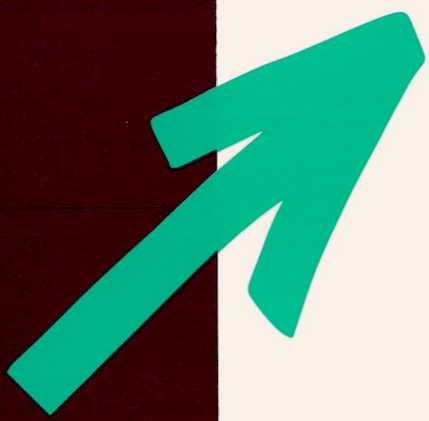
Municipal Bond Financing: Lessons for Israel

Nahum Biger and Steven Plaut



The Floersheimer Institute for Policy Studies

THE FLOERSHEIMER INSTITUTE FOR POLICY STUDIES

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About the Research

In recent years the decision-making community on the local and national levels is addressing the issue of introducing municipal bonds into the capital market in Israel, that will facilitate capital raising in local authorities and extend their available resources.

The Floersheimer Institute for Policy Studies has initiated a series of studies on this issue within the framework of its research agenda on local governance and development. Biger and Plaut, experts in the field of finance, examine the experience gained in the field of municipal bonds in the U.S. and its lessons for Israel, and present proposals and recommendations for their implementation in Israel.

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Introduction

Throughout the world, local authorities - including municipalities, regional governments, etc. are major borrowers of funds. Borrowed funds represent one of the three main sources of funds that can be used by local authorities to finance local public finance expenditure. These three are:

- Tax receipts, where property taxes often play an important role.
- Revenue sharing arrangements with the central or federal governmental authority.
- Borrowing.

In some senses, the third option is a time-deferred version of the first two options, as eventually debts must be paid, although "recycling" of debt (or issuing new debt to repay old debt) could theoretically take place indefinitely, at least within some limits. Without the anticipation on the part of lenders and creditors that the local authority will have access to the first two sources of funds in the future, it is doubtful they will lend at all to the local authority.

The last of these sources of funds can be divided into two alternative "modes" of borrowing:

- Borrowing from banks and other institutional lenders.[1]
- Issuing debt securities.

The debt securities issued within the framework of the second of these "modes" are referred to as "municipal securities" or - more generally - "municipal bonds". Other than straight bonds, they may include other financial forms and derivatives, including options, swaps, commercial paper issues, floating-rate notes, etc.[2]

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[1] In Israel there traditionally operated special financial institutions funded by the central government which extended loans to the local authorities.

[2] Feldstein, et al, (1983) and Gray (1995).

The second debt-financing alternative is really just a "securitized" version of the first alternative, where the main difference between the two is the "tradability" or "marketability" of the debt. If a bank were to make loans to a local authority that could then be traded and sold in a secondary market, the resulting "securities" would closely resemble municipal bonds. More generally, however, the prevalent contractual arrangement is for the securities to be issued by the local authority in tradable form, where the bank or other financial institution plays an underwriting or marketing/distribution role.

For a variety of reasons, municipal bonds have not been used in Israel by local authorities. They are however used widely overseas. The largest market for municipal bonds is in the United States, where they are an important part of the financial markets and an important source of funds for local authorities. Because of the federal character of government in the United States, fiscal activities of state and local government represent a large part of the entire public sector and are to a large extent independent of federal power. Hence sources of financing for local government that are independent of the federal government have always been crucial in the United States, and indeed were so even before American Independence during the colonial era.

The equivalents of municipal bonds also exist in many European countries and in Japan, but generally play a smaller role than in the United States. In some countries, such as Canada and Australia, the outstanding stock of municipal bonds represent a larger portion of GNP than they do in the United States. In the United Kingdom, the debt instruments of the local authority constitute about 3-8 percent of the debt market (with dropping trend in the 1990s). In Germany, the state governments, called Länder, issue mainly promissory notes (*Schuldscheine*) but occasionally also bonds (generally for 10 years). Their debt in mid-1992 was about DM58 billion, or about 3 percent of total debt in Germany. Other German public sector agencies besides the Federal Government that issue debt include the Federal Railways, the Post Office, and Treuhandanstalt (the agency for privatizing assets acquired in East Germany from unification). Municipal bonds represent about 15 percent of domestic debt securities in Norway, and include issues by local authorities as well as public-sector agencies, such as power companies. The Netherlands and Sweden both have small municipal bonds markets.[3]

Various public sector agencies besides the national Treasuries issue debt in a number of European countries. In France, for example, the state rail companies, the state power company, a state property financing agency, and a special municipal financing agency are large issuers of debt.[4]

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[3] Euromoney (1992). See also Heifetz & Co (1997).

[4] Euromoney, (1992).

1 The American Experience

In principle, municipal bonds can play not only a **financial role** but also a **political/federalist role,** as they allow state and local authorities to raise financing without the involvement of or control by the central or federal government. This strengthens the local authorities and enables them to undertake a large number of governmental and civic activities that otherwise would fall within the realm of the central authorities.

In the United States there are some 37,000 or so state, town, or county authorities, school districts, airports, public agencies, transit authorities, state hospitals, etc. who issue these bonds.[5] Municipal bonds are directly issued by these local authorities themselves, and are often underwritten by either investment banks or commercial banks.[6] (While American commercial banks are ordinarily prohibited from underwriting activities under the Glass-Steagall Act, municipal bonds were made an exception in the original law. Partly because of these underwriting activities, commercial banks are large holders of municipal bonds.)[7]

The bonds then trade in the secondary market over-the-counter (OTC). There are a large number of bond dealers, connected to one another and to brokers electronically, who "make the market" in municipal bonds. (One problem for Israel in developing a municipal bonds market is that no OTC market operates in Israel; on the other hand it is conceivable that municipal bonds could trade on the bond exchange at the Tel Aviv Stock Exchange, like other governmental and corporate bonds do currently.)

There are large and diverse numbers of municipal bonds in the United States. They are commonly divided into two large "families" based on their collateralization:

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[5] For institutional information, see Bierwag (1981), Feldstein, et al, (1983), Lamb and Rappaport (1980), Marlin and Mysak (1991), Zipf (1995).

[6] For a discussion of underwriting and issuing, see Bierwag (1981).

[7] There are also tax advantages to banks in these holdings.

Revenue Bonds (RB) - These are bonds where a specific source of revenue is earmarked for purposes of repaying the bond. Revenue bonds are often assigned names based on the nature of the source of revenue pledged for their repayment. Examples would include hospital bonds, airport bonds, sewer bonds, transit bonds, etc. In each case the local authority in a sense "sells" or subordinates a specific source of future revenue, such as fees from an airport's operations, transit tickets, hospital revenues, etc. A special case of the revenue "bond" is the "anticipation note". This is a short-term municipal security that is issued as a kind of "bridge financing" to tide the authority over until a source of revenue becomes available. For example, a "tax-anticipation note" or TAN allows the authority to spend tax income in advance of its actual receipt. Similarly, a "grant-anticipation note" or GAN allows the authority to spend the proceeds from a federal grant even before it is received. A "bond-anticipation note" or BAN allows the authority to borrow against the proceeds expected from an upcoming bond issuing.

General Obligation (GO) Bonds - These are municipal bonds that are "collateralized" by the entire range of revenue sources available to the local authority, including all forms of tax revenue, fee revenue, financing received from the central government, etc. The GO bonds are considered to constitute a *senior lien* against these revenues. Any revenues left over after servicing GO obligations are deemed to be subject to a *junior lien* toward revenue bondholders.

There are advantages and disadvantages to each of the two "families" of instruments. Under revenue bonds, the bond is in effect a *first-lien* on the specific source of revenue earmarked for that bond. If the revenue is sufficient to cover all obligations to the revenue bondholders, any surplus can be used by the local authority for other financial purposes, including servicing GO bonds. If the earmarked revenue is insufficient to service the revenue bond, the residual owed to revenue bondholders becomes a junior lien on the entire range of revenue sources of the local authority, junior to the claims of GO bondholders.

From an investor's point of view, when a revenue source is secure and plentiful, municipal bonds investment is probably safest when it is in a revenue bond for which that revenue is earmarked. Investors then have "first claim" on all such revenues. This advantage will be all the more important for local authorities in financial distress or approaching insolvency. In that case GO bondholders could lose their investment while revenue bondholders get repaid in full. On the other hand, if the revenue source is not secure and reliable, investors in GO bonds hold a safer investment because it is a senior claim on general revenues.

The determinants of the revenue source reliability are more complex. In the United States, the main source for local authority general revenue is the property tax. Property tax revenue in turn has been the subject of ballot proposition limitations in several states, for example the now-famous Proposition 13 in California. Once a ballot proposition sets limits to property taxes, voters in effect curtail the tax resources of the local authority. Where such limits create general revenue shortfalls, GO bonds become riskier. Over the past decade the share of municipal bonds in the United States that are revenue bonds has increased significantly, while the share of GO bonds has fallen. Tax limitation initiatives have been suggested as the explanation for this. Even the chance that voters will limit property tax rates in the future is sufficient to affect the bond ratings.

In other ways, municipal bonds overseas are not so different from ordinary corporate bonds. They can have similar contractual features, including provisions for repayment schedules, sinking funds, bond covenants, assignments of bond trustee, pricing formulas (selling at discount or par or at premium), etc. We see no reason why the central government in Israel should dictate to the local authorities how they choose to select or characterize these features in any securities they seek to market in a future Israeli municipal bonds market. We are sure the market is competent to price any and all bond structures efficiently.

How Safe are Municipal Bonds?

The answer to this question is complicated. On the one hand, municipal bonds are issued by parts of the public sector, which should generally mean they have low risk. On the other hand, there is a long and painful history of defaults and delinquencies in the municipal bonds markets, especially in the United States.

Briefly, in the United States, there was an early wave of defaults on municipal bonds in 1837-45, beginning with a yellow fever epidemic in Mobile, Alabama and then other cities defaulted, including Detroit and Philadelphia. The state of Mississippi defaulted on its bonds in the 1840s. Jefferson Davis, later President of the Confederacy, lost the election for Governor of Mississippi because he ran on a platform pledging to repay all debts in default. During and after the American Civil War, there were defaults on all bonds issued within the Confederacy and also on some issued in the Union. In the 1870s, South Carolina defaulted on a large issue of "Whorehouse Bonds," which got their colorful name from the location in which the Governor spent his working hours and where he signed the bond issuing orders. In the 1880s, Louisiana defaulted on a large issue of "Baby Bonds," so named because of a cartoon of a baby on them, after the State Comptroller had fled the country after stealing much of the proceeds and using

the bond plates to triplicate each bond's serial number. In the late nineteenth century there were debt repudiations by Alabama, Arkansas, Florida, Georgia, Michigan, Minnesota, North Carolina, and Virginia.

The Great Depression of the 1930s saw yet another wave of state and local debt repudiation and default, including by the cities of New York, Chicago and Cleveland. In Florida, 85 percent of municipal bonds were in default by the end of the Depression. During World War II, Florida municipal bonds again went into default. In 1958, $133 million of West Virginia Turnpike bonds went into default.

Most recently, in 1995 $1.73 billion of municipal bonds went into default, although this was less than 1 percent of all such debt outstanding. (Once in default, the bonds continue to trade, usually in the range of 50-60 cents on the dollar.) The most famous recent large defaults on municipal bonds were the New York City default in the 1970s, the Cleveland default in the late 1970s, and the Orange County default in 1995. In addition, a large number of sewer construction bonds in Colorado went into default in recent years. Another huge recent default involved the Washington (state) Public Power Supply System - WPPSS (which is now known in the professional literature as Whoops!!), which defaulted in 1983 on $2.25 billion in debt run up in building nuclear power reactors.

Because municipal bonds resemble corporate bonds more so than central government bonds in their default risks, we believe it is advisable that any such municipal bonds issued and introduced into Israel be covered by the same security laws, including disclosures and rules for publishing prospecti as for corporate bonds, and not be exempt like central government bonds are in Israel.

2 Advantages of Municipal Bond Financing

The introduction of municipal bond financing into Israel must take into account a number of factors and advantages and disadvantages of this method of financing local authorities:

Advantage 1: *Securitization is a key to reducing concentration and expanding competition in Israeli capital markets. Hence it benefits the Israeli economy as a whole. Municipal bonds would be part of this enhanced competition.*

Municipal bond financing represents a form of securitization and should be understood as such. In general "securitization" refers to the replacing or displacing of traditional bank lending operations by marketable securities. An example might be where borrowers of a certain type issue their own securities instead of borrowing through banks. In some cases, securitization consists of converting a loan contract between a bank and its customer into a marketable asset. In some cases the initiating bank does this conversion itself; in other cases a "securitizing" agency does the work.

Securitization is perhaps the most significant financial innovation in capital markets around the world in the past two decades. Much of the securitization first appeared in the United States, although by now there are many securitized markets in Europe, Japan, and occasionally even in less developed countries.[8] The oldest forms of securitization in the United States involve the mortgage markets. Three federal or federally-sponsored agencies involved in mortgages came to operate primarily as securitizers for mortgages originated by thrifts and banks: Fannie Mae,[9] Ginnie Mae,[10] and Freddie Mac.[11] Other somewhat-similar governmental agencies in the United States have also become securitizers for different categories of loans, including student loans,

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[8] For example, the debt of Third-World less-developed countries has been securitized and traded for about two decades.

[9] The official name is the Federal National Mortgage Association.

[10] The official name of Ginnie Mae is the Government National Mortgage Association.

[11] Federal Home Loan Mortgage Corporation.

export/import loans, farm loans and small-business loans. In many cases the loans being securitized are themselves guaranteed against default by the federal government. Finally, municipalities and local authorities have been important utilizers of securitization as a method of financing.

Securitization represents a significant change in the nature of financial intermediation. Securitized transactions represent a substitute for traditional banking operations. Instead of banks raising funds through deposits that are then lent to borrowers, loans are ultimately financed through the issuing of securities.

Under securitization, banks play roles very different from traditional intermediary institutions. In some cases, the role of the bank is as initiator or originator of a loan, which is then "repackaged" and sold as a negotiable security. In other cases, the bank plays the role of underwriter or distributor of the securities issued by its clients in lieu of the traditional bank loan. In still other cases, the bank is "cut out" altogether, as the borrower issues directly without making any use of bank services. In many forms of securitization the bank operates as a "broker" of assets, in contrast with the more traditional bank role as "transformer" of assets.

In all markets where it occurs, securitization enhances competition because it represents an alternative route of financing against which traditional institutions and instruments must compete. Consider for example the American mortgage market. Mortgage institutions (known as savings and loan institutions) have traditionally provided the bulk of mortgages in the United States, financed out of deposits raised by the same institutions. Under securitization, mortgage financing can alternatively be raised through the selling of a loan into a pool operated by one of the securitizing agencies, shares in which are then issued and sold to investors in the open market. So when such pools exist, a mortgage lender must be able to provide financing to a borrower at terms at least as good as those the borrower obtains when his loan contract is securitized, or else he will not borrow from that lender at all. Securitized mortgages thus compete against non-securitized mortgages and induce lower mortgage costs. The mortgage market becomes more efficient, larger, and more liquid. Much of this improved efficiency is captured by borrowers in the form of cheaper financing. This in turn has implications for the housing market.

In Israel, there has been virtually no securitization at all of any debt instruments. There has been very limited trading in mortgages, as mortgage banks occasionally sell loans to insurance companies and to each other, and there has been discussion of allowing pension funds to invest in mortgages. There has also been much discussion about creating within Israel a commercial paper market, although this does not yet operate.

Securitization could be one of the most important and potentially beneficial innovations for the Israeli capital market.

Securitization would be particularly beneficial for Israel, compared with other countries, because of the unique industrial structure of its financial industry. Israel's banking markets are very poorly competitive and often politicized. Since 1983 the bulk of ownership in the four largest banks has been held by the government.[12]

Securitization would be beneficial because it represents an additional form of competition for the uncompetitive banking sector. Within the Israeli banking system proper, two or three banks dominate the market and "compete" primarily against one another (or collude instead of competing). With securitizing financing available, each bank would be forced to compete against this alternative financing mode as well. The ability of the large banks to exercise oligopolistic power would be sharply curtailed by the ability of commercial, municipal and individual borrowers to tap the alternative securitized sources of financing.

Most of the discussion to date regarding the introduction of securitization into Israel has focused on commercial paper. Israeli firms have tapped commercial paper markets abroad, issuing their own paper there, and sometimes holding the paper issued by others in their portfolios. For several years, there has been discussion about opening a domestic shekel-denominated commercial paper market. In part, this was inspired by the success of the MAKAM (Short-Term Loan) Treasury bills introduced in the mid-1980s. Corporate commercial paper would be regarded as a close substitute. No other forms of securitization are currently under serious discussion, although the recent Brodet Commission did endorse introduction of securitization into Israel.

Advantage 2: *Securitization frees the local authorities from dictates from the central authorities. For those who favor federal or other sorts of decentralized government, such strengthening of local government is more "democratic".*

Local government is often seen as "closer to the people and to the voter." Individuals may make their voices heard more effectively at the local level, because it is smaller. There is less competition for the attention of officials. There is more opportunity for voters to "get to know" representatives in a personal way. Local government reflects the preferences of constituents better and more accurately than central government. Such a political orientation is well entrenched in the American Constitution. For better or

[12] The ownership of the smallest of the four is now over 50 percent private, but even there government holdings are nearly half.

worse, such thinking has been exceptional and foreign in Israel, where government has always been highly centralized and largely devoid of checks and balances.

Constitutional issues aside, strengthening local government and making it more independent of central government, including fiscally independent has other important economic advantages. Fiscal independence can enable the creation of a much more heterogeneous set of choices of local public service packages and so can provide a wider set of choices for consumers. There is rich academic literature based upon the early research of Charles M. Tiebout that endorse this idea at the level of local public finance.[13]

The "Tiebout Hypothesis", as it has become known, states that when the following conditions hold:

(1) When local governments are independent and when consumers can move freely within a greater metropolitan area and choose to reside in any of a large number of local communities;

(2) Where each local authority offers a different local fiscal package;

(3) Where consumers are faced with a diverse "menu" of location choices, based on the range of mixes of services and taxes represented by the choice of communities; then a "market-like" mechanism occurs that leads to market-like choices of local public services and taxes and this leads to efficient resource allocation.

Under the Tiebout hypothesis, each community offers some mix of local services and taxes. If the menu of such mixes were infinite, every individual could select that mix that exactly appeals to him and so could consume a personally optimal fiscal package. In reality the menu of communities is always finite and limited; nevertheless consumers can choose from a wide variety of fiscal package alternatives within a metropolitan area and reach near-efficient results. Differential demands for locations are reflected in differential property values. The ability to choose and "vote with one's feet" in turn forces local authorities to compete for residents or residential demand. This competition makes local government more efficient, more cost effective, and more closely attuned to consumer preferences. In Israel the main potential for applying Tiebout-like mechanisms would be in the suburban rings surrounding Tel Aviv and Haifa.

The Tiebout hypothesis relies upon the independence of local authorities and their ability to offer heterogeneous fiscal alternatives to residents in the greater metropolitan area. If

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[13] His most important paper on this subject was "A Pure Theory of Local Expenditures," *Journal of Political Economy* 64 (October 1956), 416-24.

their local service mix is dictated by central government and is uniform or homogeneous, then no choice to speak of (in the Tiebout sense) exists. Heterogeneity of service and tax mixes can be generated and encouraged through greater fiscal autonomy, and local authorities are likely to enjoy greater fiscal autonomy when faced with a broader set of debt financing alternatives available.

Thus opening a municipal bonds market in Israel would make financing choices of local government more flexible and autonomous and would lead to greater heterogeneity in terms of packages of local public services and taxes. The Israeli consumer would face a richer and more heterogeneous set of choices in terms of the fiscal nature of communities. Creating real choice for consumers in turn would create real competition for local authorities and real incentives to achieve local fiscal efficiency.

***Advantage 3**: Like all financial innovations, introducing municipal bonds serves the interests of portfolio investors.*

It allows a broader and more highly diversified selection of portfolio components from a richer choice set. This in turn makes portfolio design and risk control for investors easier and more effective.

3 Problems of Municipal Bond Financing

Problem 1: *What is the exact relation of the central government to local government debt? In particular, does there exist an explicit or implicit guarantee against default on local government debt by the central government?*

Problem 2: *The availability of municipal bond financing can cause a relaxation of legal, political and market constraints upon the budget discipline of local authorities, allowing them (at least temporarily) to escape the need to exercise fiscal discipline and restraint. In other words, the availability of municipal bonds can cause a "spending binge" and an irresponsible running up of municipal debt.*

The above two problems are not simply theoretical dangers. There are ample examples of local authorities and other institutions that have rung up enormous amounts of debt because of their expectation that the central government would bail them out. In Israel, in late October it was revealed that the local authorities had debts outstanding of about two billion NIS. Other familiar recent examples of spiraling debts include the debts of Tel Aviv, the Hebrew University, the Histadrut pension funds, the kibbutz and moshav sectors, and the General Sick Fund. In all these cases it is conceivable (and has been so asserted) that the expectation that the central government would be incapable of not bailing out these institutions (for political reasons) caused the debts to grow in the first place.

In the United States, similar cases where debts grew because of the anticipation that central government could not refuse to rescue the debtor might explain the New York default of the 1970s, the recent Orange County default, and numerous cases of high leverage and debt issuance by banks, thrifts and other institutions. An entire doctrine has arisen in the United States, called "Too Big to Fail." The idea is that because some institutions are so large that their default or bankruptcy would cause such serious economic (or political) damages, the government simply cannot allow them to "fail". The "Too Big to Fail" doctrine has been raised as rationalization for bailouts for some

large American and Japanese banks and for aid to some local authorities in the United States who have gotten themselves into financial distress. The "Too Big to Fail" doctrine has been criticized as being little more than pork-barrel patronage and as unfairly favoring large institutions over the small, while rewarding the politically powerful and penalizing politically weak lobbyists.

***Problem 3**: Related to the earlier points, there are fears that capital markets will be distorted if municipal bonds enjoy the explicit or implicit backing of the central authorities. In that case, the effect of the creation of a municipal bonds market is to allow local authorities to issue "riskless" securities, close substitutes for central government bonds. The local authorities may have the power to "force the hand" of the central authority by issuing debt with an explicit or implicit central governmental guarantee against default. This in turn eliminates incentives for budgetary discipline at the local authority level.*

This is probably the most serious issue that needs to be addressed. It is an enormous problem in the "federal-agency security" market in the US, and is a problem for some municipal bonds markets as well. This is, in effect, a serious "moral hazard" problem. Ironically, there are serious questions as to whether the central government is even capable of withholding such a guarantee of the debts issued by local authorities. This has been a major concern in the United States, especially for debt issued by federal or federal-sponsored agencies. The question has been raised in the United States as to whether the market would perceive that such debt is devoid of a Treasury guarantee even if the government insisted daily that no such guarantee exists. The market might presume it *does* exist in spite of such denials. If the market so presumes, it will invest and behave accordingly. This in turn may leave the federal government with no politically feasible choice in the event of default other than to bail out the debts of the defaulting agency. So market presumption of such a guarantee causes it to come into existence.

A similar danger exists in Israel. Indeed the danger may be even more serious than in the Unites States. The reason is the long history of bailing out troubled institutions and sectors by the Israeli government that can be seen as precedent. These bailouts have occurred not only in the public sector, but also in the Histadrut and private sectors. If the politicians of Israel were incapable of sitting back and resisting the urge to spend 20 percent of the national product on bailing out stock market speculators in 1983, if they were incapable of *not* allotting the equivalent of 45 percent of GNP for bailing out the insolvent, then how can anyone really believe they would not bail out city governments if they were to become financially distressed? Even if the government declares in advance it will not do so?

A possible remedy for all these problems could be to condition all issuing of municipal bonds on having first obtained a backup or standby letter of credit from a bank or insurance company in Israel or from abroad, guaranteeing the bonds against default. Such backup letters of credit, lines of credit, or guarantees are commonly used in the United States by issuers of municipal bonds. In the event of default, the central government is "off the hook", and needs to help out only in the unlikely event that both the issuer and the guarantor become insolvent at the same time. Default insurance is sold to issuers of municipal bonds in the United States by a number of banks and private insurance companies specializing in this sort of insurance product. The requirement that issuers obtain default insurance in one form or another in the private sector also means that the pricing of the default insurance is done by the market and not by the government bureaucracy. Governmental provision of default insurance is highly problematic. Deposit insurance for depository institutions has been blamed for the banking and thrift crisis in the United States in the 1980s, for the Japanese banking crisis of the 1990s, and for the enormous cost of the bailouts of many American and Japanese financial institutions. Deposit insurance is priced in a notoriously poor manner and with little attention to the risks being insured. Private default insurance and guarantees resolve all these problems through private market pricing.

***Problem 4**: Municipal bonds may be used (or misused) as a method to enable private corporate borrowers to save costs and avoid taxes.*

This problem is particularly severe if municipal bonds enjoy tax benefits or exemption. However the problem could also arise if the issuing municipality has a better credit rating than the private corporations whom it wishes to assist for political reasons. A serious abuse of municipal bond financing has been common in the United States through what are known as "industrial development bonds" or IDBs.[14] These are municipal bonds whose proceeds are turned over to private-sector corporations as a substitute for corporate bond financing. A corporation thinking of setting up house within the jurisdiction of local authority X routinely requests assorted benefits and tax breaks. The local authority has incentive to comply with these requests, as it may be "competing" with other jurisdictions to become the location for the corporation's domicile, thus "creating jobs". The corporation may likewise request that the local authority "help out" by issuing tax-exempt bonds and then turning over the proceeds and debt servicing to the corporation for its own private purposes. In effect, the local authority "stands in" for the corporation in the debt markets, while allowing the corporation to receive the benefits of the tax-exempt status of the IDBs. Tax-exempt bonds carry much lower interest costs, other things equal, so the effect of the

[14] For a history and description of the relevant American laws and regulations, see Zimmerman (1991).

"connivance" between the corporation and the local authority is to reduce the financing costs for the corporate borrower. These savings are not at the expense of the local authority, but rather of the income tax authorities. Where IDBs are not tax-exempt, if the municipality has a high credit rating, it still may be able to save costs for a low-quality corporate borrower by "standing in" for it and issuing IDBs in a similar fashion. All these activities raise questions concerning tax evasion and other problems from "farming out" the municipality's credit-issuing capabilities on behalf of private corporations.[15] This problem aggravates those raised above regarding defaults and central-governmental guarantees. If there is a danger that local authorities may use municipal bonds to "overextend" themselves in borrowing, then that danger is all the greater if they are "conniving" with private corporations in issuing IDBs or their equivalents.

This problem could be dealt with by stipulating that municipal bonds enjoy no tax advantages at all, an idea that will be endorsed below for other reasons as well. In addition, legislation enabling municipal bond issuing in Israel could rule out IDBs and their equivalents altogether. It might also rule out IDBs in disguise by limiting the ability of local authorities to issue debt to be used by or earmarked for "municipality-owned corporations and enterprises", like town development corporations or authorities.[16]

Another common example of "stand-in" financing commonly used in the United States is where municipal bonds are issued for purposes of passing along capital and credit to private mortgage borrowers through municipal "mortgage bonds". Here the local authority issues municipal bonds and then lends the proceeds to homebuyers (or in some cases contractors and builders). Homebuyers borrow at below-market interest rates from the local authority. In many cases, such "mortgage-financing" municipal bonds are designed to provide low-cost funds for low-income homebuyers. But not always. There is no reason to believe that local authorities have any comparative advantage in mortgage banking or in operating financial institutions. Hence these are activities in which they do not belong and where they can cause economic distortions. The only reason they are engaged in these mortgage-financing activities is the tax advantages they enjoy. We believe that most of these distorting activities can be avoided in Israel altogether by decreeing that municipal bonds are taxed like all other private securities. In addition, the Inspector of the Capital Markets at the Ministry of Finance could be empowered to prevent issuing of municipal debt that is then used by local authorities to make loans to other special interest borrowers.

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[15] These are discussed at length in Kaufman (1981) and Quigley and Rubinfeld (1991).

[16] A list of these operating in Israel can be found in Israel, Ministry of the Interior, "Seker chevrot ironiot," Megama, Mike Weil, ed., 1990.

4 The Rating of Municipal Bonds

A rating can simply be defined as an estimate of the probability of timely payment of interest and repayment of principal for any particular security. A rating combines hundreds of different factors and summarizes them in different categories representing different degrees of risk. A rating, however, is not a recommendation to purchase, sell or hold a particular security. Ratings do not take into consideration the price, the investor's risk preferences, the investors' portfolio mix, or the investors' investment goals.

In the United States, there are three major rating agencies which rate municipal bonds, and some smaller minor rating agencies. The large ones are Moody's Investor Service, Inc., Standard and Poor's Corporation, and Fitch Investor Services Inc. Of these three, Moody's and Standard and Poor's are dominant and only these two will be discussed here.

Moody's Investor Service, Inc. (Moody's), located in New York, has been issuing municipal bond ratings longer than any other organization. It began rating municipalities in 1918 and currently has 15,000 ratings outstanding. Moody's rates 4,500 new municipal bond issues each year. Standard and Poor's Corporation (S&P), also located in New York, has been in business since 1860 and has issued municipal bonds ratings since 1940. S&P currently have 7,000 outstanding municipal bond ratings and issues 1,500 new municipal ratings each year. Although the two agencies combined have 22,000 outstanding ratings, many of these are duplicates, as issuers often feel that it is necessary to have ratings from each of the major agencies when selling bonds. Some bond buyers prefer one agency over the other or have investment restrictions which require two or more ratings.

The ratings provide an easily recognizable measure that impartially represents the credit quality of a particular security. This facilitates the bringing together of borrowers and lenders in the financial marketplace. With this type of arrangement, it is imperative that the rating agencies be impartial in their judgment as well as their business connections. Therefore, the agencies maintain no connections whatsoever with any outside organization that could be perceived as benefiting from their relationship with the agencies.

Issuers have bonds rated by at least one of the nationally recognized rating agencies to attract investors to their issue. This increase in the demand lowers the interest cost (compared to an unrated issue with similar qualities) to the issuer.

The Rating Process

Once a decision has been made to issue bonds, the issuer or its representative (generally an underwriter or financial advisor) will request one or both of the rating agencies to rate the bond issue. This request will be made between two to six weeks prior to the sale date to provide the agencies with enough time to study the bond issue. The rating agencies will be provided with all the necessary documents for analysis. Sometimes an agency will send a representative to the project site itself to get a first hand view of the activities. Alternatively, the issuer may travel to New York to present its case in person. Ratings are generally issued and released to the public at least two business days before the issue is to be sold, although ratings may be issued earlier than that date if requested and available. The rating will continue in effect for as long as current information on the issuer is furnished to the rating agencies. Failure to provide timely information will result in the suspension of the rating. Additionally, the bond rating may be later downgraded or upgraded at any time if economic conditions necessitate this action.

In general the rating agencies look at five different factors in assigning ratings to municipal bond issues. These are legal factors, administrative factors, financial factors, debt factors, and socioeconomic factors. Depending on the type of bonds being sold, different factors will be given more or less emphasis in determining the final rating. For example, financial factors and debt factors receive more weight for shorter term issues than for long-term ones, since for the long term ones they have less effect on the ability of a municipality to repay its obligations. Conversely socioeconomic and administrative factors take on greater importance for long-term issues.

When rating a municipal bond issue, the rating agency will be supplied with a copy of the Official Statement (O.S.) as well as other pertinent legal documents. The rating agency analyst will read through the documents, analyzing the five factors mentioned above. He will weigh these factors according to the type of bonds being issued and summarize these factors into one rating, which impartially represents the risk involved in purchasing the bond.

The Rating Criteria for General Obligation Bonds

In rating a general obligation bond, the rating agencies will concentrate on all of the factors mentioned above, giving extra weight to particular areas. Typically, the rating analyst will conduct the following analysis.

Economic factors: Socioeconomic factors are considered highly important when rating general obligation bond issues. Economic base (socioeconomic) analysis is the analysis of the fiscal health of the community comprising the issuing entity. Virtually all sources of revenues, from sales taxes to permits and property taxes, are affected by the economic vitality of the community. In addition, major expenditures for municipalities, such as welfare, are directly influenced by economic conditions.

A summary of the items considered in evaluating the economic base is presented below.

Summary of Items Considered in Economic Base Analysis

Employment	Income	Population	Business
Unemployment rates	Per-capita income	Total population and Population growth	Largest taxpayers
Size of labor force	Per household income	Annexations and de-annexations	Types of industry
	Total income	Age of population	Leading employers
		Educational attainment levels	Building activity
			Retail sales activity
			Other economic indicators

Source: Standard and Poor's rating guide

Unemployment rates are usually studied closely simply to determine if there are any areas of "vulnerability" in the employment base and demands on general revenues. These figures are compared against regional, state and national figures. While unemployment levels can be useful in some cases, the emphasis is placed on trends of employment and labor force growth. These two figures give a real indication of expansion or contraction within the community.

Income data are considered in evaluating the economic "base" of the community. Total, per-capita and per-household income levels are looked at, since either figure alone can be deceiving. Per-capita income can be distorted by particularly large or small householding.

Total income can be distorted by any recent annexations or de-annexations. As always, these figures are compared with comparable figures for the region, state and nation.

Population statistics are compiled to gouge growth trends. Again, changes in boundaries of the municipality are considered, since they could account for sudden changes in the population. The age of the population is studied to determine the percentage of dependent individuals. Under 18 and over 65 are considered dependent because they require more costly services, while providing little economic income. The average educational attainment level as it relates to wage earners is examined.

General economic indicators are studied, including the largest employers and leading types of industry. A high local dependency on any one or two companies is regarded as dangerous for the economic stability of the community. Should that company or industry encounter troubles, the economic vitality of a community could be affected. Retail sales activity, building activity, and other economic indicators are studied to get a general economic picture of the community.

Rating agencies examine the economic indices listed for at least five years retrospectively, and often ten. This gives the analyst a good picture of growth (or decline) within the community over time. Communities with higher income levels and diverse economies that provide protection against economic fluctuations will demonstrate a higher capacity to pay the bondholder.

Financial Factors: Financial analyses for general obligation bonds consist mainly of studying the financial statements of the issuing entity. The rating agency usually does not compile the information, but merely studies the information provided including the audited financial statements with comments from an independent auditor, preferably a Certified Public Accountant. Most important is the revenue/expenditure balance over a period of time. Both revenues and expenditures are analyzed to determine the consistency among individual items as well as the extent to which items are related to each other.

Because the timing of expenditures does not usually coincide with the receipt of revenues, the need for short term financing might arise. For instance, does the issuer have sufficient revenues to see it through the lean periods or is it dependent on borrowing to meet its short-term obligations? Owing to inflation, an aging workforce, or very generous public employee retirement programs, pension fund requirements become particularly important to analyze. Annual benefit payouts often rise at a rate faster than asset accumulation. By a thorough analysis of the information, the rating agency will determine the adequacy of payments to the system. Inadequate payments now could result in heavy liabilities in the future.

Debt Factors: These include the nature of the security being pledged, the past history of debt repayment, the current debt burden, and the debt repayment schedule. Bonds that are secured by limited taxes versus those secured by unlimited *ad valorem* taxes have different risks, which should be reflected in the rating. The local debt burden is analyzed with respect to the size of the budget. The issuer should be able to operate within realistic debt limitations that allow for annual capital needs to be met. In addition, debt repayment should correspond to the actual useful life of the project being financed. The past debt history is studied only to determine the willingness of the issuer to repay its obligations.

Administrative Factors: Under this category, the analyst will analyze the general management of the issuer including the composition and experience of the issuer's governing and management as well as the politics of the underlying constituents. For instance, a constituency which consistently votes to require costly services or administrative procedures (such as minority firm involvement or the payment of prevailing union wages on public projects) has a disadvantage over other municipalities in the area. Property values and assessments are looked at to determine the basis for taxes levied. Since most municipalities derive a substantial portion of revenues from property taxes, the basis for those taxes are studied carefully. Any flaws or misjudgments could possibly affect the future tax revenues. Additionally, tax rates and tax collections are examined. Already high tax rates or consistently high tax delinquencies will reflect negatively on the bond issue rating.

Rating Revenue Bonds

Revenue bonds are bonds that are repaid with revenues produced by a specific project of enterprise for which the bonds are issued. In rating revenue bonds, the analyst will concentrate on four of the five factors mentioned previously. These are the legal, socioeconomic, administrative, and financial factors. Debt factors are also considered but are less important than the other.

Legal Factors: The first area of inquiry concerns the security behind the bond. The source from which the issuer is planning to repay bondholders is analyzed to determine the amount of revenues, which may be used to pay debt service. Other provisions, which are known as covenants, include rate covenant and the parity bond test. The rate covenant obligates the issuer to charge rates for services sufficient to cover debt service. The parity bond test sets criteria for the agency to meet before issuing any additional parity bonds, that is, bonds which have an equal lien on the issuer assets.

Socioeconomic Factors: The main reason for performing an economic analysis for revenue bonds is to evaluate the demand for services offered, roughly similar to the analysis done for

general obligation bonds. In order for revenue bonds to be repaid, the service being offered must be in marketed. Therefore, the socioeconomic analysis done for general obligation bonds also applies to revenue bonds.

Administrative Factors: The analyst concentrates here on general management qualifications, on the management staff and governing body of the issuer. Past administrative performance with particular emphasis on the budget is the most important part of the analysis.

The rating of municipal bonds range from the highest quality of "investment grades" (usually AA) down to "junk" or high-yield municipal bonds, roughly analogous to "junk" corporate bonds. For some issuers, GO bonds are rated higher than revenue bonds, and for others it is the reverse. We see no reason why the local authorities in Israel should be restricted to any subset (such as GO only or revenue only) of these different kinds of municipal bonds, and believe they should be free to issue what they wish.

Municipal bond financing depends on a well-functioning credit rating system. Israel now has such credit rating agencies, so this should not present an obstacle to the development of such a market in Israel.

5 The Tax Exemption Debate

A major problem created by municipal bonds and securities in the United States is their tax exemption. This exemption leads to misallocation of financial resources, capital market distortions and tax evasion.[17]

For Constitutional reasons, it was early decided that the federal government in the United States would not tax most of the debt issued by state and local authorities, in order not to infringe upon their "sovereignty". Thus the securities issued are exempt in most (but not all) circumstances from federal income taxes. In a sense, this "consideration" is mutual, in that Treasury securities are exempt from state and local income taxes. The tax status of municipal bonds and securities in terms of their exemption to state and local income taxes varies across states. Some states do not have an income tax at all. Some grant tax exemptions for all municipal bonds enjoying federal tax exemption. Some grant exemption only for municipal bonds issued within the state of the taxpayer.

The financial effect of the tax exemption is to allow the issuing of municipal bonds and securities at financing costs far lower than those that would be paid in the absence of a tax advantage. To see this, suppose that every investor is in a 40 percent tax bracket. Suppose that ordinary taxable bonds of a given quality currently carry yields of 10 percent. Then an issuer of municipal bonds with the equivalent quality rating and maturity would have to pay a yield of 6 percent. The investors will be indifferent between a taxable bond paying 10 percent before taxes (paying 6 percent after taxes) and a tax-exempt bond paying 6 percent. Issuers would save 4 percent per year in financing costs at the expense of the income tax authority.

But what happens when there are different investors each having a different marginal tax rate? We can imagine arranging these investors according to their tax bracket and according to the lowest yield they would be willing to accept on a tax-exempt bond in

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[17] For a detailed discussion of tax issues for the American municipal security markets, see Fabozzi, et al (1995), Feenberg and Poterba (1991), Feldstein and Fabozzi (1987), Feldstein, et al (1983), Gordon and Metcalf (1991), Metcalf (1991, 1993), and Poterba (1989).

lieu of a taxable bond of similar quality and duration that pays a yield of 10 percent. This is shown in the Table.

Investor "Supply" of Capital for Municipal Bonds by Income Tax Bracket and Lowest Accepted Yield (Equivalent taxable securities pay 10 percent)

Income Tax Bracket (percent)	Lowest Accepted Yield (percent)
70	3
60	4
50	5
40	6
30	7
20	8
10	9

The numbers in the above table can be thought of as a sort of "supply curve" of capital to the municipal bonds market, or a "demand curve" by investors for these securities. The supply or quantity of these securities outstanding will intersect this curve, and the intersection then represents the equilibrium yield.

In the equilibrium for tax-exempt municipal bonds, there occurs a segmentation of the investor population into two subgroups, based on tax bracket. To see this, imagine that the bond market shown in the above table equilibrated at a 6 percent yield for tax-exempt municipal bonds. In that case, investors in exactly the 40 percent tax bracket would be indifferent between the taxable and the tax-exempt bonds. Anyone in a tax bracket *higher* than 40 percent will strictly prefer the tax-exempt securities, because they produce a yield for the investor that is higher than the after-tax yield on taxable bonds. Anyone with a tax bracket lower than 40 percent will strictly prefer the taxable securities, because they produce a yield for the investor that is higher on an after-tax basis than the municipal bonds. Indeed the last group of investors will refrain from entering the municipal bonds market altogether.[18]

Changes in market conditions and in the tax laws will change the structure of the market, the segmentation partition, and the size of the yield premium for taxable securities.[19] As an extreme example, if the income tax were abolished, the difference in yields between the two sets would disappear altogether. A proposal to lower tax rates

[18] As a special case, tax-exempt investors, such as non-profit institutions, would stay out of the market altogether.

[19] Calkins (1992).

will result in a lower premium, and this is likely to occur the moment the intention of later lowering the taxes is made known (even before they are actually lowered). There have been interesting case events where tax rates were changed that can be studied for empirical confirmation of all these arguments.

The incidence of the tax exemption is also debated. Who really benefits ultimately from it? How much goes to the issuing municipality and how much to investors?[20] At most, only part goes to the issuer.

Be that as it may, the use of tax exemption for municipal bonds has often been criticized because of its regressive nature. As we saw in the example above, the tax-exempt bonds are strictly preferred by those investors in the highest tax brackets, and these will generally be the wealthiest investors (if the tax code is progressive). Municipal bonds represent a way for high-income investors to "escape" the tax consequences of being wealthy.[21] The result is that the overall tax system becomes less progressive.

Finally, tax exemption has been criticized because it amounts to a sort of federal subsidy to the entire range of activities financed by local authorities, including "frivolous" things, like construction of horse-racing tracks, swimming pools, sports stadiums, concert halls, etc. In recent years, the Treasury department in the United States has acted to reduce the ability of local authorities to use tax-exempt debt issues for these "frivolous" purposes. In addition, debt ceilings have been imposed on the local authorities by the Treasury, which sets limits to how many tax-exempt bonds in total each local authority may issue. In both cases, the local authority is free to issue municipal bonds beyond those limits imposed by the Treasury, but without the benefits of tax exemption. There exists a sizable market in the United States today for taxable municipal bonds, representing issues that exceed these restrictions.

The bottom line is that the tax exemption of the municipal bonds market creates a sort of "tax laundering" set of opportunities, and causes distortion of capital allocation because of tax considerations. For all these reasons, we believe that the introduction of municipal bonds into the Israeli market should avoid the pitfalls of the American market altogether by stipulating that municipal bonds have exactly the same tax status as corporate bonds.

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[20] Gordon and Metcalf (1991).

[21] Regan, Edward V., "End the Municipal Bond Subsidy," *Wall Street Journal*, March 21, 1996.

6 Issues to be Addressed and Resolved

In order to introduce a municipal bonds market into Israel, a number of issues need to be addressed and resolved. Perhaps the most important one is the taxation issue raised above. As noted, we believe it should be resolved by making municipal bonds taxable at the same rates and terms as corporate debt. Other issues include the following:

- **To what extent, if at all, should the central authorities exercise veto power over the local authorities?** In the US, the federal government must approve issues and uses of funds under tax-exempt municipal bond financing, but this is largely due to the tax exemption factor. Non-exempt bonds exist and are exempt from federal veto. Should such issuing in Israel be exempt? Should the State Comptroller exercise oversight? There are political arguments in favor of and against such oversight and regulation. As noted above, regulation by the central government infringes upon local authority sovereignty and power, but may be useful in preventing irresponsible issuing of large amounts of debt and consequent financial distress. The experiences of such entities as the Tel Aviv Municipality and the Hebrew University suggest that such institutions can get themselves into serious overextension of indebtedness, and - *de facto* - this often falls on national taxpayer shoulders.
- **How exactly should such municipal bonds be issued and traded?** Over the counter, like in the US? or like corporate "concern" bonds in the Tel Aviv Stock Exchange (TASE)? There are serious problems with the methods of trading on the TASE, and in particular with the dominant role of the large banks. On the other hand, no over-the-counter (OTC) market exists in Israel. Stipulating that municipal bonds trade OTC could serve as an impetus for developing such a market.
- **Should local authorities be permitted to issue municipal debt in foreign exchange and to overseas investors?** By allowing them to do so, they can tap a larger source of funds with a richer set of diversifying and innovating instruments. American local authorities and federal agencies have tapped overseas markets to some extent and with success. On the other hand, there are many examples of local

authorities finding themselves "over their heads" and "out of their league" in international financial markets or in derivatives markets they do not comprehend.

- **Should banks be allowed to invest in municipal bonds? Pension funds? Other institutional investors? To what extent?** There are implications for the risk exposure of banks and other institutions. This exposure will be more complex if these same institutions act as guarantors and backup financiers for municipal issues. Should banks be permitted to underwrite municipal debt? Since one argument for introducing securitization in the first place is to create non-bank financing that competes against banks, it might be desirable to prohibit this in Israel. Because the banks manage most of the mutual funds and provident funds in Israel, problems of conflicts of interest can arise from a banking role in the municipal bonds market.

- **What kind of collateralization of municipal bonds is needed?** Their collateral must be defined legally, including the circumstances that allow their forfeiture. The liens of municipal bonds holders need to be defined with respect to other claimants upon the resources of the local authority, including municipal workers and pension funds. Will investors in municipal bonds be able to seize pension funds held by the local authority in the case of default? School buildings? Other municipal property? These issues have to be settled in legislation before the market commences operation. In particular, the issue has to be addressed of whether and how a local authority can go into bankruptcy proceedings or their equivalent.

In other countries problems have arisen due to abuses of the underwriting of municipal bonds.[22] A potential form of local political corruption is where the bonds are underpriced deliberately and sold by politicians to special interests and partisan constituents. The taxpayer then gets left holding the tag for granting political largesse, rents and "pork" gifts to the supporters of a departed municipal politician. Deliberate underpricing of securities was used by Israeli politicians in the underwriting and "privatizing" of government-owned bank shares in the early 1990s, so there is precedent for concern. There now exists on the books in Israel the Mandatory Competitive Tender Act, requiring that government sell assets in open competitive tenders. There are similar rules in effect for the local authorities. Rigorous enforcement of these rules and closing of the law's loopholes can prevent this problem from occurring.

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[22] In the United States recently municipal bond underwriters came under criminal investigation for improper contributions to the political campaign for the Senate of Massachusetts Governor William Weld. See, *Wall Street Journal*, November 18, 1996 .

Policy Recommendations

- In principle, we believe that the creation of a municipal bonds market in Israel would be a beneficial development, with financial, economic and political advantages for the Israeli citizen. We have also pointed to a number of serious pitfalls and dangers. Some of these may be avoided through **refusing to follow the American precedent of creating tax exemption for municipal bonds.**
- If this tax recommendation were adopted, the main remaining danger that needs to be addressed involves the nature of the central government guarantee (if any) for the debts of local authorities. This is related to the main remaining question, namely, what sorts of impediments and limits (if any) should be imposed upon the local authorities to prevent their overextending themselves in issuing excessive amounts of debt and to avoid their default and falling into financial distress. We believe the best way to achieve this is **to write into law a declaration that the central government will be prohibited altogether from bailing out local authorities who default on their debts or who become insolvent**. An exception could be made with some sort of supermajority Knesset vote, and also by the stipulation that all municipal issues be backed up by private-sector guarantees or letters of credit, issued by banks or insurance companies in Israel or abroad. This carries the additional advantage of market pricing of default insurance for municipal debt and its depoliticalization.
- We strongly reject the proposal in Heifetz & Co (1997), that municipal security issues be limited to revenue bonds or that the central government exercise micro-control and approve the "worthiness" of each and every individual municipal security issue. **We think that municipal bonds should be within the jurisdiction of the Israel Securities Authority** and subject to the same security rules as corporate securities, and other than that the market - and not the bureaucracy - needs to decide. We do not rule out other caps or ceilings imposed by the central authorities on the total volume of debt issuing by any local authority.

- We recommend **the prohibition altogether on issuing of Industrial Development Bonds and other "pass-along" financing**, where local authorities issue debt whose proceeds are then "passed along" or lent to other private parties.

- To avoid political pressures to bail out the local authorities in cases of insolvency, Israeli **pension funds and provident funds should have caps placed upon the total amount of funds they can invest in any individual issue of municipal bonds**, and perhaps also a cap on total municipal holdings. Similar caps could be considered for other investors. **Central government funds should not be invested in municipal bonds**, except with very strict limits and in very special circumstances. (Otherwise the entire purpose of municipal bonds in freeing the local authorities from dependence upon and dominance by the central government would be lost.)

- The legal mechanics of liens and "foreclosure" against municipal assets needs to be defined in legislation. **We believe municipal bonds should *not* be exempt from security law requirements regarding disclosure**.

- Finally, trading and underwriting procedures need to be clarified and determined. In particular, **the role of the commercial banks in the municipal bonds market needs to be decided; our own recommendation would be that it be minimized.**

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