The Evolution of the State and Local Government Municipal Debt Market over the Past Quarter Century

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Much has happened in the municipal bond market during the past 25 years. This article provides a retrospective of some of the significant developments in the market during that period of time. These developments include passage of the Tax Reform Act of 1986, innovations in the market in response to changing economic and social conditions, and the regulation, increase in disclosure requirements, and proliferation of credit enhancements that renewed the efficacy of municipal securities for American state and local governments.

INTRODUCTION

The occasion of Public Budgeting & Finance's 25th anniversary provides an opportunity to reflect on how the municipal bond market in America has changed over the past 25 years. It is striking how different the municipal bond market is today compared with the 1981 market. In the following pages, it is our intent to highlight some of the more important changes and events in the market during this time period.

The past quarter century indeed has been characterized by a lot of changes in the municipal bond market. As activity has increased dramatically, with outstanding debt growing from approximately $400 billion in 1980 to over $2 trillion at the beginning of

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1. The "market" for municipal securities issued by state and local governments in America is more accurately referred to in the plural form ("markets") because of investor segmentation, state tax law variations, pricing inefficiency in the secondary market, and other characteristics.

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2005, the tax-exempt state and local bond market has been subjected to a major change in tax law that had a profound impact, has become increasingly creative in response to changing economic and fiscal conditions, and has weathered some crises and near crises. The result is a market that is much different from the one in existence in the early 1980s.

It is impossible for one article to adequately cover all the changes that have occurred in the market during the past 25 years. As a result, this article will serve as a retrospective of some of the major developments in the municipal bond market during this period of time. First, the Tax Reform Act of 1986 (TRA '86), which had a significant impact on the market, is discussed. Second, some of the innovations that have occurred in the market in response to changing economic and fiscal conditions are discussed. Third, the discussion turns to the crises or near crises experienced by participants in the market along with the way the market has responded through the increased use of credit enhancements, increased regulation, and disclosure requirements.

EVOLUTION IN TAX LAW

The watershed event in the market for municipal securities was TRA '86. Its enactment significantly changed the way debt obligations of state and local governments were treated and its effects are still being felt today. Before its passage virtually all interest on state and local government debt was exempt from federal taxation. Once enacted, only particular types of debt were eligible for this federal subsidy and only certain investors could avail themselves of this tax break.

In the years leading up to the TRA '86, the total volume of new tax-exempt issues was growing robustly. In 1985 the volume of issues reached almost $229 billion dollars, a more than 72 percent increase from the previous year and an increase of more than 210 percent over the volume in 1980. Admittedly some of this increase can be attributed to activity in anticipation of the occurrence of tax reform. Not surprisingly new borrowing volume fell by almost 25 percent to $172.6 billion in 1986 and fell another 27 percent in 1987 to $125.5 billion. In 1988 the market began to rebound with the volume of new issues growing 12.3 percent to slightly less than $150 billion. Growth continued at a relatively modest pace for the next three years. It was not until 1991 that the volume of new issues returned to levels close to 1985, with totally new issues amounting to $217.7 billion. TRA '86 has been credited with transforming the once placid environment for municipal securities into a frenetic and arcane market. The Act prompted a sizable re-

duction in the exempt nongovernmental bond area, what are commonly referred to as private purpose or private activity bonds, changes in arbitrage rules affecting municipal debt, and whether bonds are "bank eligible." These changes affected both the issuers of tax-exempt debt and the investors in this debt.

Effect on Issuers

The most pronounced effect of TRA'86 was on the issuers of private activity bonds. Private activity bonds are securities where the proceeds are utilized for a project or a purpose that is used by or benefits a private entity. Concern had been mounting about the volume of tax-exempt bonds that were being issued for private activities. By one account, the volume of private activity bonds in 1981 was $25 billion, which accounted for 48 percent of the municipal bond market. The result was a narrowing of the interest rate differential between taxable and tax-exempt issues, which raised the borrowing costs of state and local governments and the cost to the Federal Treasury.

The assault on private activity bonds was three pronged. First, tighter definitions were placed on what constituted a private activity bond. Second, limitations were imposed on the purpose for which bond proceeds could be used. Third, state-by-state volume caps on the issuance of these bonds were imposed.

Tax-exempt bonds were divided into two basic categories—essential function government activities and private activities. The latter category—private activity bonds—was created in response to the dramatic growth in the use of industrial development bonds, economic development bonds, housing bonds, and other specialty bonds for what were considered tangential government purposes. Generally, two tests were used and continue to be used to determine whether a bond is considered a private activity bond. The private use test affirms that if more than 10 percent of the bond proceeds are used in any private trade or business, the bond is categorized as a private activity bond. In a similar vein, the security interest test states that if more than 10 percent of the debt service on the bonds is secured by or payable from property being used for private business purposes, it is considered to be for private use. Bonds that fail to satisfy both of these tests are considered governmental use bonds and qualify for regular tax-exempt status.


Not all types of private activities qualify for the tax-exempt private activity bond moniker. The activities must fall into well-defined categories including exempt facilities (such as government-owned airports, mass-commuting facilities, water and water treatment facilities, etc.), certain types of housing, certain types of economic and redevelopment activities, and certain types of nonprofit activities. Another change that affected issuers was restrictions placed on arbitrage earnings. Before, tax reform state and local borrowers were able to reduce their borrowing costs by taking advantage of the difference between the interest rates commanded by the tax-exempt bonds they sold and the interest rate they could realize by investing some or all of the proceeds in other investments. Often they were able to cover some or all of their operating and administrative expenses through arbitrage.

Because this use of arbitrage earnings by state and local government entities was considered a misuse of the tax exemption, TRA'86 placed strict limitations on the borrowing of funds in the tax-exempt market and their reinvestment in the taxable market. Instead of allowing three years for unlimited arbitrage earnings that was the custom before reform, TRA'86 shortened the period to six months. In addition, issuers are required to keep track of all their investable proceeds and report these to the Internal Revenue Service. Essentially, there is a limit of 10 percent of bond proceeds that can be invested in higher yielding securities and these proceeds have to be part of a reasonably required debt service fund. Any earnings in excess of those allowed have to be rebated to the U.S. Treasury in order for the bond to retain its tax-exempt status.

Finally, TRA'86 constrained issuers by limiting the number of advance refundings that can occur for any bond issued after January 1, 1986 to one. In addition, the defeasance of the bond must occur at the first call date; refundings are not allowed at later call dates. Clearly this provision limits the flexibility of issuers, implicitly raising the potential cost of borrowing to state and local governments.

Effects on Investors

Historically, institutional investors, specifically commercial banks and property and casualty insurance companies, had been big players in the market for tax-exempt bonds with individual investors assuming a smaller role. In the aftermath of TRA'86, individual investors, including mutual funds and unit trusts, adopted a more prominent role in the market. This shift in the relative importance of investors was because of a number of changes contained in the act that affected the desirability of holding municipal bonds as part of one's portfolio.

10. This list is not intended to be exhaustive. For more details, see Alan Walter Steiss, "New Financing Instruments for State and Local Capital Facilities," Public Budgeting & Finance 18, no. 3 (1998): 24-41.
11. Peterson, 22-34. Subsequent arbitrage regulations in 1993 by the Internal Revenue Service narrowed and clarified these provisions.
First, the tax advantages associated with holding tax-exempt securities were altered. On the supply side, municipal bonds were no longer treated as a homogeneous commodity. The type of security, the nature of the investor, when the bond was acquired, and other considerations resulted in differential tax treatment after passage of the act. In addition, TRA'86 lowered the marginal federal income tax rate, basically flattening the rate structure. The top marginal tax rate for individuals dropped from 50 to 28 percent and individual income now was subject to the alternative minimum tax (AMT). Corporations saw their marginal tax rates decrease from 46 to 34 percent.

Second, TRA'86 eliminated the deductibility of interest expenses incurred by banks on funds they use to purchase tax-exempt bonds. Under the old rules, commercial banks were allowed to deduct 80 percent of the interest expense associated with acquiring tax-exempt securities. This deduction was eliminated for bonds issued after August 7, 1986, with the exception of "purchases of governmental purpose or 501(c) (3) bonds from issuers of less than $10 million in new debt each year."13 As can be seen in Figure 1 the tax law change with regard to bank deductibility has contributed to an eroding share for

commercial bank investors in the entire municipal bond market. In terms of annual long-term municipal issues only, since 1986, bank-qualified municipal bonds have comprised an average of 6.7 percent of those issues, ranging from as much as 8.4 percent in 1998 to as little as 4.1 percent in 2003.

Clearly, there was a significant shift in holdings among investors initiated by TRA '86. Individual investors—households, money market mutual funds, and mutual funds combined—share of tax-exempt debt had been increasing steadily since 1980 and its share increased dramatically in the years immediately following the enactment of TRA '86. At the same time the shares of tax-exempt debt held by commercial banks and insurance companies were steadily declining since 1980 and the share of commercial bank holdings decreased significantly in the aftermath of tax reform. More recently, things have stabilized with individuals holding about 64 or 65 percent of the tax-exempt securities, insurance companies holding approximately 13 percent, and commercial banks holding around 7 or 8 percent.

Other Significant Tax Reform Affecting Tax-Exempt Bonds

In 1982, Congress mandated that municipal bonds had to be issued in registered form in order to retain their tax-exempt status. In 1988 the U.S. Supreme Court ruled that Congress can eliminate the tax-exempt securities market because there is no constitutional requirement for tax exemption, despite arguments that this is a violation of the Tenth Amendment and the concept of federalism, as well as a violation of the intergovernmental tax immunity principle essence. This case provides a foundation as Congress revisits fundamental federal tax reform and the potential that reform has for eliminating tax-exempt municipal bonds. Subsequent legislation has targeted municipal securities in different ways, but none have been as significant as TRA '86.

INNOVATIVE DEBT INSTRUMENTS BORNE OUT OF NECESSITY

In the late 1970s and early 1980s state and local governments were faced with mounting capital needs and fewer degrees of freedom to deal with these needs because of high interest rates, inflation and a slowing economy, reduction in federal aid as a result of concern over mounting federal budget deficits, and tax and expenditure limitations on

state and local governments. Crises tend to spawn innovation and this certainly has been the case with capital financing.

Over the past 25 years, issuers have shown a steady preference for customizing their solution to a specific financing need rather than relying solely on a long-term, fixed-coupon general obligation (GO) bond. Revenue bonds predominate, not GO bonds.\(^{19}\) Creative ways to avoid debt limits and procedural hurdles have propelled the growth of lease financing, including Certificates of Participation (COPs), and the increased use of tax increment financing (TIF), bond banks, and revolving loan funds. Issuers provide investors with protection against the credit risk of dedicated revenue streams by purchasing bond insurance or letter of credit (LOC) facilities. Issuers are prone to advance refund outstanding debt well ahead of the call date, even if it is done to gain the bare minimum interest rate savings on new debt, but exhausts the one-time option provided under federal tax laws.\(^{20}\) Some issuers appeal to sophisticated investors (especially institutional and bank purchasers) by structuring debt obligations in ways that give investors added flexibility and risk. The continuing search for lower interest rates have propelled issuers to use reset securities, or floating rate debt, instead of fixed-rate coupons.\(^{21}\) Infrequently, large and recognizable issuers have borrowed in foreign markets, especially in periods when the cost of borrowing here is high.\(^{22}\) Interest rate exposure is mitigated by a variety of swap and other derivative products. All of these provisions introduce liability risks that must be managed, leading some to argue that simpler instruments might benefit both investors and issuers.\(^{23}\)

**Some Innovations in Debt Instruments**

A scan of the literature indicates there have been many innovations in the way debt instruments are structured and used, including, but not limited to, variable-rate obligations, derivative securities, interest rate swaps, tax-exempt inverse floaters, puts, warrants, residual interest bonds, and zero coupon bonds.\(^{24}\) Market professionals continue

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to show their creative ability to design instruments around almost any impediment. This section uses tax-exempt reset securities and interest rate swaps to illustrate the ways issuers can design securities to appeal to certain investor segments and respond to changing market conditions.

Reset securities come in the two basic forms of variable-rate demand bonds (VRDBs) and auction rate securities (ARS). Variable-rate securities have a nominal long-term maturity, as well as a coupon that is adjusted frequently (usually weekly) to reflect market conditions. On the reset date, each investor faces a choice to either continue holding the securities at the new rate or put the bonds back to the issuer at par. Issuers use a remarketing agent to manage this process, including setting the rate to match supply and demand. This procedure gives investors more liquidity than under a fixed-rate security. Issuers, in turn, can borrow at lower rates but at the risk of having debt service increase to accommodate higher reset rates. Variable-rate securities require a stand-by bond purchase agreement from a commercial bank in the form of an LOC facility to ensure adequate liquidity.

VRDBs are held primarily by money market fund portfolios because these securities qualify under the federal regulatory rule that mandates the maturity and quality standards for money market funds. Money market funds must maintain a $1 net asset value, so their holdings must have high liquidity and stable values. Variable-rate securities offer weekly put options permitting the investor to liquidate its position with strong credit support offered by LOC and other provisions.

Recently, issuers have turned to ARS. Unlike VRDBs, ARS are long-term, variable-rate bonds tied to short-term interest rates. ARS are priced and traded as short-term debt obligations. They are priced in a Dutch auction process, where securities are sold at the highest price at which sufficient bids are received to sell all the securities offered. In other words, the competitive bidding process determines rates on each auction date (held every 7, 28, or 35 days, as specified). The U.S. Treasury has used this process in selling coupon-bearing securities since 1976 and discount securities (T-bills and Treasury Notes) even longer.

Owners of ARS have the option to hold an existing position regardless of the new rate, bid to hold an existing position at a specified rate, or request to sell an existing position regardless of the interest rate set at the auction. Current and potential investors submit their bids, through a broker/dealer, to an auction agent. The winning bid rate is the rate at which the auction “clears”—defined as the lowest possible interest rate that equals the cumulative total of securities demanded (buyers) to the amount auctioned (sellers). All accepted bids receive the same interest rate. Generally, the securities are sold at or above the established clearing price and they trade at par. ARS have a variety of reset dates available, ranging from daily to quarterly. ARS have par values of $25,000, $50,000, or

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$100,000 per bond, and the minimum issue size is large ($25 million). The primary investors are corporate cash managers and high net-worth individuals, not tax-exempt money market funds (because of the lack of tender option).

Unlike VRDBs, ARS do not have the "put" feature and therefore do not require the third-party LOC facility. As bank liquidity facilities have become more expensive, the auction market provides an attractive low-cost and flexible way to obtain variable-rate debt. Because of this lack of a credit facility, most ARS are credit enhanced by municipal bond insurance.

Issuers can convert ARS into variable-rate or fixed-rate instruments. To limit risk, issues can enter into interest rate hedges including swaps, caps, or collars. The most common approach is to fix all or part of the variable-rate exposure through a "floating to fixed" interest rate swap. An advantage of fixing all of the exposure is that it results in a net fixed-rate payment obligation by the issuer. This makes debt service planning easier. Issuers can redeem the bonds anytime, without prepayment premium.

An interest rate swap is a derivative that alters the cash flows of a debt obligation. An issuer's exposure to increasing interest rates arising from outstanding reset securities may be hedged through a swap. Accordingly, the reset securities' cash requirements plus the effect of the swap should make the variable debt synthetically behave as fixed-rate debt. For example, a government may issue 3 percent variable-rate debt with terms that permit the debt's interest rate to range up to 7 percent. Working with a broker/dealer as counterparty, a swap may be constructed that is the mirror image of the potential variable coupon payments. Continuing with the example, a swap may vary from 7 to 3 percent, the opposite cash flows of the variable-rate debt. A synthetic fixed-rate debt is attractive when the cost of the variable-rate debt and swap is less than a conventional fixed-rate debt. Given these risks, state and local governments must have a swap management plan. Such a plan might include evidence that governing officials understand the advantages and disadvantages of planned actions, that staff know how to manage the complex contracts and cash flow scenarios, that procedures and internal controls are in place to mitigate the risks, and that there are clear exit strategies.

Various derivative products have been developed to meet the wide variety of financing needs of state and local government issuers. These types of debt issues are extremely complex and challenge even the most sophisticated issuers to manage their financial liability risks. State governments have responded with prescriptive rules while the government finance profession has adopted recommended practices.26

26. For recommended practices, see the Government Finance Officers Association (www.gfoa.org). In 2003, the Government Accounting Standards Board issued a technical bulletin (No. 2003-1), which requires state and local government borrowers to understand and disclose the objectives, terms, fair value, risks, and other material facts relating to all derivative instruments to which the borrower has entered into.
Innovative Ways to Access the Market

Confronted with mounting capital needs and shrinking resources for capital improvements, state and local governments renewed their search for innovative ways to access the capital markets. Particularly noteworthy are TIFs, revolving loan funds, leasing, and bond banks.

TIF

TIF is a financing vehicle that dates back to the mid-1940s when California enacted its Community Redevelopment Act. As early as 1980, 28 states had enabling legislation for TIFs, by 1982 nine additional states had adopted this financing tool, and by 1997, 48 states had the ability to use TIF.27 Interest in TIF really began to intensify with the passage of the Tax Reform Act of 1986 when all economic development bonds were categorized as private activity bonds and were subjected to state-specific volume caps.

TIF bonds are attractive to localities because most of the interest earned on these bonds is exempt from federal income taxation. Generally, to qualify as a TIF bond entitled to tax exemption, 95 percent or more of the net proceeds must be used for redevelopment purposes in a designated blighted area. Among some of the other requirements, the bond issue must be accompanied by a redevelopment plan, and the debt service must be primarily secured by general taxes imposed by a general purpose government or incremental taxes attributable to the improvement being financed.28

Generally, a local government entity forms a development authority that maps a special tax increment district that includes, in many cases, blighted or deteriorating properties. The intent is to invest in infrastructure improvements in the district and use a portion of the taxes that are generated as a result to finance the improvements. More specifically, when the district is created, the property tax base is frozen and any taxes generated by the increase in property value that occurs after the district is formed (commonly referred to as the tax increment) are pledged to pay for the infrastructure improvements.29 The rationale is that the increased property value is because of enhanced economic activity directly resulting from the investments in infrastructure. An innovative variation is when property values decline rapidly because of environmental

contamination and a city freezes the value at the reduced level and considers the restored property value as the increment upon which to finance the cleanup.30

Proponents point out that TIF provides another vehicle for local governments to use to finance much needed capital improvements. It allows access to credit markets without pledging the jurisdiction’s full faith and credit, without being constrained by constitutional debt limits, and without a referendum. Also, it provides a “shot in the arm” for blighted areas with a declining tax base. Those subscribing to the pure attribution theory argue that in the absence of TIF no development would occur. If developers were forced to bear the costs of infrastructure improvements and other development, they would not choose to make the investment.31

Opponents point out a number of difficulties associated with TIF. Sponsor governments, the ones that have a say in the design of the district and the projects within, make the development expenditures and collect TIF revenues. Contributor governments, on the other hand, do not directly participate in any of the decision making concerning the district, but must contribute a portion of their tax base to finance the district’s projects.32 Often the contributor governments complain that the sponsor governments gain at their expense, because successful development will result in increased service demands for the contributor governments without a requisite increase in the tax base wing to the lost increment.

TIFs detractors argue that this financing initiative results in a zero-sum outcome. Development that may have occurred elsewhere in the jurisdiction is lured to the increment district because of lower overall costs developers face owing to the public investment. Pure capture theory suggests that development would have occurred without the subsidy the increment provided to developers. Therefore, there is no net gain to the community.33 Concerns have been voiced that successful development may have an ill effect on existing businesses and residents, pricing them out of the market and forcing relocation.34 Opponents also point out there is a lack of voter participation in the decision making; TIFs involve a complex and costly approval process, at times TIF districts have included areas that are not blighted, and on occasion districts are drawn to include more than the area targeted for redevelopment in order to ensure financial viability.35 Finally, TIFs involve a passive revenue stream that is based on the increment

33. Kriz, 41–64.
of value in excess of the frozen base. If subsequent action by the state alters the base or the calculation of the increment, the ability to repay bond investors may be threatened.  

Evidence concerning whether TIFs are successful tools for capital investment is mixed. Rosentraub and Man demonstrated that TIF stimulated property values. Another study determined that in order for a TIF to be successful, a large initial development is required to provide a sufficient flow of revenue throughout the life of the project. Finally, Kriz concludes that TIFs most likely are a net financial loss to local governments. He states that “TIF may be best thought of as a large financial investment by local governments that may have a small chance of financial reward.”

**Revolving Loan Funds**

Revolving loan funds serve as another alternative to the more traditional tax and borrowing approaches to financing capital and infrastructure improvements. This financing vehicle leverages funds by capitalizing a loan fund administered by a state entity, usually through grants or appropriations, and providing below market interest rate loans to local government entities, sometimes referred to as qualified entities. As a result, qualified entities receive a subsidy to help finance their capital expenditures while replenishing the loan fund so that additional loans can be made to finance the capital expenditures of other local government bodies. Many consider revolving loan funds to be a specialized form of bond bank.

The revolving loan fund’s profile as an alternative means of financing capital expenditures was heightened by passage of The Water Quality Act of 1987. This amendment of the Clean Water Act phased out Environmental Protection Agency (EPA) grants for wastewater treatment construction, replacing them with the State Revolving Loan Fund (SRF) program. This program, administered by the EPA, provided capitalization grants for state-administered SRF funds with the proviso that states provide matching funds of at least 20 percent. Because the SRF funds are administered by the states, there is variation among states on how they provide matching funds, the amount they choose to match, and the way they choose to leverage the SRF funds.

Generally, three types of SRF programs are offered by states. The direct loan program lends funds directly to qualified entities and, as per federal regulations, the

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38. Davis, 63-73.
qualified entities repay the principal. States have the option to charge interest on the loan with the amount of the subsidy being provided to the qualified entities equal to the difference between the prevailing market interest rate the qualified entity would face if it borrowed funds on its own and the rate of interest the SRF program charges on its loans.

A second approach is the matching loan program. Capitalization funds provided by the EPA are matched with proceeds from a revenue bond issued by the state. Funds are then loaned to qualified entities and loan repayments from the qualified entities are used to pay the debt service of the revenue bond issue. Again, qualified entities are required to repay the loan principal, but it is up to individual states to decide what rate of interest, if any, to charge on its SRF loans.

Leveraged loan programs constitute the third type of state SRF program. Under this approach SRF funds are not lent to qualified entities. Instead the state entity issues revenue bonds whose proceeds are lent to local government units. SRF funds serve as a reserve fund for the revenue bond issue and the interest generated from the investment of these SRF funds is used to subsidize the interest rates charged to qualified entities. This approach to the use of the SRF funds maximizes the amount of loanable fund capacity available, especially in the early days of the fund’s existence, and generally improves the credit worthiness of the revenue bond issue because of its backing by SRF funds.42

By 1995 the EPA had provided over $11 billion in capitalization grants and there were over $18.9 billion total funds available in state SRF programs.43 By fiscal year 2000 the EPA had provided over $20 billion in capitalization grants to states and states had contributed approximately $10 billion to their SRF programs. About $3.3 billion came from state appropriations with the remainder coming from leverage loans.44 By 2001 all 50 states and Puerto Rico had SRF programs that had been in existence for more than 10 years. Over the life of the program over $30 billion in assistance had been provided through issuance of over 9,500 low interest loans, with annual assistance during the 1996–2001 period averaging about $3.2 billion per year. Finally, the program does a good job leveraging every federal dollar spent in the SRF, generating about 73 cents in additional expenditures from state contributions and interest earnings.45

Leasing

A third approach that has been used to provide another vehicle to finance capital and infrastructure expenditures is municipal leasing. These are complicated legal and con-

tractual arrangements that allow local governments access to capital markets without the constraints of voter approval, constitutional debt limits, and other requirements associated with regular debt issuance in the municipal market.46

There are many different types of lease arrangements, but lease purchase arrangements seem to be the most popular among local governments, although hard data on leasing practices are difficult to collect.47 Lease purchase agreements involve the government entity consenting to make installment payments based on the market value of the asset. When the lease terminates, the entity gains title to the asset thereby allowing the government unit to own the property without using debt finance. This right to ownership is what exempts the interest payments made by the governmental unit to the lessor from federal taxation. The list of assets that have been acquired through this financing vehicle include, among other things, buildings, vehicles, computers, and equipment.

Sometimes lease purchase agreements are underwritten and then sold to institutional and individual investors, generally as COPs. COPs allow an investor to own a portion of the lease, resulting in a lease agreement that has the appearance of a bond issue. The credit analysis performed on COPs is similar to that performed on other fixed income securities. Of primary importance is the lessee government unit’s general credit worthiness followed by the ease with which the lessor can repossess property from the lessee if payments are not forthcoming, any credit enhancement backing the lease, and the non-appropriation clause.48

Proponents of leasing point out that this financing approach allows equipment costs and capital costs to be spread out over the useful life of the asset, much like debt financing, without accessing the municipal debt market. It can fill the gap between pay as you go and pay as you use (debt financing) when the life of the asset is not long enough to justify the costs associated with issuing bonds. In addition, it allows local government entities to benefit from federal tax deductions despite the fact that these entities are not subject to federal income taxes. In the case of a lease purchase, the interest paid by the lessee (the government unit) is tax-exempt income for the lessor. As a result, the lessor can offer the lessee more favorable lease terms, saving the governmental entity money.49 COPs are structured much like regular debt, yet government entities can treat the annual lease payments as an operating expense rather than debt service, thus avoiding the re-

46. Congress is not hesitant to stop “abusive” municipal lease structures, such as in the American Jobs Creation Act of 2004, which ended the use of lease-in-lease-out transactions.
49. Congressional Budget Office, 239–249.
striction associated with debt issuance. And the lessee can stop lease payments if it so desires.

The ability of the lessee to stop payments is because of the nonappropriation clause contained in lease agreements, which helps distinguish lease arrangements from regular debt arrangements. The nonappropriation clause states that the lessee can elect not to appropriate funds necessary to make annual lease payments. The existence of such a clause forces the lessee government to walk a tightrope of sorts, arguing that the lease payments are annual operating expenditures and not debt service on long-term obligations, while reassuring both the lessor and investors in COPs that annual lease payments will be forthcoming as outlined in the lease agreement.

General wisdom holds that COPs associated with lease arrangements involving essential services are more insulated from possible nonappropriation of funds and therefore are safer investments. The reasoning is that government entities will be reluctant to suspend lease payments for these assets in difficult financial times because of the essential nature of the services—such as services provided for public safety or for the health and welfare of the community. One study concludes that in tough financial times it is likely the opposite will occur. Because the leases involve essential functions, government entities may choose to renege on these payment agreements first, knowing that the lessor will be less willing to repossess equipment from or evict the delinquent government entity. In fact, a 1998 industry study on municipal lease nonappropriation and defaults reported a low default rate, and although the lessee's fiscal condition was the most frequent reason for nonappropriation, the number of events was low relative to the market.

**Bond Banks**

Bond banks have been around since the first one was established in Vermont in 1970. They are championed as a way to promote economic development and provide another tool to finance the rehabilitation and development of infrastructure.

There is some disagreement about what exactly constitutes a bond bank. The traditional definition involves a state-sponsored entity that assists the government in the financing of local infrastructure projects by providing more affordable and practicable access to capital markets. The state entity may or may not choose to provide either direct or indirect subsidies through credit enhancements to the local governments. Regardless, the ultimate goal is to provide a relatively low-cost financing option to local govern-

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ments. A more generous definition characterizes a bond bank as an entity—private, nonprofit, and governmental—that sells its own securities and then lends the proceeds to local governmental bodies. Depending on how one chooses to define a bond bank, it has been reported that there are between 10 and 27 bond banks operating in up to 25 different states.

Not surprisingly, there are different mechanisms used by bond banks to achieve their objective of providing local governments affordable access to capital markets. Some banks rely on a long-term bond pool where the state entity issues bonds and then uses the proceeds to purchase debt obligations of qualified entities. The security behind the state entity’s bonds is the debt service payments by the qualified entities plus, perhaps, a state credit enhancement. Qualified entities benefit from the interest cost savings associated with the pooled risk and economies of scale associated with the state bond issue rather than entering the capital market with their own debt obligations.

Other programs provided by bond banks include cash flow financing, equipment lease financing, and revolving loan programs. Cash flow financing involves the issuance of short-term securities by the state entity that provides for interim financing to qualified entities so they can smooth out traditionally lumpy revenue streams to match expenditures. Lease financing generally involves the state entity assisting qualified entities in placing loans for equipment with banks. These may involve pooled placements or individual placements. The bond bank’s involvement helps standardize the process and documentation, resulting in increased interest among banks to bid on the loans and lower interest costs. Finally, revolving loan funds involve an initial capitalization of the fund and then below market interest rate loans to qualified entities.

In a 1995 survey of 17 bond banks, 16 had long-term bond programs (Virginia had only SRF and other loan programs). Three states engaged in cash flow financing, four in equipment lease financing, nine in SRF financing, and five states had other programs. Indiana was the only state that had programs in all five categories—long-term bond, cash flow, equipment leasing, SRF, and other. Michigan and North Dakota had programs in all but the “other” category; three states had programs in three categories; an additional three had programs in two categories; and seven states had only a long-term bond program.

55. Government Finance Group Inc.
56. The 17 states included in the survey were Alaska, Colorado, Indiana, Kentucky, Maine, Maryland, Michigan, Mississippi, Nevada, New Hampshire, New Mexico, North Dakota, Oregon, Texas, Vermont, Virginia, and West Virginia. The definition of bond bank used was a more traditional definition that did not include any stand-alone SRF programs, although some of the bond banks did have SRF programs as part of their portfolio. Government Finance Group Inc. (February 1997).
There are four types of credit enhancements offered by state bond banks. The moral obligation reserve fund involves funding a reserve equal to one year's debt service on the bonds issued by the state entity. If the reserve fund is insufficient because of the failure of one or more qualified entities to pay its debt service to the bond bank, there usually is a pledge to replenish the debt reserve fund through a state appropriation. A second enhancement, state aid intercept, involves the diversion to the state bond bank of state aid owed to the qualified entity if the entity defaults on its obligations. Some bond banks receive annual appropriations from the state that serve as banking for bonds they issue. Finally, it is possible for a state to guarantee the debt of a bond bank through a pledge of its full faith and credit.

In the same survey mentioned above, it was determined that five states used both the moral obligation reserve and state aid intercept enhancements, four states used moral obligation alone, two used full faith and credit, three used state aid intercept alone, one state used both state appropriation and moral obligation reserve, one state used moral obligation reserve and full faith and credit, and one state used aid intercept and other enhancements.57

Most observers agree that bond banks have achieved their stated goals. They provide smaller governmental units affordable access to regional and national capital markets. They overcome constraints on access faced by these units of government, such as relatively high legal and administrative costs per dollar of debt, lack of information about small issuers among underwriters and investors, and the lack of a bond rating.58

**CRISES IN THE MARKET AND THE RESPONSE**

As the 1980s opened, the cause célèbre of the public financial management community were Proposition 13 in California and urban problems mixed with fiscal mismanagement in New York City and Cleveland. In response to New York City's debt repayment moratorium in 1975, a state control board gained review and oversight responsibilities over city contracts and budgets while a special debt financing authority (the Municipal Assistance Corporation) helped restructure existing debt and provide the city with continuing access to the capital markets.59 Cleveland followed in 1978 by defaulting on GO notes—the first GO default since the Great Depression era. This event prompted Ohio to pass general legislation in 1979 creating a control board mechanism similar to New...
York’s to oversee the city’s recovery from fiscal emergency, but Cleveland was just one of seven cities assigned a control board in the early years of this legislation.\textsuperscript{60}

New York City’s highly publicized fiscal unraveling highlighted a growing recognition that impairment of the repayment obligation to investors could extend the impact beyond city limits to investors nationwide. At the same time, “improper and unethical trading and selling practices” in the municipal securities industry led policy makers to conclude that there was a need for increased investor protection.\textsuperscript{61} In 1975, Congress amended the securities laws to require municipal securities dealers to be registered with the Securities and Exchange Commission (SEC). Congress established the Municipal Securities Rulemaking Board (MSRB) as the self-regulatory organization with primary rulemaking responsibility for municipal securities dealers, but gave the SEC final approval authority. While giving the MSRB authority to regulate municipal securities dealers, Congress added an explicit provision known as the Tower Amendment that prohibited the SEC or the MSRB from requiring “any issuer of municipal securities, directly or indirectly . . . to file with the [SEC or MSRB] . . . prior to the sale of such securities by the issuer any application, report, or document in connection with the issuance, sale, or distribution of such securities.”\textsuperscript{62} There were no such restrictions on the SEC for protecting municipal securities investors from fraud committed by issuers, their officials, and the various parties advising on a public market transaction.

Although the Tower Amendment prevented the MSRB from requiring municipal issuers to file disclosure documents prior to sale, there remained an unease in the marketplace about the provision of information to bond investors by the issuers of municipal securities. By the end of the 1970s, the currently named Government Finance Officers Association responded to this reasonable concern by publishing a set of voluntary market disclosure guidelines for state and local governments.\textsuperscript{63}

In the ensuing 25 years, several events further framed the evolution of state and local debt management. In 1982, the Washington Public Power Supply System defaulted on $2.25 billion worth of revenue bonds. A state court permitted affected local governments to abrogate take-or-pay contracts that had been the security for construction of several nuclear power facilities, ruling in essence that those local governments did not have the

\textsuperscript{60.} Indeed, it was the Cleveland default and the issues it raised for municipal bonds that led the first author to accept his first academic position at nearby Kent State University and to attend for several years the meetings of the Cleveland control board to learn about the causes and solutions to fiscal emergencies. Case studies of the Ohio experience are contained in Bankruptcies, Defaults, and Other Local Government Financial Emergencies (Washington, DC: U.S. Advisory Commission on Intergovernmental Relations, 1985).

\textsuperscript{61.} Municipal Securities Rulemaking Board, Manual (October 1, 1995), 201.

\textsuperscript{62.} Securities Exchange Act of 1934, as amended, section 15B(d).

\textsuperscript{63.} Guidelines for Use by State and Local Governments in the Preparation of Yearly Information Statements and Other Current Information (1978) and Disclosure Guidelines for State and Local Governments (1979), both by the then-named Municipal Finance Officers Association, Chicago.
legal authority to enter into the contracts in the first place.64 What prompted these jurisdic-
tions to seek legal relief was a change in circumstances brought on by unrealistic
original energy demand estimates, extended project delays, escalating project costs in a high
interest rate environment, and growing political pressures to maintain low power rates.

Nationally, the WPPSS bankruptcy intensified concerns about the adequacy of mu-
nicipal bond disclosures. Issuers and other market leaders responded by publishing a
revision of the voluntary disclosure guidelines.65 In August 1989, the SEC responded
more forcibly by adopting Rule 15c2-12, which required municipal securities brokers/dealers to obtain market offering circulars, termed "official statements," from issuers
before agreeing to purchase the bonds.66

Aside from WPPSS, there were local government bankruptcies, too.67 The San Jose
School District in California sought bankruptcy protection in 1983, due, in part, to
Proposition 13 tax limits, but, more pointedly, to void a labor arbitration award. Al-
though the city declared itself insolvent, it paid all debt service on schedule. In 1991, the
Richmond Unified School District in California sought bankruptcy protection from
financial problems that included a default on an $8.5 million lease transaction configured
as COPS.68 Although California passed bailout legislation allowing the district to with-
draw its bankruptcy petition, a state court ruled that the bond disclosure document
contained a nonappropriation clause that clearly stated the debt would be paid only
when there was sufficient money to do so. These COPS remained unpaid until a court
settlement resolved the matter.69

Across the country, Bridgeport, Connecticut, tried but failed to declare bankruptcy
in 1991. The state countered, in part, with the assertion that the city first had to get
the state's approval, and that had not occurred. (A subsequent change in federal
bankruptcy law now requires specific state authorization before a municipality can file
for bankruptcy.) However, the reason the court rejected Bridgeport's bankruptcy pe-
tition was because of the fact that the city actually was not insolvent. It had been paying
its debts and had sufficient cash to pay them in the immediate future.70

64. L. R. Jones, "The WPPSS Default: Trouble in the Municipal Bond Market," Public Budgeting &
(July 10, 1989).
68. Craig L. Johnson and John L. Mikesell, "The Richmond Unified School District Default: COPS,
Bankruptcy, Default and State Intervention," in Case Studies in Public Budgeting and Financial Management,
525–540.
27; Johnson and Mikesell, 41–54.
In 1993, Brevard County's (Florida) public flirtation with exercising its nonappropriation right on a COPs transaction caused market-wide scorn, threatening to harm COPs transactions everywhere.\textsuperscript{71} This experience highlighted the municipal securities industry view that the standard nonappropriation clause is an accommodation to circumvent a legal definition of debt, not the granting of a legal loophole for issuers to get out of a multiyear payment obligation merely because of a lack of willingness to pay during difficult times.

Issuers were quickly learning that they had an obligation to the market both at the time of original issuance and throughout the life of their debt instruments. If there was any doubt, a heightened municipal securities enforcement effort by the SEC drove home the point. With his appointment in July 1993, SEC Chairman Arthur Levitt Jr. brought an intensive focus on promoting investor protection, coupled with a particular interest in state and local finance as the only son of the long-serving elected New York State Comptroller.\textsuperscript{72} Soon, Chairman Levitt created the SEC’s Office of Municipal Securities to coordinate activities in reforming the municipal debt markets in conjunction with the enforcement efforts of the Commission.\textsuperscript{73} This office initiated an extensive program to educate municipal market participants—including issuer officials, underwriters, bond lawyers, financial advisers, and others—in their securities law responsibilities.\textsuperscript{74} Working in parallel fashion, the Internal Revenue Service started a comprehensive enforcement program in 1993, based, in part, on a 1993 report from the General Accounting Office that criticized IRS monitoring of tax-exempt securities.\textsuperscript{75}

In late 1993, the SEC’s Office of Market Regulation issued an extensive report on the “integrity and fairness of the municipal securities market,” that concluded, in part, that “voluntary efforts to increase disclosure in the municipal securities market, while constructive, have not resulted in complete and comprehensive disclosure of the financial condition of issuers of municipal securities.”\textsuperscript{76} Short of Congress repealing the Tower Amendment, the only avenue open to the Commission was to approach the topic through broker/dealer regulations. Accordingly, in March 1994, the SEC issued a state-


\textsuperscript{75} General Accounting Office, Improvements for More Effective Tax-Exempt Bond Oversight, GAO/GGD-93-014 (May 10, 1993).

\textsuperscript{76} U.S. Securities and Exchange Commission, Staff Report on the Municipal Securities Market (September 1993).
ment on continuing disclosure responsibilities as a prelude to the adoption of related amendments to Rule 15c2-12 in November 1994. The Rule, as a whole, establishes certain initial and continuing disclosure requirements. An initial issuer of municipal securities must prepare an official statement meeting certain content requirements before a broker/dealer may recommend securities to potential investors. Moreover, the issuer must agree in writing with the broker/dealer (through an “undertaking” agreement) that the issuer will file certain materials while the securities are outstanding. In particular, the issuer must agree to provide an annual report, audited financial statements, material event notices, and a notice stating any failure to file the other reports. Rule 15c2-12 requires the submission of disclosure documents to each of the Nationally Recognized Securities Information Repositories (NRMSIRs) and applicable State Information Depositories (SIDS).

Orange County, California, filed for bankruptcy in December 1994 on the basis of a portfolio loss of $1.5 billion in its pooled investment fund. Local officials in Orange County, as well as certain other governmental participants in the investment pool, adopted budgets largely dependent upon interest earnings and approved municipal bonds that helped enlarge the investment pool, yet failed to oversee the investment function and issued misleading market disclosures. Subsequent SEC enforcement action declared that elected and appointed officials have a personal obligation to investigate the nature of the jurisdiction’s market disclosures before approving them. Orange County’s indifference to bond market responsibilities emboldened the SEC as it sought to protect municipal securities investors.

Local problems still emerged. Fiscal mismanagement led to respective state takeovers of several prominent cities, including Miami (Florida) in 1996, and Pittsburgh.
(Pennsylvania) and Buffalo (New York) in 2003. The Miami situation, in particular, led the SEC to issue a landmark order against the city to cease and desist from committing any future violations of federal securities laws because of the city's dismissive attitude toward the value of disclosure and its accuracy.82

In Boston, the “Big Dig” construction project (formally the Massachusetts Central Artery/Ted Williams Tunnel Project) by the Massachusetts Turnpike Authority (MTA) led the SEC to conclude, in a settled action in 2003, that the delay in disclosing cost increases exceeding $1 billion in several 1999 bond transactions violated federal securities laws. The SEC raised important issues of disclosure of uncertain and ambiguous facts in a context in which the MTA asserted that it did not want to disclose emerging cost increases that had not been fully quantified or confirmed because disclosure could lead to a “self-fulfilling” prophecy.83 Currently, San Diego faces a serious fiscal problem, including potential SEC enforcement inquiries, caused by its handling of pension obligations and subsequent questionable disclosures in the municipal debt markets.84

In terms of sheer magnitude, however, nothing compares with the turn to heavy debt financing by California in the last few years to deal with its aborted electric industry restructuring, and the precipitous decline in state finances because of the dot-com bubble. In this and a few other notable occasions (e.g., Louisiana in 1988 and Connecticut in 1991) states have borrowed money to cover operating deficits, the same problem that led New York City to its ignoble fiscal situation in 1975.

Despite this list of troubled issuers of municipal securities during the past two to three decades, the fact is that both municipal securities defaults and governmental bankruptcies are rare. Municipal securities not only have a generally low rate of default, but general governments, and GO debt, in particular, have the lowest default rates of all with the last big wave of GO defaults occurring during the Great Depression.85 However, municipal securities backed by dedicated revenues display a more frequent default pattern, especially those issued for healthcare and industrial development purposes. In addition, land-secured bonds have been a notable problem.86

Bankruptcy involves the entire jurisdiction or organization, not just a debt obligation, and can involve many different creditors. Therefore, Congress sets the rules. In the face of municipal fiscal problems in New York City and Cleveland in the late 1970s, Congress responded by incorporating into the comprehensive U.S. Bankruptcy Code of 1979 a
modified municipal bankruptcy law that was codified as Chapter 9. Unlike personal and business bankruptcies, municipal bankruptcy is an entirely voluntary action; creditors cannot force a municipality into bankruptcy. After Bridgeport’s filing for bankruptcy over the objection of the state of Connecticut, Congress revised the law in 1994 to require specific state approval before a municipality can file for bankruptcy. From 1990 to 2002, there have been 135 Chapter 9 filings, with the bulk of the filings from land-secured special districts, not general governments, in California, Colorado, Nebraska, and Texas.

Credit Enhancements as a Response

In response to the increased concern for and attention paid to the potential for default, state and local governments have turned to credit enhancements such as bond insurance and LOC to provide added protection for investors in municipal securities. The most common form of credit enhancement is bond insurance, which is an unconditional pledge by a private insurance company to make principal and interest payments to bond investors. Bond insurers evaluate the creditworthiness of state and local governments and charge an appropriate premium based on their reviews. Independent bond rating agencies subject bond insurers to a stringent depression scenario stress test before awarding the insurer the coveted triple-A credit rating which the bond insurer “rents” (in exchange for a premium) to the insured. A higher credit rating translates into a lower interest cost of borrowing for the debt issue. Bond insurance is viewed as a way to simplify an otherwise complicated security arrangement, making it easier for investors to understand and evaluate the risks involved. Since its introduction in 1971, the market turned to municipal bond insurance following New York City’s debt moratorium in 1975 and the WPPSS default in 1983, with bond insurance quickly representing over 25 percent of the new issuance market. As shown in Figure 2, about one-half of all new issues are insured.

90. For the history, see the first bond insurer—the American Municipal Bond Assurance Company (Ambac): http://www.ambac.com/about.html. Interestingly, municipal bond insurance is not covered in the index or the glossary of the influential book of that period: Lennox L. Moak, Municipal Bonds: Planning, Sale, and Administration (Chicago: Municipal Finance Officers Association, 1982).
91. The Bond Buyer, “A Decade of Municipal Bond Finance,” various issues.
Another form of credit enhancement is LOC. These are financial instruments that substitute the credit risk of the provider of the LOC, usually a bank, for that of the weaker debt issuer. Basically, an LOC is an unconditional pledge of the bank's credit to make principal and interest payments of a specified amount on an issuer's debt for a specified time period, which may be shorter than the term of the bonds. Because the issue's rating is based on the bank's pledge to pay, issuers utilizing LOC are able to obtain more favorable interest rates than they would otherwise. LOCs are less prevalent than bond insurance as shown in Figure 2, with less than 6 percent in recent years, primarily a function of the changes in bank credits and the availability of other alternatives.92

Policy and Management as a Response

Regardless of the debt structures used, a hallmark of infrastructure financing in the United States is its decentralized, market-based approach, especially with the withering of intergovernmental grants. There is no federal oversight of state or local bond

92. The Bond Buyer, "A Decade of Municipal Bond Finance," various issues.
transactions, either before or after the transaction, save for that very rare occasion where the Internal Revenue Service determines that the bond does not qualify for tax-exempt status. Moreover, very few states impose any comprehensive oversight over local debt creation and repayment. Instead, state and local governments must subject themselves to the demanding requirements of the capital markets, and the penetrating analysts at independent credit rating firms.

Credit rating firms consider the management of a state and local government issuer one of four key assessment areas, along with its financial, debt and economic profiles. These four areas provide a convenient, but not definitive, way of characterizing related debt-related research. First, economic and demographic analyses illuminate ways to assess the wealth base that serves as the collateral for long-term bonds. Second, research has also chronicled the changing financial condition of state and local governments and discussed new accounting standards that seek to improve the external reporting of financial results. In regard to the third element, debt itself, studies have analyzed its level and affordability.

Management, as the fourth part of credit analysis, involves a range of policies and practices that defy easy measurement. Yet, it is the actions of policy makers that result in the decision to borrow and the methods and practices utilized. Accordingly, this is a lively area of research in government finance. For example, alternative ways of structuring debt yield unexpected results. The efficiency of selling bonds competitively instead of by negotiation continues to generate debate with an increasingly sophisticated slicing of the data. Using the Internet to conduct an auction for selling debt expands this discussion. A wide range of research focuses on issuer choices regarding the use of financial advisers

94. This research is summarized elsewhere in this symposium.
and other financial certification agents. Regardless of the manner of sale, municipal bond bid valuation research since the mid-1970s indicates that issuers should calculate the cost of capital using time value of money principles—specifically the “true interest cost” (TIC) factor instead of the “net interest cost” (NIC) calculation—while recent work suggests the need for a broader all-in cost of capital measure. Studies also focus on the effectiveness of soft (e.g., management policies) and hard (e.g., constitutional) constraints on debt creation.

CONCLUSION

In the United States, state and local governments’ use of the capital markets to finance needed infrastructure and other public requirements has fostered economic growth and development, and a higher quality of life. This historic perspective is no less relevant for the period covered by this paper.

Over the past 30 years, there have been five national recessions, with the last one ending the longest economic expansion in over 100 years. While the early 1980s were marked with tax-exempt coupons in the double digits, most recently the rates have been


in historically low single digits. At the same time, citizen demand for services has outstripped the willingness of citizens to pay.

In the face of a constrained public budget environment, public officials and their finance managers have to be creative to achieve desired fiscal goals.\textsuperscript{106} Fostering this behavior is a public finance community comprised of bond lawyers, investment bankers, financial advisers, credit rating firms, credit guarantors, and other experts. Investors have not wilted in the face of this onslaught of debt paper, nor with the prospect of having to trade municipal bonds in an inefficient secondary market.\textsuperscript{107} In fact, institutional investors have created new products that generate demand for certain types of debt instruments, such as reset securities. A more aggressive regulatory scheme has emerged, albeit targeted at municipal securities dealers as a backdoor way to regulate issuers. Increased accountability, both internal and external to the government, has wedded with enhanced professionalism among the finance staff, to guide the capital market appetite of these governments. A new generation of scholars has addressed municipal bond questions with finance theory and sophisticated statistical methods.

More troubling is the prospect that Congress may use fundamental federal tax reform to end the tax exemption for municipal securities. If this happens, we only have to look at our northern neighbor to see the impact. In Canada, provincial and municipal governments have to borrow in an exclusively taxable market, in direct competition with its national government and private business. The result is that provincial and municipal governments pay up to one full percentage point (100 basis points) higher interest rates that the Canadian Treasury. For already strapped budgets among U.S. state and local governments, an increase in the cost of capital of this magnitude would be problematic.

Capital markets can be demanding masters as debt accumulation carries an obligation to repay. Over the past 25 years, for the most part, state and local governments have improved their capital market behavior. Learning has been steady, but with significant events propelling the march of progress. Efforts need to be intensified to wring out the inefficiencies in the municipal securities market and in issuers' debt acquisition practices. The past quarter century suggests that this decentralized approach to infrastructure financing works exceedingly well.

\textsuperscript{106} W. Bartley Hildreth, State and Local Government Debt Issuance and Management Service (Austin, TX: Sheshunoff Information Services Inc. 2004, updated yearly).