised only when necessary for bridging purposes during a fiscal year; and

[10] See also Blackrock (2016); Wilmington Trust (2016/ 11/ 18).

(b) bind itself and a future Council in the exercise of its legislative and executive authority to secure loans or investments for the municipality."

The Constitution thus opens a wide legal space for municipal bonds, especially for long-term bonds that are used to fund infrastructure investments.

The MFMA specifies the respective rules of the Constitution, in particular in its chapter 6, called "Debt".

In Section 46, more specific rules for "Long-Term Debt" are stipulated:

"(1) A municipality may incur long-term debt only in accordance with and subject to any applicable provisions of this Act, ..., and only for the purpose of—

(a) capital expenditure on property, plant or equipment to be used for the purpose of achieving the objects of local government as set out in section 152 of the Constitution, ...; or

(b) re-financing existing long-term debt ..."

One of the objects defined in sections 152 of the Constitution is:

"(b) to ensure the provision of services to communities in a sustainable manner".

The permission for re-financing gives municipalities more flexibility in their infrastructure development.

Article (2) of MFMA section 46 defines main powers and functions in the long-term borrowing procedure:

(2) A municipality may incur long-term debt only if—

(a) a resolution of the municipal council, signed by the mayor, has approved the debt agreement; and

(b) the accounting officer has signed the agreement or other document which creates or acknowledges the debt."

Hence, the main responsibilities are with the municipal council, the mayor and the accounting officer.

Part (a) of section 47 prohibits to take specific foreign currency risks:

"47. A municipality may incur debt only if—

(a) the debt is denominated in Rand and is not indexed to, or affected by, fluctuations in the value of the Rand against any foreign currency".

Section 48 regulates when and how to provide "Security":

48. (1) A municipality may, by resolution of its council, provide security for—

(a) any of its debt obligations;

(b) any debt obligations of a municipal entity under its sole control; or

(c) contractual obligations of the municipality undertaken in connection with capital expenditure by other persons on property, plant or equipment to be used by the municipality or such other person for the purpose of achieving the objects of local government in terms of section 152 of the Constitution.

(2) A municipality may in terms of subsection (1) provide any appropriate security, including by—

(a) giving a lien on, or pledging, mortgaging, ceding or otherwise hypothecating, an asset or right, or giving any other form of collateral;

…"

Based on that, municipalities are allowed to meet essential and reasonable expectations on security of capital lenders.

Moreover, the lenders and other stakeholders will expect to be adequately informed by the borrower. Section 49, "Disclosure", stipulates:

(1) Any person involved in the borrowing of money by a municipality must, when interacting with a prospective lender or when preparing documentation for consideration by a prospective investor—

(a) disclose all information in that person's possession or within that person's knowledge that may be material to the decision of that prospective lender or investor; and

(b) take reasonable care to ensure the accuracy of any information disclosed.

…"

This section gives the lenders and stakeholders a strong claim and lays a strong foundation for trust and exchange between the different sides.

The Policy Framework for Municipal Borrowing and Financial Emergencies

In 1998, the South African Department of Finance/ National Treasury (NT) published a document, called:

> "Policy Framework for Municipal Borrowing and Financial Emergencies" (PFMBFE).

This document had been written with four key motivations:

- To further develop the relevant legal framework;
- To further clarify and optimize powers and functions in municipal borrowing;
- To improve financial health of and service delivery by municipalities;
- To overcome the earlier stagnation of the municipal debt market.

The PFMBFE discusses and gives recommendations to four main questions:

1. Which municipal entities should be allowed to issue debt?
2. How should powers in municipal borrowing be distributed between different government entities and within the issuing entity?
3. What type of debt should municipalities be allowed to issue?
4. How much should municipalities be allowed to borrow?

Ad 1.)

The PFMBFE argues that there is insufficient justification for the law-maker to classify municipalities to give them different restrictions on how and how much they are allowed to borrow. The framework gives three reasons for that:

1. South African municipalities had not yet come close to reasonable limits of borrowing. The general problem was rather under-borrowing.
2. Municipalities should not be discouraged to improve their credit-worthiness because of inadequate classification by the law-maker.
3. Under good market conditions – with in particular high transparency – (potential) lenders would rather be able and willing to determine where the right limits for municipal borrowing are.

Ad 2.)

The PFMBFE would assign the main responsibility for municipal borrowing to the municipal council. They justify their opinion with two reasons:

1. Such an assignment conforms best to the general South African fiscal framework – with its principle of fiscal equivalence.
2. This principle avoids that lenders pull other government entities into liability.

Ad 3.)

As the fundamental principle, the PFMBFE endorses a maximal free space for municipal borrowers to design a contract that best fits their needs. Restrictions, however, should be given in particular with respect to the pledging of:

- Assets that help to provide basic services;
- Revenue streams that are needed to provide basic services.

Ad 4.)

The PFMBFE opposes against the idea to introduce a fixed legal debt limit for municipality. It does this with the following arguments:

- Municipalities are very diverse in their financial conditions and needs.
- It is theoretically very difficult to justify a specific set of debt limit rules and values.
- It is practically very difficult to implement such a set of rules and values.

- It would be easy for a municipality to circumvent such rules and manipulate their values.
- The lenders might be in a better position and better incentivized – it is about their own money – to set the right debt limits to municipalities.

Overall, the PFMBFE was apparently written in a market optimistic spirit. Nevertheless, it acknowledges the need for high transparency (disclosure) and fair and efficient facilitation on the capital market to work properly. And the creation of these conditions might need to be guided by the law-maker.[11]

Current Debt Policy

To better assess the opportunities and risk of municipal bonds in South Africa, it is helpful to first analyse the general state of municipal debt.

Table 3 presents four key variables of the municipal debt; which are:

- Total debt;
- Budgeted revenue;
- Gross value added;
- Size of Population.

The following ratios have been derived from them:

- Debt to revenue ratio;
- Debt as % of GVA;
- Debt per capita;
- Respective total metros to total municipalities.

The numbers have been given or calculated for:

- Each of the 8 metros;
- The total of metros;
- The total of municipalities.

Table 3: Key variables of municipal debt in South Africa.

[11] NT has planned to revise the PFMBFE with the assistance of its "Urban Finance Working Group".

	Total debt, Q4 2015/ 16, in R'000	Budgeted revenue, 2015/ 16, in R'000	Gross value added (GVA), in R'000	Size of Population
BUF	496477	5719607	62122732	755200
NMB	1411952	8885456	94565655	1152115
MAN	722063	6740247	58872541	747431
EKU	5411930	29454839	266048559	3178470
JHB	18071380	43788546	549810995	4434827
TSH	10861687	26295831	313014335	2921488
ETH	9236444	29534286	339978590	3442361
CPT	6627090	31723843	349948095	3740026
Total metros	52839023	182142655	2034361502	20371918
Total all muncipalities	60 902 671	304 254 061	5 145 262 421	51770560
Share of metros	86.76%	59.87%	39.54%	39.35%

	Debt to revenue ratio	Debt as % of GVA	Debt per capita
BUF	8.7%	0.8%	657
NMB	15.9%	1.5%	1226
MAN	10.7%	1.2%	966
EKU	18.4%	2.0%	1703
JHB	41.3%	3.3%	4075
TSH	41.3%	3.5%	3718
ETH	31.3%	2.7%	2683
CPT	20.9%	1.9%	1772
Total metros	29.0%	2.6%	2594
Total all muncipalities	20.0%	1.2%	1176

Source: NT (2016/ 12): Local Government Data Base.

The following results may be highlighted:

- JHB and TSH carry the highest absolute and relative debt burdens:
    - The debt to revenue ratios are exactly equal in both of these metros, with 41.3%;
    - In JHB, the debt to GVA is a bit lower: 3.3% versus 3.5%; while
    - The debt per capita is higher: R 4075 versus R 3718;
- Clearly, the lowest debt burden is carried by BUF:
    - Its debt to revenue ratio is 8.7%;
    - Its debt to GVA 0.8%; and
    - Its debt per capita R 657;
- The second lowest burden is carried by MAN (15.9%; 1.5%;1226).
- Altogether, the 8 metros have taken an over-proportional share in the indebtedness of South African municipalities:
- Their share in the total debt of all municipalities is 86.76%; while:
    - Their share in budgeted revenue is 59.87%;
    - Their share in GVA 39.54%; and
    - Their share in population 39.35%.

Tentatively, the following reasons can be given, for why the bigger municipalities take higher debts:

- They are economically more dynamic;
- They are considered more credit-worthy;
- They invest more in infrastructure;
- They can fund less with grants;
- They have better individual and institutional capacities to manage debts.

In the context of the general debt policy of municipalities, it can be better assessed what role municipal bonds play or should play.

Table 4 presents relevant numbers of the only three South African municipalities that have issued long-term municipal bonds.

These municipalities are:

- CPT;
- JHB;
- TSH.

The relevant variables are:

- The number of debt/ bond instruments;
- The average interest rate per annum;
- The amount of interest paid in a period;
- The balance at the beginning of a period;

- The balance at the end of a period;
- The share of this instrument/ bonds in the total debt.

Table 4: Bonds of South African Municipalities, as to 4th quarter 2015/ 16.

LT - Marketable Bonds ('000)

	No of Instruments	Average Interest Rate per Annum	Interest Paid this Qrt	Balance at Begin of Qrt	Balance at End of Qrt
CPT	3	11.63	132,540	4,200,000	4,200,000
JHB	11	10.70	290,602	6,475,667	6,475,667
TSH	9	9.52	101,562	2,140,000	2,140,000
TOTAL	23	10.62	524,704	12,815,667	12,815,667

Total Debt ('000)

	Balance at Begin of Qrt	Balance at End of Qrt	Share of bonds in total debt
CPT	6,680,703	6,627,090	63.4%
JHB	18,288,477	18,071,380	35.8%
TSH	9,840,629	10,861,687	19.7%
TOTAL	34,809,809	35,560,157	36.0%

Source: NT (2016/ 12): Local Government Data Base.

Most interesting results in our context are ('000):

- About CPT:
  - It uses the lowest number of bonds; which is only 3;
  - To reach in absolute terms a medium balance: R 4 200 000;
  - It has to pay the highest interest rates, with 11.63% on average;
  - But gives bonds the highest share in its debts: 63.4%.
- About JHB:
  - It has created the highest number of bonds, which is 11;
  - These have altogether left the highest respective balance: R 6 475 667;
  - JHB pays a medium average interest rate on that: 10.70%;
  - The share of bonds in total debt is: 35.8%.
- About TSH:
  - Their 9 bonds have created a comparatively low debt of R 2 140 000;

- The average interest rate to pay for them is the lowest: 9.52%;
- Their share in total debts is also comparatively low: 19.7%.

These results may at first appear rather confusing. Some plausible explanations for them might be:

- Economies of scale are not so important in bond issuance.
- The interest rate is determined by:
  1. The municipalities credit-worthiness;
  2. The overall market demand for securities;
  3. The return for alternative investments;

  Factors 2 and 3 fluctuate a lot.
- There is path dependency on specific terms and conditions of bonds.
- Bond investors consider a municipality's debt structure in their own risk management.

How Could Municipal Bond Borrowing be Improved in South Africa?

A special characteristic of a bond is its standardization. The standardization helps to make this debt instrument tradable. The special characteristics of a municipal bond are based on the special status of its issuer, as a local public entity. There is – as a standard on a basic level – a long process with many players involved which leads to the issuance of a municipal bond.

For the issuers, the two main advantages of bond borrowing might be that:

- It allows them to address a wider spectrum of creditors;
- It makes them more independent.

The two main disadvantages might be:

- It offers less flexibility in the terms and conditions;
- It incurs higher transaction costs.

The degree to which these potential advantages and disadvantages become real, especially depends on:

- The market regulation;
- The capacities of the borrower.

The USA has a long and strong tradition of municipal bond borrowing. Nevertheless, there were also strong signs and instances of bond market failure. Therefore, they established a market regulation institution, called MSRB. Its main task is to promote efficiency and fairness on the municipal bond market – in the interest of the public in general, and the municipalities in particular. With the help of the "S&P Municipal Bond Index", it can be shown – maybe more from a creditor's perspective – that the U.S. municipal bond market has worked quite well over the last years.

Now the question may be asked:

> What is it that can be learned from the theory and this practical case for municipal bond borrowing in South Africa?

The main piece of legislation for municipal bond borrowing in South Africa is the MFMA. The MFMA states that municipalities are only allowed to incur long-term debt for the purpose of specific capital expenditure on property, plant or equipment, or re-financing of existing long-term debt. To secure its debt, a municipality is allowed to hypothecate an asset that is not bound by any higher-ranked local government objective. The main responsibility of debt issuance lies with the council; mainly supervised by the mayor and the accounting officer. Altogether, the MFMA opens a rather wide legal space for municipalities to use bonds.

To give more guidance, NT wrote and published the PFMBFE. This Policy Framework mainly discusses five questions:

1. Which municipal entities should be allowed to issue debt?
2. What should be their respective and related powers, functions and responsibilities?
3. What type of debt should they be allowed to issue?
4. How much should they be allowed to borrow?
5. For which purpose should they be allowed to borrow?

The answers are given in a market optimistic spirit. Nevertheless, NT emphasizes that capital markets need a high degree of transparency and proper facilitation in order to work in a fair and efficient manner.

In South Africa, there are only three municipalities that have issued long-term bonds, namely:

- CPT,
- JHB,
- TSH.

The most interesting results in our context seems to be:

- JHB has – in absolute terms – the highest amount of outstanding debt in long-term bonds (R 6 475 667).
- CPT has the highest share of bonds in its total debt (63.4%).
- TSH pays the lowest average interest rate (9.52%).

Altogether, there has been little use of municipal bonds in South Africa by now. The results out of those activities are rather inconclusive and thus difficult to interpret. Nevertheless, the following recommendations may be given on how South African municipalities can improve their use of bonds:

- They need to increase their credit-worthiness according to the way in which it is measured by the rating agencies. Thus, the following financial indicators become even more important to them:
    - Debt per capita;
    - Debt per GDP;
    - Debt per pledgeable assets;
    - Debt per total revenue;
    - Debt service costs per operating revenue;
    - Capital expenditure per total expenditure;
    - Own source revenue per total revenue.

  Other indicators that are more oriented towards long-term social development might thus lose in importance.
- The municipalities need to increase their capacities for bond management. Bond borrowing incurs specific players, rules, procedures, options and dynamics to deal with.
- They need to develop and present adequate infrastructure projects. Such projects are rather more standardized, less complicated, less risky and more profitable.
- They need to be more global in their development policy; since that is what international creditors usually expect from them.
- They need to be more careful in their communication policy; since global capital markets are very sensitive, responsive and prone to biases.
- There needs to be external support:
    - to improve bond market rules and other conditions;
    - to get relevant information;
    - to develop the required capacities;
    - to be protected from (intended or unintended) misuse.

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