

Fifth Edition

PUBLIC
BUDGETING
IN
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CAPITAL BUDGETING AND DEBT ADMINISTRATION

This chapter discusses state and local debt, capital budgeting, and issuing government debt for state and local government in the American context. In addition, this chapter defines the concept of debt and explains the classifications commonly used in the marketplace. This chapter contrasts capital budgeting with operating budgeting by emphasizing capital facility planning and the capital budget cycle. This chapter also explains the practical aspects of state and local bonding, including designing an issue, the prospectus, notice of sale, debt records, reporting, and bond ratings. The chapter introduces capital budgeting and debt administration by emphasizing the specific knowledge particularly useful to a person dealing with these challenging subjects. At the completion of this chapter, the reader should understand the following:

- the commonly used definition of debt;
- why governments incur debt;
- alternatives to debt;
- types and forms of debt;
- revenue bonds;
- creative capital financing and its origin;
- nontraditional capital financing;
- commonly used tests and limits on debt;
- early warning guidelines for municipal financial operations;
- significance of the New York City, Orange County, and Washington State Public Power Supply System financial crises on debt administration;
- municipal bankruptcy, financial problems, and remedies;
- the difference between capital and operating budgets;
- capital facility planning and its significance;
- the essential decisions and expertise critical in designing a municipal bond issue;
- what is and should be in a bond prospectus and notice of sale;
- investment syndicates and their significance;
- the importance of good bond administration and data associated with debt reporting; and
- bond ratings, what influences them, and why the market finds them significant.

STATE AND LOCAL DEBT

Definitions

When persons charge items on Master Card or Visa, they incur *debt*. They receive the items and pledge that they will pay for these items within a certain time period. When they get a bank loan for a car, they incur debt. They agree to pay back the loan amount (called *principal*) plus an extra amount (called *interest*) for the privilege of borrowing the money over an extended period of time.

Governments also borrow money; thus, they incur short- and sometimes long-term obligations to pay back the principal and interest. However, some types of debt (for example, trade accounts payable and conditional repayment loans) sometimes do not involve interest payments. Debt constitutes an obligation that the government must pay under the established legal conditions. The Bureau of Census uses the following definition, which stresses interest-bearing obligation:

All long-term credit obligations of the government and its agencies, and all interest bearing short-term (that is, repayable within one year) credit obligations. Includes judgments, mortgages, and "revenue" bonds, as well as general obligation bonds, notes, and interest bearing warrants. Excludes noninterest bearing obligations, amounts owed in a trust or agency capacity, advances and contingent loans from other governments, and rights of individuals to benefit from employee-retirement funds. (U.S. Census Bureau, 2001)

Governments incur debt for several reasons. In some cases, they need cash before they collect their revenue. They use debt to harmonize the divergent patterns of current expenditures and revenues. Often, governments wish to finance a significant capital construction project or even large equipment purchases. They cannot pay current revenues for such large purchases so they negotiate a loan. Sometimes they incur a debt in order to refinance an existing (for example, *short-term*) debt. On occasion, they incur a debt to finance operating deficits. A form of debt that often the general public does not recognize as such is a government's *pension benefit obligation*. Government rarely sells bonds for this purpose, but pensions are an increasingly significant government obligation that can place severe financial pressure on governments.

Governments do not have to incur debts, but the alternatives to debt are difficult to use effectively. The *sinking fund* is an alternative that accumulates funds over time, much like an individual's Christmas savings plan. Government invests the funds until such time as it needs the money. Another alternative is to *pay-as-you-go*, meaning the government pays for the equipment or building costs out of operating expenses. The difficulty with both alternatives is that capital facility needs of governments often do not fit the pace of financing of the funding techniques. Sometimes, a city that needs to build a water purification plant cannot wait the ten or twenty years required for a sinking fund or pay-as-you-go financing approach. Emergencies and irregular expenditure demands occur, and debt is sometimes the only practical alternative under the circumstances, especially where government experiences accelerated urban growth.

New borrowings by consumers and private businesses far exceed government debt, but in the 1980s the governmental share of the nation's total debt load rose remarkably

to nearly 36 percent. In the previous decade it was 30 percent. By 2000, it was 37 percent. In one decade, all outstanding debt rose to nearly \$11 trillion from the previous \$4 trillion level. By 1991, the debt equaled about \$43,000 per person in the United States and exceeded the nation's gross national product by 1.9 times. By the year 2000, total debt stood at \$17 trillion. The total federal government debt stood at nearly \$6 trillion in 2000. Driving this debt load was the large annual federal deficit of the 1980s, but by the late 1990s government policies halted that trend. Surprisingly, the annual deficit was temporarily but effectively eliminated in FY 1998 because of burgeoning revenues from a booming economy and improved financial management and oversight. In the aftermath of the 9/11 terrorist attacks on the United States, deficits are once again accumulating as the economy slows and military and emergency preparedness costs escalate as part of a beefed-up antiterrorist campaign by the United States. Deficit numbers for FY 2001 were \$18.5 trillion with no end in sight given the continuing threat to national security.

Classifications of Debt

Most of the liability items in the state and local government balance sheet are debts of the government. They include bonds, certificates of indebtedness, mortgages, notes, accounts payable, warrants payable, liens, judgments, unfunded pension obligations, and selected contingent liabilities. Excluded are contingent items and reserves for encumbrances.

The largest amount of debt is in the form of bonds. They are a written promise to pay a specified sum of money (called the *face value* or *principal amount*) at a specified date or dates (called the *maturity dates*) together with periodic interest at a specific rate. Financial managers design *serial bonds*, which are the most common type of bond, so that the borrower retires a specific number of bonds each year. Financial managers also design *term bonds*, which the securities industry infrequently uses, to pay interest over time but pay the principal often at the end of the loan period. Borrowers use *sinking funds* to collect the necessary large principal payment by the end of the loan period. Before 1983, borrowers had bonds that had detachable coupons representing the interest payments to the bearer. Upon presentation of the matured coupon to the bond maker's paying agent, the borrower paid the proper interest represented on the coupon. Now, borrowers must register all bonds on the books of the issuing government or paying agent in order to provide protection to the bondholder.

The other forms of debt are typically not as significant unless they happen to involve large obligations. *Certificates of indebtedness* vary from state to state, but the securities industry uses them frequently in connection with agency resources or assets. *Mortgage bonds* use property to secure the obligation without transferring the title, but most of them still do not give the government's creditor the right to foreclose. Financial managers widely use notes to represent evidence of financial obligation, usually of a short-term nature. *Accounts payable* is a debt that includes such government liabilities as *wages earned but not yet paid* as well as the common unpaid bills. The now uncommon *warrant* is a government-issued document to the bank upon which the bank makes payment with the approval of the government. A *lien* is a claim upon property arising from failure of the owner to make timely payment of a claim. A *judgment* is a court decision that the government has a liability or debt to a

person who has sought redress through the courts. Government incurs an *unfunded pension liability* when it does not set aside sufficient funds in an appropriate pension reserve fund to pay the liability of its employees' pensions. Government incurs a *contingent liability* when it agrees to take on the liability (for example, a student loan) of a third party (for example, a student) if that student defaults on the loan. Typically, government uses contingent liabilities as a matter of public policy to lower the third party's interest rate because the bank knows that the government will pay the loan, thus, that lowers radically the nonpayment risk factor.

The financial community sometimes uses the *pledge of security* to classify debts. One type is the *full-faith-and-credit* debt in which a government uses its unconditional pledge, which includes its implied power of taxation, to assure that it will pay its debt. For example, a city or state pledges that it will unconditionally pay a bond obligation, including raising taxes if necessary to meet the obligation. Another type is a debt in which the issuer or a guaranteeing government has a moral but not a legal obligation to pay. A *moral debt* is rarely of interest to the financial community unless the government takes a serious responsibility for that debt by pledging something that assures that the government will pay its debt to the investor. What commonly occurs is some government body (for example, a housing authority) pledges its user charges or some other revenue source to pay the debt, and another unit of government (for example, the state) gives its moral backing to the debt. The financial community typically requires the government to spell out a default remedy. The best pledge from the investor's point of view is a full-faith-and-credit obligation plus a specific user charge to pay the indebtedness.

Merl M. Hackbart and James Leigland (1990) devised a useful approach for understanding debt that is still relevant for use in twenty-first-century public finance. They classified long-term, tax-exempt state government debt obligations into the following four categories:

- *General obligation (GO) debt.* Government backs this debt with an unconditional pledge of any and all the government's revenue sources including its taxing power for the purposes of debt repayment.
- *Revenue debt.* This is a nonguaranteed debt, but the government dedicates one or more specific, pledged revenue sources (for example, user fees, special assessments, limited taxes) to pay the debt.
- *Special authority debt.* Government (usually a special purpose governmental unit such as a public authority, special district, board, bond bank, or corporation) issues this type of debt. The financial community does not consider it a direct obligation of the state. Specific pledged revenues of the state or governmental unit often back such debt. State governments sometimes secondarily back the local obligations.
- *Lease-backed "debt."* Financial advisors structure this debt-like instrument like a revenue bond issue using "certificates of participation" or "lease revenue bonds" secured by lease payment agreements. Although similar to revenue bonds, the financial community makes the distinction because some states do not recognize lease-backed obligations as state debt.

Like Hackbart and Leigland, M. G. Valente (1986) identified the following three broad categories of capital financing options:

- **traditional**, including current revenue, general obligation bonds, revenue bonds, special assessments, and tax increment financing;

- **public-private**, including tax exempt lease purchases, sales lease-back, exaction, and privatization; and
- **creative bonds**, including deep discount/zero coupon bonds, variable rate bonds, put option bonds, bonds with warrants, minibonds, and mininotes.

Short-Term Debt

Governments typically use short-term borrowing for the following reasons:

- The community is short of the necessary revenue to pay for services. For example, the city forecasted the revenue incorrectly, and there is not enough money to pay for planned expenditures.
- The government needs a brief loan and agrees to pay the principal back with interest as soon as it collects the taxes. Possibly the government tied its assets up in securities, but nevertheless it must pay its obligations to its employees or someone else. The government can negotiate to receive a brief loan to *bridge* (thus, it is sometimes called a *bridge loan*) this cash flow problem until it collects its money.
- The community has an emergency, and necessary funds are not available.
- The government has need for funds to start a capital improvement project, but it has not yet completed a long-term bond issue.

At one time, short-term debt vocabulary included only *tax anticipation notes* (TANs), *revenue anticipation notes* (RANs), and *bond anticipation notes* (BANs). Under Internal Revenue Service (IRS) arbitrage regulations, local governments can invest in short-term securities, yielding significant revenue, but IRS rules limit this practice significantly. Thus, there is a fifth reason for short-term borrowing: to raise revenue, as the government can borrow at a lower rate than it can earn in the security market. In addition, there are new forms of short-term borrowing, including *tax and revenue anticipation notes* (TRANs), *grant anticipation notes* (GANs), and *tax-exempt commercial paper* (TECP), which this chapter explains later. Given that they have very tight budgets and that they collect revenue primarily in the third and fourth months of a fiscal year, most large and many medium-size governments appreciate the advantages of short-term borrowing.

However, IRS arbitrage rules severely limit the revenue earning possibilities for local government. Because instruments such as TANs can actually be a money source—an added bonus—local government financial managers can distort the larger purposes of short-term borrowing and even indirectly reduce the income of the federal government. To prevent this absurdity, IRS wrote its arbitrage rules. Certainly the popularity of BANs plus their remarkably high long-term interest rates give local government finance officers huge moneymaking potential from arbitrage investments. To stop local government abuse of arbitrage, federal tax legislation in the mid-1980s changed the IRS law curtailing much of the money earning potential of short-term debt for state and local governments. Although there have been minor adjustments to the tax code relevant to state and local debt since the 1980s, this fundamental change in the treatment of debt has dramatically affected the investment decisions of local finance officers. Regardless of the government's motivation for short-term borrowing, it should carefully review IRS arbitrage rules and then properly manage its debt to maximize the benefits to the local government.

Early Developments in the Debt Concept

Starting with revenue bonds, the financial market experienced significant innovations and changes in the use of debt. The most well-known innovative debt concept is the revenue bond. In 1897 the Spokane, Washington, Water Works used revenue bonds first. However, this debt mechanism, coupled with a means to raise revenue, was not popular until after World War II. Then court decisions held that authorities (for example, the Port of New York and New Jersey and Triborough Bridge Authority) had separate legal status. People in government sought new ways to finance public facilities without increasing taxes, and revenue bonds provided an answer. Briefly, the reasons for the increased use of revenue bonds are as follows:

- Although at first revenue bonds had a higher interest cost than general obligations bonds, their cost decreased significantly, as the financial community became familiar with their use.
- There was more use of public authorities and an expansion of types of authorities (for example, airports, public parks, recreation areas and facilities, stadium and public sport facilities, power projects, housing, public markets, college dormitories, port facilities, and so on).
- Restrictions on general obligations closed that mechanism, forcing the greater use of revenue bonds.
- Governments found that obtaining revenue bond approval, especially because of the nonreferendum requirement, was relatively easy.
- Government found the public acceptable to applying user charges to pay for debt services.

A lesser used version of the revenue bond is the *lease rental bond*. Let us say a school district cannot get voter approval for a bond issue. One mechanism used is to create a nonprofit authority to build and then lease the new school to the school district. A long-term school board lease with the authority provides the authority with the necessary security to assure revenue bondholders that the money from the government's lease will pay the authority's debt service. For example, in 2001 this mechanism was used by the Greenville County School District in the State of South Carolina when it faced stiff taxpayer resistance to raising revenues to support an aging infrastructure. The school board authorized the creation of a nonprofit entity that floated bonds to pay for a major construction and rehabilitation project across the school district. Thus, the authority's revenue bond finances the building of the school and the school district gets its wanted school because of this unique financing arrangement. Because the authority is merely a financing mechanism, some financial groups treat these financial arrangements as general obligation bonds.

In order to attract private industry to a city, region, or state, state and local governments started issuing *industrial aid revenue bonds* (IDBs). The concept was simple: government paid less for interest so it would issue a bond and a new industry would pay the bond interest and use the proceeds to build a new factory that created more jobs for the economic area. Although it was a useful tool for state and local government to attract industry, the issuance of those bonds lowered federal income tax receipts because the interest on the bonds was tax exempt. The Tax Reform Act of

1986 essentially halted most of the use of that type of bond. Today, statewide caps exist on IDBs and the federal government ended the tax-exempt privilege in December 1989. However, many states now utilize the mechanism of Tax Increment Financing (TIFs) as an alternative to fund many of these same industrial and commercial projects. See the discussion of TIFs in Chapter 7.

An interesting cousin of the revenue bond is the *special obligation bond*. An issuer ties the revenue bond to the revenue-generating capacity of a government's ability to produce a service, as well as to the demand for that service. A special obligation bond ties government's revenue-generating capacity to a specific government revenue source that can be entirely outside the control of the local government and may have no logical relationship to the reason for the bond. For example, a local government can pledge its general revenue-sharing receipts from the federal government as the dedicated revenue source for a special obligation bond that the local government uses to build libraries, schools, roads, or piers.

Capital Financing in the 1980s

The early 1980s saw a remarkable change in the tax-exempt securities market. On the one hand, the need for state and local spending on public facilities became very significant (that is, \$3 trillion). On the other hand, the supply of long-term investment capital decreased. This was in a period in which President Reagan's Republican administration successfully reduced federal domestic programs, many state and local areas experienced tax revolts that limited their government revenue, and the national economy experienced the worst recession since the Great Depression. This left state and local governments with debt as the only alternative in a very unstable credit market in which traditional debt instruments were inadequate.

Both the recession and legal changes instituted by the Reagan administration affected the municipal bond market. As a counter to high inflation rates prior to the recession, the Federal Reserve System imposed extremely restrictive monetary policies. That, combined with the Republican administration's massive yearly deficits, produced record high interest rates, which came down slowly when economic recovery started. Changes that the congress enacted in the Economic Recovery Tax Act of 1981 (ERTA) contributed to the higher interest rates. The act reduced the incentive for persons in higher tax brackets to use the municipal bond tax shelter and expanded other income-sheltering opportunities (for example, Individual Retirement Accounts and All Savers Certificates). In addition, ERTA permitted firms to sell tax benefits to the highest bidders, which created billions of dollars of alternative tax shelter investment opportunities and significantly lowered corporate income tax revenues. Further, the Investment Tax Credit (ITC) and Accelerated Cost Recovery Schedules (ACRS) enhanced the after-tax rate of return on private investment, thus lessening the need for tax shelters because less income was taxable. The 1982 Federal Tax Act (TEFRA) further changed the municipal security market by the partial removal of the deductibility of bank interest costs used to finance tax-exempt securities and the requirement that investors must register all of their new municipal bonds. The latter change was extremely significant, as coupon bonds were very popular among investors.

The biggest influence on the market, however, was the poor economy. This created lower business and individual profits, which had less need for municipal bonds as tax shelters. Given those environmental factors, the character of the municipal bond market changed radically. Demand for tax-exempt bonds by the two major institutional investors, namely commercial banks and casualty insurance companies, practically evaporated after 1979. The tax-exempt market reacted by stressing and more aggressively marketing bonds to individual investors. The percentage of bonds held by individual and mutual funds in the tax-exempt market shot up in 1981 and 1982. This was particularly true for short-term tax-exempt paper, which appealed to the money market mutual funds. During 1981, tax-exempt money market holdings grew by \$3 billion, which represented an increase of approximately three-fourths. By the end of 1982, there were \$13.2 billion in aggregate holdings.

The preceding factors, plus the extensive use of private-purpose tax-exempt borrowing, narrowed the gap between the tax-exempt and taxable markets, with the notable exception of the short-term market. Historically, tax-exempt interest rates ran from 65 to 70 percent less than comparable taxable bond yields. In 1981 and 1982, the spread shifted to 80 to 85 percent. This meant that the arbitrage advantage did not result automatically in lower bond interest charges for local and state governments. The cost of borrowing for long-term issues was about the same for government as the private sector. This radical change was partially the result of industrial revenue bonds that induced their extensive and scattered defaults (for example, Washington Public Power Supply System) and shook investor confidence in revenue bonds. The result was higher tax-exempt borrowing rates.

The Tax Reform Act of 1986 brought significant changes to municipal debt of which the most notable was the diminishing of total dollar volume of new issues from over \$220 billion in 1985 to about \$100 billion in 1987. Most of the decline was in nongovernmental or private activity bonds due to the legal constraints of the Tax Reform Act. But even in governmental purpose bonds, the government policy changes lowered borrowing to pre-1985 rush levels to avoid the 1986 legal changes and the stronger arbitrage earning limitations of the 1986 law that sapped demand. For those governments that did borrow after 1986, they found lower interest rates with a spread of a little over 80 percent from taxable securities. John Peterson's (1988) work offers a still timely summary of the impact of the 1986 act as follows:

- Government could finance fewer projects on a tax-exempt basis because of the restraints placed on borrowing, especially involving nongovernmental entities.
- The legal changes meant that the municipal market became fragmented and complicated by the varying tax treatments for different classes of bonds.
- Fewer opportunities then existed to earn arbitrage income by investing bond proceeds.
- Currently, there were more burdensome procedures that surrounded the issuance process.
- There was stiffer competition among underwriters and thus lower profits and fewer firms existed because there were fewer deals and constraints on flotation costs.
- The low ebb of institutional investor demand meant that the individual investor became supreme in the tax-exempt market.
- Little likelihood existed that there would be a relaxation of federal restrictions and a return to rapid tax-exempt market growth.

The Tax Reform Act of 1986 created a new security called the *taxable municipal bond* with the likely buyers being households influenced by the federal alternative minimum income tax. Unfortunately, market buyers linked 42 percent of the early issues indirectly to the junk bond crisis associated with the then-famous securities fraud of Mr. Ivan Boesky. Despite the early problems, a weak market came into existence for this new security. However, interest rates were significantly higher and even higher than corporate bonds with comparable pledges.

The Tax Reform Act of 1986 also brought other significant changes to municipal debt. Congress severely limited the use of tax-exempt bonds to finance "essential" or "public purpose" projects as defined in the legislation. Thus, "private purpose" projects and programs (such as loans to farms and small businesses) had to turn to the new taxable municipal bonds for funding. John E. Peterson estimated that the new market was 15 percent or higher than the dollar value of municipal securities. With the post-1986 federal caps (that is, limits) on industrial development bonds, the percentage was sometimes higher. The likely buyers of these new taxable municipal bonds were households that the federal alternative minimum income tax influenced.

After strong initial interest in these new securities, issuers and investors balked. Investors felt the new and sometimes gimmicky nature of the early issues increased general investor concern about the subsequent demand for the taxable municipal bonds. Despite these early problems, market analysts expected the market to grow. For example, foreign investors, especially the Japanese at the time, became evident as they sought investment diversification of their holdings when their own markets became less desirable. This new set of important investors from abroad added the problem of currency exchange to the already complex municipal securities market decisions.

There is a new world for the finance officer. At the beginning of the last century, the municipal bond market was staid, straightforward, and conservative. Most financing was general obligation (GO) debt, with a gradually increasing use of revenue issues backed by either a user fee or a dedicated tax source. In 1960, total long-term financing was approximately \$7.5 billion, of which 70 percent was general obligation. By 1975 non-GO debt accounted for 50 percent of the total new issues; and by 1981 it accounted for 70 percent, a complete reversal of the 1960 situation. During recession periods, GO debt financed only the most popular subjects (for example, building of jails) because they alone would get voter referendum approval. In November 1991, the electorate defeated more than half of the bond referendums. By 1999, non-GO debt comprised 64 percent of new issues.

One type of creative capital financing that governments have continued to use since the 1980s is the *zero coupon bonds* (ZCBs). During the Reagan administration, the Congress significantly changed the federal tax law twice. The first change prompted creative and often complex local government bonding methods. The second change essentially stopped the use of most of those same creative capital-financing methods. ZCBs are bonds without current interest coupons that governments offer at substantial discounts from par value and provide return to investors through accretion in value at maturity. Thus, for example, governments sell them for \$602 when issued and investors redeem them in five years for \$1,000. This approach has potential appeal to investors earning between \$50,000 and \$100,000 as they are often looking for

retirement or college education financing. A package of ZCBs could provide these investors with the equivalent of a tax-free annuity stream that they would find favorably compared with taxable alternatives. Exhibit 8-1 provides an example.

EXHIBIT 8-1 Tax-Exempt ZC "Annuity" Bonds

MATURITY (IN YEARS)	AMOUNT AT MATURITY	PRICE TODAY FOR ANNUITY PAYMENT	EFFECTIVE YIELD
1	\$ 1,000	\$ 915.73	9.00%
2	1,000	830.58	9.50
3	1,000	746.22	10.00
4	1,000	671.70	10.20
5	1,000	602.34	10.40
6	1,000	538.10	10.60
7	1,000	478.89	10.80
8	1,000	424.58	11.00
9	1,000	375.02	11.20
10	1,000	329.99	11.40
11	1,000	289.28	11.60
12	1,000	252.64	11.80
13	1,000	219.81	12.00
14	1,000	189.28	12.25
15	1,000	164.54	12.40
16	1,000	143.71	12.50
17	1,000	125.28	12.60
18	1,000	109.01	12.70
19	1,000	95.52	12.75
20	1,000	83.62	12.80
	\$20,000	\$7,585.84	11.76%

EQUIVALENT TAXABLE RETURNS:

50% Tax Rate	\$40,000	\$7,585.84	26.11%
30% Tax Rate	28,710	7,585.84	18.16%

Source: Ronald Forbes and Edward Renshaw, "Tax-Exempt Zero Coupon Bonds," In John E. Peterson and Wesley P. Hough (eds.), *Creative Capital Financing*. Chicago: Municipal Finance Officers Association, 1982, p. 153. Used by permission.

NONTRADITIONAL

The nontraditional ways to package bond issues more attractively include external credit supports, tax-exempt commercial paper, put option securities, original issue discount bonds including ZCBs, variable rate securities, and leasing. These are means to attract new or retain old investors in the tax-exempt market. With these instruments, a negotiated sale may become superior to a competitive sale owing to the complexity of this type of sale. Regardless, technical advice is important to obtain in meeting the following purposes:

- targeting the investment vehicle toward a specific group of investors (those who have money and have a preference that they can satisfy);
- designing the instrument features, such as where to place the *put option*, what *index* to employ in a variable rate, and how to construct a *lease-purchase*;
- formalizing agreements (this chapter will explain them later);
- timing the transaction; and
- considering objectively the alternative approaches.

The forms of external credit support include a bank line of credit, municipal bond insurance, state credit assistance, and federal guarantees. A line of credit is a contingent loan arrangement with a bank in which the bank agrees to lend funds required by the government for a fixed time period. The *letter of credit* (LOC) is an unconditional pledge of the bank's credit to make principal and interest payments of a specific amount and terms on an issuer's debt. Both provide a guarantee that the back-up arrangement will meet the bond issuer's future liquidity requirements. Typically, borrowers use them for smaller amounts with the size and type of issue generally unrestricted; banks usually charge an annual fee for the LOC plus normal interest charges on the principal. Especially related to LOC for American local governments starting in the mid-1980s is the increased use of Japanese and European banks instead of American banks. For example, Shelby County, Tennessee, negotiated successfully with Sanwa Bank (a Japanese bank), resulting in Shelby County annually saving \$1 million on loan costs. The bond insurance premium is a one-time, up-front fee.

The LOC can lower interest cost because the LOC substitutes the creditworthiness of the bank. Also, LOC may be necessary in connection with other creative capital financing devices (for example, put options). A major private insurance group such as the Municipal Bond Insurance Association (MBIA) or the American Municipal Bond Assurance Corporation (AMBAC) can also assume the default risk of a government for a specific fee. Exhibit 8-2 presents selected features of three major private bond guarantee programs available to state and local governments.

Purchasing bond insurance should lower interest rates below the rate that a government could obtain without insurance. Thus, bond insurance makes economic sense when the local government's bond rating is low. That calculation, using a present value method, must exceed the premium cost. Typically, the insurance premium accounts for 20 to 30 basis points (100 basis points equals 1 percent in interest). Issuers can have cost savings as high as 40 to 95 basis points for new bond issues. States

EXHIBIT 8-2 Selected Features: Private Municipal Bond Guarantees

FEATURES THAT ISSUES MUST POSSESS TO BE ELIGIBLE FOR GUARANTEES

PROGRAM	TYPE OF ISSUE*	SIZE OF ISSUE (IN MILLIONS)	QUALITY LIMITATIONS	COST OF GUARANTEE (PD. AT TIME OF ISSUE)
AMBAC	GO's & Rev. Bd. of existing facilities	\$0.6-\$22.0 (tot. prin. & int.)	S&P BBB or better	1/2%-1 1/2% of original principal and interest
Indemnity Corp.	GO's & Rev.'s	\$0.6-\$22.0 (tot. prin. & int.)	none	1/2%-3 1/4% of original principal and interest
MBIA Rev. Bds.	GO's & Utility	\$0.6-\$22.0 (prin. only)	Generally, S&P BBB or better	1%-2% of original principal only

*With the exception of Indemnity Corp., all guarantees are for new bond issues. (Indemnity Corp. will also guarantee portfolios of outstanding bonds.)

Source: Michael O. Joehnk and David S. Kidwell. "Determining the Advantages and Disadvantages of Private Municipal Bond Guarantees." In John E. Peterson and Wesley C. Hough (eds.), *Creative Capital Financing*. Chicago: Municipal Finance Officers Association, 1983, p. 214. Used by permission.

can provide municipal credit assistance by guaranteeing local debt issues, much as a private insurance company would do. States can act as a financial intermediate via a state municipal bond bank and provide grants to subsidize local debt service requirements. Each activity can lower subjurisdiction interest and, possibly, administrative costs. The last external source of support is the federal government, which routinely provides guarantees in the areas of housing and urban renewal.

In 1971, insurance came into the municipal market and it has grown in use since then. Insured municipal bonds were about 30 percent of the \$41.1 billion of long-term tax-exempt issues sold in the first four months of 1991. The percentage of insured municipal bonds broke the 50 percent level in 1997. They tend to boost bond ratings and thus lower interest rates for insuring municipal governments. The major municipal bond insurers in order are Municipal Bond Investors Assurance Indemnity Corporation (MBIA), American Municipal Bond Assurance Company (AMBAC), Financial Guaranty Insurance Company (FGIC), Bond Investors Guaranty (BIG), and Capital Guaranty Insurance Company. Each firm rates most major issues for potential investors. If the municipality has insurance on an issue, then the rating company would give the issue the highest rating possible because the risk factor of nonpayment would be low. Either a good reputation in the bond market or having bond insurance can get issuers of bonds lower interest costs because their bonds are more attractive to buyers. Interestingly, insured bonds actually trade in prices closer to double-A bonds than to uninsured triple-A bonds. In other words, insurance helps, but an earned triple-A is better than a triple-A obtained by insurance. Not all insurance companies will result

in the same cost advantage. In the past, the market gave MBIA insured bonds slightly lower yields, and FGIC and AMBAC backed bonds traded 5 to 10 basis points higher. If the insurer's rating slips, so does the rating of all issues that the company insures.

An interesting creative finance development is "loan-to-lender" financing, which marries federally insured certificates of deposit to tax-exempt industrial revenue bonds. A government issues an industrial tax-exempt revenue bond, with the proceeds deposited in exchange for federally insured certificates of deposit with triple-A credit ratings. Contractual obligation dedicates the proceeds, which result from negotiation at the same rate and term as the industrial bonds, to make mortgage loans to third party developers in order to finance publicly desired projects (for example, low income housing). These increasingly popular instruments carry remarkably low interest rates.

Issuers can use *tax-exempt commercial paper* (TECP) for purposes similar to those of TANs and BANs, but a bank *line of credit*, which enhances cash liquidity, must support the paper. This new security increased in popularity when the federal government exempted the interest earned from federal taxes. The variety of maturities available and the ready liquidity make TECP an especially convenient instrument for those wishing to tailor maturities to future needs. There is a drawback: TECP has higher start-up and operating costs than traditional short-term instruments have (for example, TANs and BANs). Thus, a government should have at least \$25 million of short-term borrowing a year to justify the high initial TECP costs. If the government has large short-term borrowing needs, TECP usually costs less than traditional short-term instruments. However, the issuer should retire the TECP when funds become available, and this may eliminate a government's important reinvestment earning opportunities. The latter can be an important source of local revenue.

A *put or tender option* in the issue often can attract long-term investors as well as take advantage of lower short-term interest rates. The *tender option* permits the investors to convert the investment to a shorter maturity, much as the call provision permits the government to do the same. The *put option* places liquidity demands on the issuer; hence, an issuer needs a letter of credit. The investor can exercise a *window put*, or *European option*, once during a defined period. In contrast, the *anniversary put*, or *American option*, allows investors to put their bonds back to the issuer periodically, generally on a given date once every year. Other things being equal, investors should value a 25-year bond with a five-year window put option higher than they would a traditional 25-year bond. The former represents a very strong protection against rising rates and falling bond prices. In high interest periods, the option saves the issuer at least 275 basis points. Beside external liquidity support, the put option requires a remarketing agreement with a bank or underwriter by which the investor exercises the option.

An *original issue discount bond* (OID) is a long-term bond offered at a discount of the stated par value. The return occurs through gradual accretion to the bond's maturity when par is met. This is in contrast to traditional bonds, with which investors pay the par value to the municipality and receive back the principal plus the stated interest by the time of maturity. The IRS treats the difference between the par value and the purchase price as tax-exempt income. The "ultimate" original discount bond is the ZCB explained earlier. Another type of bond is the *compound interest*

bond (the market also calls it the *municipal multiplier* and *capital appreciation bond*), which the issuer initially sells at par value. At maturity, investors receive payment of principal plus the amount of earned interest that the security accumulated over the life of the bond based on a semiannually compounded rate.

Variable rate securities attract investors who believe that market rates will continue to rise and wish to maintain their investment capital value. Offering securities that have floating rates accomplishes this; the security ties the yield to a formula linked to some other market factor, such as the prevailing interest rate on treasury notes. An added plus is the inclusion of a put option to increase liquidity as a trade-off for lower interest charges. The key to this type of issue is the choice of indexes by which the instrument determines the floating rates and the frequency with which the instrument readjusts the rate.

A nondebt instrument that can accomplish the same purpose as a debt is the *lease*. The various types of leases are the operating lease, the sale-leaseback, the safe-harbor lease, and the leverage lease. In the past, a lease was merely an agreement between a government unit and a private owner for the use of property or services over a period of time in exchange for rent or a fee. With creative capital financing, there are much more complex lease agreements that take advantage of federal tax incentives for private investment in capital goods. In a *true* or *operating lease*, a government unit acquires the use of an asset, with a private investor having title, a 90 percent equity investment (under IRS rules), and the use of a tax-exempt debt (for example, an industrial bond) to cover the other 80 percent. Often the lease allows the government to purchase the asset at fair market value or less when the lease expires. The result of this complex arrangement is remarkable. The private person can apply the accelerated depreciation of the asset against his or her federal income tax as an expense item and still acquire an investment tax credit advantage at a lower lease rate than the normal agreed-upon fair market value selling price.

A *sale-leaseback*, sometimes called a lease-purchase, involves the sale of government property to private investors, who receive tax advantages from the purchase while leasing back the asset to the government for its use. The local government shares the value of the tax benefit with a private party, with the "sale" proceeds used to renovate the asset used by the government. In a *safe-harbor lease*, made possible by ERTA, the government sells property (for example, mass transit vehicles) in a traditional sale-leaseback, with the advantage that the private party sells the tax write-offs to other private parties, thus reducing the federal taxes of the profit-making companies' taxes. At the end of the lease, the government can repurchase the asset for a nominal amount. In a *leverage lease*, a third party finances a large purchase. The buyer uses borrowed capital to purchase the asset leased to the local government. The local government repays the lender with a tax-exempt interest and a security interest in the property. Exhibits 8-3 and 8-4 present the government's and the investor's respective advantages from a possible sale-leaseback using the new present value concept.

Financial analysts can also use two other ideas associated with creative capital financing—warrants and small denomination bonds. The Municipal Assistance Corporation's February 1981 issue for the City of New York used the term "warrant" and gave the term an additional meaning that this book explained under cash management

EXHIBIT 8-3 Sale Leaseback from the Government Unit's Perspective

	ANNUAL	15-YEAR TOTAL	NET PRESENT VALUE @15%
Cost of Sale-Lease back Financing Alternative:			
(1) Lease Payments (net of ground lease)	\$585,000	\$8,775,000	\$4,449,556
(2) Earnings from Escrow Account (\$1 million invested at 11%)	110,000	1,650,000	836,669
(3) Repurchase of Building at End of Lease (\$1.15 million less \$1 million in escrow account)		150,000	35,909
(4) Net Cost of Sale-Leaseback	\$475,000	\$7,275,000	\$3,648,796
Cost of General Obligation Bond Financing Alternative:			
(5) Debt Service if \$4 Million, 15-Year Bonds at 10% were issued	\$525,895	\$7,888,425	\$3,999,999
Savings from Sale-Leaseback:			
(GO debt service less total cost of sale-leaseback)	\$50,895	\$613,425	\$351,203

Source: John E. Peterson and Wesley C. Hough. "Leasing." In John E. Peterson and Wesley C. Hough (eds.), *Creative Capital Financing*. Chicago: Municipal Finance Officers Association, 1983, p. 90. Used by permission.

in Chapter 7. Under this usage of the word, warrants are special certificates attached to bonds that permit investors to purchase future bonds at the same price and interest as the original issue. This is usually referred to as an *option to buy*. The market treats such certificates as bearer-redeemable securities that the investor can detach from the original bonds and sell separately.

Edward Anthony Lehan champions minimunicipal bonds, which governments sell in \$100, \$500, and \$1,000 par amounts rather than in the traditional \$5,000 par amount. He points out that they were successful when tried by local government and that they give the added advantage of permitting local citizens to invest directly in their community. Financial managers model the minibonds, in some instances, after the U.S. savings bonds, as they are essentially mini-ZCBs.

One new public finance instrument added by the 1990s was *certificates of participation* (COPs). COPs raise money without issuing debt per se as they are based on lease-backed financing, thus, they avoid the need for referendum approval. With COPs, a government agrees with another entity, such as a leasing company, to have it acquire a capital item. The government then leases the capital item and the government considers the leasing fee as an operating expense rather than debt service. This

EXHIBIT 8-4 Sale-Leaseback from the Investor's Perspective

	YEAR 1	YEAR 2	YEARS 3-14	YEARS 15	TOTAL (000's)	NET PRESENT VALUE @ 15% (000's)
Total Price to Investors:	\$5,000,000					
Sources of Funds:						
\$3,850,000 Industrial Revenue Bond						
\$1,150,000 Investor Equity						
(A) Operating Expenses						
Rental Income	\$585,000	\$585,000	\$7,020,000	\$585,000	\$8,775	\$3,421
Sale Price at End of Lease	—	—	—	1,150,000	1,150	141
Administrative Expense	5,000	5,000	60,000	5,000	75	29
Debt Service on IDB	565,273	565,273	6,783,276	565,273	8,479	3,307
Income before Taxes	14,727	14,727	176,724	1,164,727	1,371	226
(B) Tax Advantages						
Tax Liability or Savings at 50%						
Bracket**	77,667	71,470	-11,535	-493,051*	-355	148
Investment Tax Credit	950,000	—	—	—	950	826
Total Return on Investment after Taxes (Income before taxes plus tax advantages)	\$1,042,394	\$86,197	\$165,189	\$671,676	\$1,965	\$1,200

*Includes capital gains tax.

**Tax on income after deductions for straight-line depreciation, administrative expenses, and interest paid on IRB.

Source: John E. Peterson and Wesley C. Hough. "Leasing." In John E. Peterson and Wesley C. Hough (eds.), *Creative Capital Financing*. Chicago: Municipal Finance Officers Association, 1983, p. 89. Used by permission.

market is primarily in California and used as a means to circumvent the California Proposition 13-type limits. The market does not tend to support COPs used for anything other than essential government purposes.

In the 1990s, a new type of financial instrument from the private sector started to appear in the public sector market because of the higher volatility of short- and longer-term rates and the desire to hedge the risk by both the issuers and investors of government bonds. The financial community calls this new instrument *derivatives* because they derive their price from other financial instruments. Derivatives have a place in the public sector financial market, but there is also the distinct possibility that improper judgment on the part of government financial managers can mean massive financial losses in the millions and billions of dollars.

Financial derivatives include *forwards*, *futures*, *options*, and *swaps*. They relate to stock, bonds, interest rates, and currencies; but in the public sector market, they are mostly associated with bonds. Forwards, futures, and swaps are a *commitment* to exchange agreed-upon cash flows at a specific future at prices or rates determined in the present. In contrast, an option provides a *right but not an obligation* to a future exchange again at a price or rate determined in the present. Thus, a financial derivative can either result in large gains or losses depending on whether the investor guesses correctly on the difference between the present and future price or rate commitment.

Financial engineering is the use of financial derivatives, typically, for risk management purposes. For example, investment experts can match the investor's requirements using derivatives to create the desired risk and provide the wanted return on investment. *Hedgers*, especially government issuers of debt, like derivatives because they use them to reduce their risk by using price or rate commitments to guard against overcommitment in the primary financial decision. Another group of derivative traders is *speculators*, who buy and sell derivatives not to reduce their risk but merely to make profit. They buy when they believe the market underpriced futures or options and sell when they believe the market overpriced futures or options. If this group of traders guesses wrong and is a significant group of speculators, this group can make or lose huge amounts of money. The third group of traders is *arbitrators*, who make profit from relative improper pricing of financials. For example, bond futures prices usually relate consistently with actual bond prices, but this need not be true. When not true, an arbitrage opportunity may arise where arbitrators buy and simultaneously sell futures when the bond futures prices are too high relative to the actual bond price.

Forwards, futures, options, and swaps have their respective advantages and disadvantages. Forwards are relatively simple to understand, and financial engineers use them for short and medium terms (up to five years). However, they have inflexible timing. Futures are more complex, and financial engineers use them for the short term (less than a year) when they do not want to constrain the timing of the cash flow. The more complex swap is a series of forward contracts that are longer term (many exceed ten years), are inflexible on timing, and are difficult to cancel or reverse. The major advantage of options is that the holder can decide not to exercise the option when the price or stipulated rate becomes unattractive.

Derivatives depend on the difference between the short- and long-term rates, the inclusion of put or call provisions in the major financial instrument, and sometimes the

use of variable rate bonds. Swaps are an agreement between the issuer and a third party (the financial community calls it a *counterparty*) to exchange interest but not principal payments on an existing debt. Often they are the swap of fixed-rate payments for variable rate and thus the issuer hedges against losses when variable rates move up or "fix out," giving the issuer more peace of mind.

Floaters and *inverse floaters* are even more complex derivative innovations that isolate a portion of the interest rate payments on an otherwise plain vanilla fixed bond-rate bond. For example, the issuer strips away the interest payments and sells them separately to two sets of purchasers who take bear and bull positions, depending on how the interest rates behave. The bear receives a floating rate payment based on a market index and the bull takes the rest, creating an inverse floating security. When interest rates go up, the bear receives more interest rates at the expense of the bull, and vice versa when rates go down. In either case, the issuer continues to pay the fixed rate. Thus, the risk taker is the investor and not the issuer. Giving the investor this flexibility to buy bear or bull positions means that the investor's rewards can be greater, but of course investors can lose serious money if their judgments are poor.

As mentioned earlier, financial derivatives are sophisticated, complex, and dangerous. Thus, government financial managers must use them with utmost caution. Clearly, the use of government derivatives as an issuer is a better risk situation than when a government acts as an investor in cash management or pension fund management situations. In fact, the use of derivatives in cash management situations is rarely if ever appropriate given their need for low risk investments. In pension fund management, the manager can assume a higher risk, but even here derivatives should be a small portion of the investment portfolio. A dramatic example of the danger of derivatives is the bankruptcy of Orange County, California, in the mid-1990s. At its high point in 1991 to 1994, Orange County cash managed over \$7 billion per year of its money and the money of other local governments that pooled their investments with Orange County. The county financial manager essentially bet most of the portfolio on an upward direction in interest rates, and they fell creating a \$1.7 billion shortfall. He did not have sufficient liquidity or short-term credit backup to cover the losses, so the county petitioned for bankruptcy under chapter nine of the U.S. bankruptcy code.

Tests and Limits

At the local and state levels, potential investors, the investment community, and opposition political leaders raise questions when policy makers contemplate an increase in the local or state public debt. Sometimes a politician argues that no debt is best. Others argue for debt by saying that their administration would substitute capital for current expenditures such as labor costs and thus greatly increase the service to the public without increasing taxes. Others argue that capital expenditures benefit tomorrow's taxpayers and paying a debt appropriately shifts the cost of the project to future generations. Others use a more pragmatic test: if the government (1) can service the debt (that is, meet the payments as well as meet other usual expenses of government) and (2) can refinance its debt through the market,

then they find a debt acceptable. Servicing a debt can be a tremendous burden on a community. A commonly used danger sign is when the debt service approaches 20 to 25 percent of the total budget. Few communities exceed this limit. Nationally, the aggregate debt figures for state and local governments are less than 10 percent of the total budgets.

The government debt situation in the United States is a mixed picture. For state and local governments, it is generally quite good except for a few odd cases like Orange County. Until the Clinton administration, there was reason for concern at the federal level as the debt service level was a significant portion of the yearly expenditure. In the George W. Bush administration, there is a yearly deficit again. The remarkable growth in the Clinton years reduced the debt service level as a percent of yearly expenditures. Having a less *net interest paid* means policy makers have more money for traditional government activities (for example, national defense and domestic programs) or lowering taxes. In addition, because most of the federal taxes are from lower-income people, payments of net interest on the debt benefit upper-income Americans and foreign investors in U.S. bonds. Thus, lowering the debt payments makes more funds available to the middle- and lower-income persons in America. The solution to a large long-term debt almost always involves cutting or limiting the yearly increases in expenditures, raising taxes, and sustaining and significantly increasing the national wealth over a long period of time. In the George W. Bush administration, the policy shifted back to lowering taxes and the yearly deficit reemerged.

Governments that have the most difficulty in financing their activities are usually those experiencing weak economic growth. If an area grows economically, then there is demand for borrowing because there is an improving tax base with which to pay that debt. If the tax base shrinks and the cost of government increases, then finance rating companies and the investors classify the government as a weak financial risk. Thus, when the city later wishes to issue a debt, it is of no interest to investors, meaning they may get no money or will pay a very high interest rate for the debt. Another common problem is a state law that easily permits local governments to issue tax-exempt bonds. For example, in the wake of Proposition 13, legal changes in California made issuing general obligation bonds difficult for communities, but vague criteria made it easy for special districts to issue bonds. This situation combined with an economic recession drives the local real estate market down and increases the likelihood that special districts will not meet their debt payments.

Governments can have trouble refinancing their short-term debt. Usually, this means that they find either retiring the short-term debt or refinancing it with another short-term debt due in the next year impossible. These situations place pressure on weaker governments when their refinancing needs are high and investor confidence from the market is low. Weaker governments find themselves unable to pay off the short-term debts, so default becomes a very real possibility in spite of the fact that typically they can meet the interest payments. In managing a debit or acquiring a loan, investors' views are significant. They are the ones who wish to buy government bonds and almost always they want to invest in safe bonds or notes that will earn

them a reasonable return on their investment. Although there are no ideal indicators, investors do use the following indicators in making decisions:

- Does the ratio of debt to full value exceed 10 percent?
- What is the ratio of debt to market value of the real property? How does that compare with other governments?
- What is the debt per capita? How does this compare with other governments?
- What is the ratio of debt to personal income (per capita income)?
- What is the ratio of debt service to total budget?

Standard and Poor (a major bond rating firm) has developed a series of early warning guidelines that municipalities should consider carefully in monitoring their own financial operations. They are the following:

- current-year operating deficit;
- two consecutive years of operating fund deficit;
- current-year operating deficit that is larger than the previous year's deficit;
- a general fund deficit in the current position in the current-year balance sheet;
- a current general fund deficit (two or more years in the last five);
- short-term debt (other than BAN) greater than 5 percent of main operating fund revenues outstanding at the end of the fiscal year;
- a two-year trend of increasing short-term debt outstanding at fiscal year end;
- short-term interest and current-year debt service greater than 20 percent of total revenues;
- property taxes greater than 90 percent of the tax limit;
- debt outstanding greater than 90 percent of the tax limit;
- total property tax collections less than 90 percent of total levy;
- a trend of increasing tax collections during two consecutive years in a three-year trend;
- declining market valuations during two consecutive years in a three-year trend;
- overall net debt ratio to percent higher than previous year; and
- overall net debt ratio 50 percent higher than four years ago.

The International City County Management Association has developed an analytical tool called the *Financial Trend Monitoring System* (FTMS). It does not provide concrete answers as to whether a particular financial trend indicates a fiscal problem, but it does help decision makers more objectively consider a local government's financial condition. As the reader can see from the Standard and Poor list of indicators, evaluating a jurisdiction's financial condition is difficult and no single indicator tells the whole story, especially if the jurisdiction invests in derivatives. Some indicators are more important than others, but the analysts cannot be sure which are more important until they assemble all the key indicators. The FTMS has twelve factors with indicators for each factor. The six financial factors are revenues, expenditures, operating position, debt structure, unfunded liabilities, and condition of the capital plant. The five environmental factors are community needs and resources, external economic conditions, intergovernmental constraints, natural disasters and emergencies, and political culture. The twelfth factor is legislative policies and man-

agement practices. The FTMS groups the indicators by factors, using historical profiles for each indicator.

Exhibit 8-5 illustrates that state constitutions and laws do establish artificial debt limits. They vary greatly from state to state as well as by type of local government. Typically, they express the limit as a percent of the property tax base. Often state laws add provisions so those jurisdictions that tax the same citizens have lower limits. This avoids greater taxpayer liabilities for citizens from two or more overlapping jurisdictions. Also state laws sometimes establish artificial limits based on the tax imposed for servicing the debt. Another common state limitation is the procedural requirement calling for a referendum on long-term indebtedness bond issues.

Investors treat revenue bonds much like private corporation bonds. State law often does not prescribe limits and the market establishes the limits. Investors examine forecasts of income to ensure local governments will meet their debt services and the investors' investments are safe.

LOOKING BACK FOR FUTURE LESSONS: SOME IMPORTANT CASES

New York City Financial Crisis

In April 1975, New York City hovered on the brink of default on its obligations. With help from New York State, the federal government, and others, it averted default, but two significant consequences emerged after the crisis. The first was that state and local governments now paid higher interest rates. The second was the financial community now required more elaborate financial disclosures.

The nation felt the effects of the New York crisis, and North Carolina is one example. In *Southern City* Kenneth Murray (1976, 6) reported that a study by the Municipal Finance Officers Association (MFOA) showed "that the New York City financial crisis already cost local governments in North Carolina \$424,000 in first-year added interest costs on bonded indebtedness and \$5.1 million total in interest over the life of municipal bonds issued in 1975."

Exhibit 8-6 shows the credit rating change for New York City. Notice from 1965 to 1975 the remarkable drop to a low of Caa. Also note that since 1977 the rating has improved. In the precrisis era, state and local governments sold their bonds without revealing much about their financial situation. Since the crisis, investors have demanded greater disclosure of facts about the community and bonds.

Washington State Public Power Supply System (WPPSS)

In 1983, the WPPSS defaulted on its revenue bonds because the revenue from the nuclear power electric generation did not meet debt service requirements. WPPSS defaulted on payments of \$2.3 billion in bonds issued to finance two nuclear power plants in the state of Washington. Eppler and Spatt argued that the default of the WPPSS raised that state's general obligation borrowing costs. Because the market held the jurisdiction responsible for repayment of principal and interest of this revenue bond default, potential GO bondholders viewed the revenue bond default as

EXHIBIT 8-5 State Debt Limitations of the 50 States

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STATE	AMOUNT OF GO DEBT LIMIT	CONSTITUTIONAL OR STATUTORY	OVERRIDE PROVISIONS	AMOUNT OF SHORT-TERM DEBT LIMIT	CONSTITUTIONAL OR STATUTORY	OVERRIDE PROVISIONS
Alabama	U	C	—			
Alaska	U	—	—	\$300,000	C	—
Arizona	\$350,000	C	—	U	C	—
Arkansas	\$1,350,000,000	C	—	—	—	—
California	U	—	—	N	—	—
Colorado	U	C	—	—	—	—
Connecticut	1.6 x Rev.	S	—	N	S	X
Delaware	—	S	—	—	S	—
Florida	—	C	—	—	—	—
Georgia	10% Rev.	C	—	N	—	—
Hawaii	—	C	—	—	—	—
Idaho	\$2,000,000	C	X	—	—	—
Illinois	—	C,S	X	\$2,000,000	C	X
Indiana	N	C	—	15% total app.	C,S	—
Iowa	\$250,000	C	—	N	C	—
Kansas	\$1,000,000	C	X	U	S	—
Kentucky	\$500,000	C	—	U	—	—
Louisiana	—	C,S	—	U	—	—
Maine	U	—	X	—	—	—
Maryland	—	—	—	5% of G.F. \$100,000,000	S	0
Massachusetts	—	S	—	—	S	—
Michigan	—	C,S	—	—	—	—
Minnesota	3% non-ded. Rev.	—	—	—	C	—
Mississippi	1.5 x Rev.	C	—	—	S	—
Missouri	1,000,000	C	C	5% of G.F. N	S C	— X

Montana	U	—	—	U	—	—
Nebraska	N	C	—	N	C	—
Nevada	2% of assessed val	C	—	—	—	—
New Hampshire	10% Rev.	S	—	\$125,000,000	—	—
New Jersey	1% of G.F.	C	Referendum	N	—	—
New Mexico	—	C	—	\$200,000	C	—
New York	U	C/S	—	\$1,000,000,000	S	X
North Carolina	U	C	Popular Vote	50% yr. total	C	X
North Dakota	\$10,000,000	C	X	N	—	—
Ohio	—	C	—	—	C,S	—
Oklahoma	U	—	—	U	—	—
Oregon	—	C	Const. Amendment	—	—	—
Pennsylvania	—	C	Referendum	20% of rev.	S	—
Rhode Island	\$50,000	C	Referendum	\$150,000,000	C,S	—
South Carolina	—	C	—	N	—	X
South Dakota	N	C	—	\$100,000	C	—
Tennessee	—	S	X	N	—	—
Texas	5% of GR	C,S	X	—	—	X
Utah	20% of state appr. limit	C,S	C	—	—	—
Vermont	U	S	—	—	S	—
Virginia	9,425,434,000	C	—	3,310,975,000	C	—
Washington	7 or 9% of general Rev.	C,S	—	—	—	—
West Virginia	per amendment	C	—	per statute	S	—
Wisconsin	formula	C	X	10% of G.F.	S	S
Wyoming	1% assessed value	C	—	N	—	—
Puerto Rico	Annual pmt. < 15%	C	—	—	S	—
Codes:	C... Constitutional S... Statutory			U... Unlimited N... No debt allowed		

Source: As adapted from National Association of State Budget Officers. *Budget Processes in States*, Washington, DC: NASBO, 2002.

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EXHIBIT 8-6 Moody's Rating for New York City

DATES	RATINGS
07/65	Baa
05/68	Baa1
12/72	A
10/75	Ba
10/75	Caa
05/77	B
11/81	Ba1
11/83	Baa
07/85	Baa1
08/88	A
07/93	Baa1
02/98	A3

Source: Moody's Municipal Credit Report. Used by permission. City of New York, Bureau of Debt Management, 2002.

evidence that the jurisdiction managed itself poorly. Epple and Spatt posited that reputation costs affect borrowing across all jurisdictions within a state when a local bond default occurs. Moreover, following years of contentious bankruptcy proceedings, the jurisdiction did make some \$500 million in payments to bondholders.

Orange County, California

The more significant local government financial crisis was the Orange County situation discussed earlier in this chapter. Orange County, one of the wealthiest local governments in the world, defaulted on general obligation bonds. Prior to that time, American local government, with very few exceptions, considered GO debt "sacred," with governments going to great lengths to protect their GO bond rating. Overnight, Orange County changed the rules and traditional financial emergency signals, which this chapter explains later, were inadequate in dealing with poor financial management using derivatives.

What are the consequences of Orange County? Fortunately, investors did not abandon the municipal market, which investors had considered about the safest place to invest. Interest rates did not spike up, except for California issuers. Most of Orange County bond investors were money market fund managers, and they reacted by either buying at par or by acquiring letters of credit or portfolio insurance with the permission of the U.S. Security Exchange Commission. Fortunately, the bond fund managers sold off their shares to investors because they realized that the Orange County median family income was a full 20 percent higher than that of the state as a whole. Unfortu-

nately, the county's voters rejected a half-cent increase in the county sales tax to address the debt problem, but the county did divert other revenues to debt service, did radically cut services (41 percent), and selectively did refinance portions of the debt. Unlike when other cities fell into fiscal disgrace, California State government did nothing due to its own weak fiscal situation and the antigovernment citizen attitude in the state. One clear consequence is that Orange County and California taxpayers in general shall pay many millions more for debt service for many years in the future.

Government Financial Emergencies

There are rather clear warning signs for a municipality that is in financial trouble:

- an operating fund revenue/expenditure imbalance in which current expenditures significantly exceed current revenues in one fiscal period (a well-managed government, under some conditions such as an excessively large fund balance, could properly have this type of imbalance);
- a consistent pattern of current expenditures exceeding current revenues by small amounts for several years;
- an excess of current operating liabilities over current assets (a fund deficit);
- short-term operating loans outstanding at the conclusion of a fiscal year, the borrowing of cash from restricted funds, or an increase in unpaid bills in lieu of short-term operating loans;
- a high and rising rate of property tax delinquency;
- a sudden substantial decrease in assessed values for unexpected reasons;
- an unfunded or underfunded pension liability, unless done over a long period of time such as 40 years; and
- poor budgeting, accounting, and reporting.

Once the government recognizes that it has financial problems, it and the financial community can consider financial management improvements. Typically, the first major hurdle is the government's self-recognition that a problem exists. Acquiring the courage to communicate that problem to the public including the financial community is the second hurdle. The most common remedy is to eliminate the imbalance between revenues and expenditures. Often, an appropriate remedy is to develop safeguards against misuse of short-term operating funds. Another common remedy could be to fund the retirement system adequately. Governments in trouble must make significant improvements in their municipal accounting and reporting systems as they commonly do not have financial reporting systems that communicate bad news to the key decision makers in a timely manner.

If self-remedies are ineffective, then governments in trouble and others can take more significant steps. For example, some states create administrative bodies to assist troubled local governments. If that is inadequate, the courts can demand that local governments in trouble hire consultants such as Morgan Guarantee Trust and, if necessary, they can arrange for direct agreements with creditors. This is usually adequate for temporary or technical financial emergencies. If the problem continues, states sometimes have the power to force special remedies on a local government. Agreements usually undergo state review, approval, and supervision. The federal role is to provide a means to devise financial adjustments, which a majority of the creditors approve.

Under chapter 9 of the federal bankruptcy law, the government facing bankruptcy must develop a plan of composition or financial adjustments. First, the eligible local government unit must file a voluntary petition for bankruptcy and a plan of composition with the petition. Those holding 51 percent of the securities affected by the plan must accept it. Upon filing, judges enter an order either approving or dismissing the plan. If approved, the resources of the debtor come within the jurisdiction of the court and the court fixes a time and place for a hearing. The court gives notice to the creditors, creditors and others can file answers, and the court holds the hearing. After the hearing, the court may confirm a plan of composition that the creditors involved in two-thirds of the aggregate amount accepted. The court may but seldom does continue jurisdiction after the confirmation of the plan.

CAPITAL BUDGETING

Operating versus Capital Budgeting

Most local and state governments have two types of budgets: operating and capital. The operating budget deals with everyday types of activities. The capital budget deals with large expenditures for capital items. They differ in the nature of items that they purchase, the methods of financing, and even the accompanying decision-making process. In most instances, government depletes operating expenses in a single year. Typically, capital items have long-range returns and useful life spans, are relatively expensive, and have physical presence, such as a building, road, water supply system, or sewage system. Fifty-six percent of American cities have a separate capital budget, and 73 percent of cities over 100,000 have them. Over forty states have capital budgets. Interestingly, the U.S. federal government does not have a capital budget, but the U.S. General Accounting Office champions this reform strongly.

The most significant difference between operating and capital budgeting is the method of financing. Governments finance capital budget items through borrowing, but they can also fund them by saving money over a period of years for the capital item or by using grants, special assessment, and the general revenue fund. Because government debts are often complex and can create financial hardships if local governments manage them incorrectly, state laws, not surprisingly, do establish debt limits (usually associated with the assessed value of property). Also, states often require equalization rates to ensure consistent treatment throughout each state. The debt limits vary from state to state, and there are exceptions to the limit and application of equalization rates.

Some local governments shift as many expenses as possible from operating to capital budgets. For example, in both West Point, Mississippi, and New York City, the local governments called band uniforms capital budget items. This tendency can lead to corruption of the concept of a capital item to such an extent that the government has two operating budgets, with one financed through borrowing. That situation in turn leads to overuse of bonding, greater government resources used for debt retirement, and proportionately less money used to meet operating budget demands. Eventually, the debt can become large enough that a government cannot meet its payments, and the community must face the possibility of management bankruptcy. Tradition-

ally, government uses debt to finance items with a life expectancy that lasts as long as the debt payments. The effect of this practice is to limit the overuse of debt financing and to make the debt more politically defensible as the future taxpayers identify how they benefit from the decision to finance the item by borrowing money.

In capital budgeting, planning and careful, deliberate actions are essential. Government needs planning to integrate the capital items with the remainder of the physical structure in the community. Capital improvement plans are essential to coordinate the work by time, funding possibilities, and physical plans. If capital budgeting involves a building, then the process of executing decisions involves study of the possibilities, site selection and acquisition, and planning and design as well as construction financing. Delays translate to higher construction costs due to inflation, especially rising labor costs; thus, government must avoid delays. Also, the increased operating and maintenance expense incurred on account of the new facility is an important factor, which government should consider in the planning phase. Communities have built facilities they cannot afford to operate or maintain (for example, stadiums).

Capital Facilities Planning

Governments can make decisions to add a public facility or make extensive repairs on the basis of understanding the needs of the community and the resources available. The best approach to identifying the resources is to inventory the existing public facilities. The next step is to catalog the proposed public facilities. The key facts in the catalog include the location of the proposed facility, the year of construction, cost priority, project description, financing schedule, prior or sunk costs, projection of future related fund requests, operating costs, and savings in operating and maintenance costs. Public managers can update their inventory and file of proposed projects at least once a year to ensure that policy makers base their decisions on the correct facts.

Making decisions on proposed projects is not easy, and managers can aid policy makers greatly if there are clear, detailed answers to the following questions:

- What is the relationship of the proposed project to the overall development of the city?
- The project will help how many citizens and it will harm or inconvenience how many citizens if the government does not construct the project? Which citizens will benefit or hurt from the project?
- Will the proposed project replace a present worn-out service or structure or is it an additional responsibility of government?
- Will the project add to the property value of the area, thus increasing the value of city property and receipts from property tax? How much will the city realize from the increase?
- Will the construction of the improvement add to the city's operation and maintenance budget? How much?
- Will the project increase the efficiency of performance? How much and where? What cost savings will result? Will the project reduce the cost of performance for a particular service? How much and where?
- Will the project provide a service required for economic growth and development of the municipality?
- Is the estimated cost of the improvement within the city's ability to pay?

Ultimately, policy makers must decide and make their priorities. Sometimes decision makers find analytical techniques such as cost-benefit analysis useful, but regardless of the techniques that policy makers employ, they cannot avoid making judgments. Some communities use a point system to establish priorities. One scale used is as follows:

- urgent (highest priority),
- essential,
- necessary,
- desirable,
- acceptable, and
- deferrable (lowest priority).

Capital Budget Cycle

The budget cycle for capital budgeting is similar to the operating budget cycle. The phases are identical. Government needs a capital budget call and calendar just as in an operating budget. Government must collect detailed information such as the illustrations developed by Girard Miller for the Government Finance Officers Association noted in this chapter's references.

Many governments prepare a multiyear capital improvement program each year. This helps those relying on capital decisions to understand the likely physical facilities in the near future. Governments usually fund capital projects through borrowing, grants, and sometimes the operating budget. The government formally approves the capital improvement plan and passes an ordinance or law that clearly explains what the government approved and the method of financing the program or project.

Policy makers and staff carefully review capital budgets. Both budget analysts and planners review the plans for possible errors and potential problems. Governments hold public hearings commonly, especially if the government uses revenue-sharing money to fund the capital budget. Careful consideration goes into deciding the best financing plan. Ultimately, the official government policy-making unit, such as the city council (and possibly even the electorate, if the law requires electoral approval of the bond issue) approves the capital budget.

Realities of Capital Budgeting

John P. Forrester empirically examined municipal capital budgeting in the United States. Although most students of budgeting associate capital budgeting with economic rational decision making as described earlier, political and managerial concerns lace the actual process, as they do in operational budgeting. The Forrester survey did link the CIP with capital budgeting, but some respondents said the linkage did not exist in their city. Some said they used economic criteria, such as benefit-cost analysis, to make their capital budget decisions, but others identified less rational managerial and political factors. Also the respondents tended to separate capital and operational budgeting, but when they made actual capital decisions they said their

short-term orientation and being identical budget actors with the operational budget were the deciding factors. Although planning for such reasons as growth and change does influence the capital budget decision makers, more traditional and human budget policy criteria are more significant, with short-term considerations being the most significant.

BONDING

Designing an Issue

Once a government decides to borrow money, it must go to the financial market with a bond offering. The government must follow the bond disclosure rules of the Securities and Exchange Commission (SEC), which apply only to bond issues over \$1 million. Two approaches to bonding are possible: use competitive bidding or arrange a negotiated sale to a specific underwriter. Often, governments use competitive bidding to seek the lowest bidder, especially in general obligation bonds; but revenue bonds and very small general obligation bonds more frequently employ negotiated sales. Underwriters affect issuers' costs due to their differing profit spread and their ability and willingness to locate investors to repurchase the bonds.

Competitiveness tends to encourage underwriters to lower their profit spread and try harder to locate investors. With negotiated sales, financial managers can tailor issues to meet the unique needs designed for the specific interests or preferences of a particular underwriter. This might mean that the particular underwriter might be in a better position to offer a lower bid for the bonds. The following are six common reasons for choosing a negotiated sale:

- A new credit instrument may need such a sale to get customer interest.
- Sometimes, issues are too large for only one syndicate to buy through competition.
- Sometimes, a government has a low credit rating and they have no other choice.
- The issues are very small, and there is no interest in submitting a competitive bid.
- The securities market is very volatile, and the government will receive few competitive bids.
- The issue is complex, and a negotiated bid can better deal with the complexity.

In public finance, one of the most enduring debates involves whether competitive or negotiated sales best services the issuer's interest because each method has its strengths and weaknesses. The major advantage to competitive sales is that it keeps the effective cost as low as possible, as history indicates especially in general obligation and revenue bond issues. The second advantage is that the process is open and fair, thus precluding favoritism and lessening the chances of corruption. The major disadvantage to competitive sales is its creation of a risk premium in the underwriter's bid to compensate for uncertainty about market demand. Another disadvantage is the process makes last minute timing and structural changes difficult. In addition, there is minimal control over the underwriter selection and bond distribution. The major advantage of negotiated sales is that the underwriter assists the issuer in preparing the issue for the sale. More extensive presale marketing is possible, thus better gauging the market

demand for the bonds. Unlike competitive sales, negotiated sales are more flexible and give the issuer greater potential influence over the underwriter selection and bond distribution. Under negotiated sales, pricing is less subject to the rigors of competition, thus requiring more issuer vigilance in terms of pricing, favoritism, and corruption.

If there is a choice, the issuer should systematically evaluate the following:

- If the issuer is less familiar with the market, the presale marketing associated with negotiated sales becomes significant.
- The higher the quality of the credit, the less need there is for a negotiated sale.
- If issuers' control over underwriter selection or bond distribution is important, then a negotiated sale is best. However, the possibility of favoritism and corruption is stronger in these circumstances.
- If the debt instrument is new and unfamiliar to the market, then a negotiated sale is wiser.
- If the issue size is unusually small or large, then a negotiated sale is wiser.
- If unusual events or conditions surround the sale, the presale marketing of a negotiated sale is important.

If neither competitive nor negotiated sales seem best, then there are alternatives. The issuer can use the legal framework of a negotiated sale combined with pricing the issue through the solicitation of bonds from all interested underwriters. This approach provides the flexibility offered by the negotiated sale with the competition of pricing offered by the competitive sale. Another alternative is to infuse competition in the negotiated sales by using the *request for qualification* process or *request for proposal* process in the selection of the underwriter. Hiring a financial advisor or investment banker for only portions of the sale is a third alternative.

Regardless of the choice made, issuers must take responsibility for the issue as the government is responsible for the public's interest. The issuer must understand the likely demand level of the bond and focus on the total financing cost. If in-house expertise is not adequate, then the issuer should hire a financial advisor. The issuer should not place blind faith in any sale method, but rather evaluate each sale method for each separate circumstance.

Issuers who must make the negotiated or competitive sales decision need to reflect carefully on the principal-agent ethical problem. The agent must reveal any benefit he or she gets as a result of the principal-agent relationship to the principal. If not, one type of principal-agent ethical problem exists. The agent owes the principal due care, obedience, and loyalty or the agent has a conflict of interest. The underwriter in a negotiated sale is an agent of the issuer, who must act solely for the public interest rather than for personal or political self-interest or for the interest of any elected or appointed officials.

Unfortunately, in some negotiated sales situations the fiduciary interest of the public is of less importance than the relationship between the issuer and the underwriter. For example, notwithstanding the reality that competitive sales usually result in better interest rates for the issuer than negotiated sales, Oregon moved to 82 percent negotiated sales for general obligation bonds sales within one year after the legislature no longer required competitive bidding. The principal-agent problem arises for several reasons. Sometimes a local government official's concerns for his or her

campaign fund contribution overrides the concern for achieving the lowest interest rate on bond sales for his or her community. Underwriters are major contributors to local and state government campaign funds. Sometimes the issuer to underwriter working relationship is more important than low interest rates, possibly because underwriters enhance that relationship with minor or major favors for the issuers.

Deciding Issue Details

Prior to publishing the invitation to bid, financial managers must make decisions on the maturity, the size of the issue, the call terms, the principal and interest return structure, the interest cost limit, and the option to reject the bids, plus a wide variety of financing considerations such as a put option and ZCBs. Commonly, a financial advisor helps government's financial managers make these decisions. Maturities vary in length and size. Sometimes they are thirty years, but more commonly they are twenty years or less. Traditionally, the length of the maturity of the issue is no longer than the useful life of the capital facility that is the reason for the issue. Issuers can divide serial bonds on an approximately equal basis, but it is also possible to negotiate a deferral of payments during the first two to five years, resulting in a large final payment (called a *balloon*). If the issue is simple, it is called *plain vanilla* bonds; the financial community calls unusual or complicated bonds that require more effort to sell *story bonds*.

If the issue appeals to the larger banking and security community, it should not be less than \$1 million; \$4.2 million is a usual size, but issues of more than \$100 million do exist. The changing federal tax laws have shifted the makeup of the bond market. For example, the alternative minimum tax has caused many banks to leave the bond market. If the insurance companies follow the banks, the market will consist only of private households, which tend to be the most volatile group.

Large issues require buyers to form *syndicates*, which are temporary financial partnerships to buy and sell securities. The primary buyer is called an *underwriter*, which can be a syndicate. Eventually, these buyers sell the securities to groups and even to other syndicates. The use of syndicates is commonplace. Interestingly, underwriters sometimes make their complex million-dollar agreements by phone in a remarkably informal manner. If the issuer plans a negotiated sale, he or she must focus on the following:

- defining coupon interest rates so that an issue's yield curve will conform to the market yield curve for the appropriate grade of security,
- ensuring the underwriter involved will properly promote and place the bonds so as to get the best possible price, and
- selecting an acceptable level of underwriting compensation.

Underwriters should know several weeks in advance that they will have a specific product to sell. Thus, they can test the market and even change such things as a bond's size to improve the bonds' marketability. The provisions in the bond offering are important. Together with the credit standing, they largely determine the marketability of the issue. If many seek to invest in the security, then the government can get a lower interest rate. The variety of ways to structure the issue is remarkably complex. The key to

the decision is to structure the issue to achieve the lowest price and other benefits for the government. The real cost of interest payments depends on the time value of money. The future dollar is worth less to the investor than near-term dollar. To accommodate the common preference for shorter-term maturity bonds, the issuer can design "front-loaded" bonds that give high coupon rates on short-maturity bonds. Another consideration is that buyers seek specific maturities that are similar to what the market finds attractive. Thus, coupon rates should enable the market to sell bonds at or near their par value. If this occurs, the financial community calls them *efficient*. If they are not efficient, then underwriters would have to resell bonds at prices that are substantially above or below their par value. Such a requirement typically makes such sales difficult and sometimes costly to the underwriter. Thus, in designing an issue an issuer wants an "efficient" coupon rate.

For most bidders, the fact that there is a tax advantage for municipal bonds is significant, but taxable government bonds do exist. Exhibit 8-7 illustrates the importance of municipal bonds across tax brackets. In nontaxable bonds, the interest income is exempt from federal income taxation and is often exempt from the income

EXHIBIT 8-7 Advantage of Municipal Bonds Across Tax Brackets

2001 FEDERAL INCOME TAX RATES

Tax Bracket	28%	31%	36%	39.6%
Single	\$27,050–65,550	\$65,551–136,750	\$136,751–297,350	\$297,351 and up
Joint	\$45,200–109,250	\$109,251–166,500	\$166,501–297,350	\$297,351 and up
Tax-Exempt Yield%	TAXABLE EQUIVALENT YIELD (%)			
4.00	5.55	5.80	6.25	6.62
4.50	6.25	6.52	7.03	7.45
5.00	6.94	7.25	7.81	8.28
5.50	7.64	7.97	8.59	9.11
6.00	8.33	8.70	9.38	9.93
6.50	9.02	9.42	10.16	10.76

- Find the appropriate return (single or joint).
- Determine your income tax bracket by finding your taxable income category.
- In your tax-bracket column, identify the taxable equivalent yield for each of the tax-exempt yields in the far left column.

For example, an investor in the 28 percent federal tax bracket would have to earn a 6.94 percent yield from a taxable bond to match a 5.00 percent yield from a tax-exempt bond. For residents of those states with state income taxes, the advantage of investing in municipals may be even further enhanced.

Source: Morgan and Stanley at <http://www.morganstanleyindividual.com/markets/bondcenter/school/insured/pdf>, 2002. Used by permission.

tax in the state of issue. In *South Carolina v. Baker*, the Supreme Court ruled that the doctrine of reciprocal tax immunity does not apply, but the Congress did not repeal federal laws revoking tax immunity. However, if a state or local government improperly places the loaned proceeds in revenue-generating investments (for example, only for reinvestment purposes), then the Internal Revenue Service would call the bonds arbitrage and tax the interest income from the bond. Without such a rule, local governments would take advantage of their unique lower interest rates to invest in higher interest bearing bonds and make a profit from the difference in interest rates.

Bond-issuing governments use three basic methods for awarding bond issues to competing bidders. They are the *unrestricted net interest cost* (NIC) method, the *net interest cost with constraints* (NIC-C) method, and the *true interest cost* (TIC) method. Of the three, the newer TIC tends to minimize interest costs the best. The NIC method looks at the total coupon interest payments over the life of the issue. It takes special account for the time value of money. Thus, this method encourages bidders to front-load their bids and produce inefficient bids that result in penalty yields. NIC-C imposes constraints on the bidding process to overcome the shortcomings of the NIC method. For example, the coupon rate on any particular bond, which must be at least as high as the rate on bonds having the shortest maturity, establishes a constraint. This constraint helps in terms of front-loading and penalty yields, but it can still result in bond issues awarded to bidders who do not bid the lowest true interest cost among the bids submitted. In the TIC method, government evaluates the bond bids on the interest payments required in terms of their present value or present worth. Many states have laws that do not permit the use of the TIC method yet.

The government can also consider other factors before it offers a bond. The government may wish to establish an interest cost limit to protect itself from bids that are, as a group, unreasonable. In some circumstances, such ceilings can raise costs, especially when tax-exempt yields are very high for a prolonged period of time. Such ceilings force postponement of projects and thus possibly raise project costs even higher. States are wiser to remove statutory interest rate ceilings or have them indexed. Governments sometimes add a stipulation that they can reject all bids to further protect themselves. In designing a bond issue, other decisions include the bond date, the place and time of sale, payment dates for principal and interest, who will receive and read the bids, who will print the bonds to avoid counterfeiting and theft, and what to do if the government receives no bids.

Many local governments do not have the necessary expertise to handle bonding or special types of bonding. Thus, getting outside assistance is common, especially for complex issues. Some states provide financial advisory assistance, but typically governments use private advisory services. The amount and degree of assistance vary with the amount and kind of funding contemplated. In moderate-sized, full-faith-and-credit transactions, groups such as local commercial banks, investment bankers, bond counsels, and state agencies may provide the services at no direct or minimum charge on negotiated sales. However, such services would be minimal, and there might be the expectation that the private party would develop or protect an advantageous relationship. Often, the underwriter or potential underwriter can be helpful in suggesting approaches with a stronger market appeal.

Services of financial advisors include developing a sale schedule, sizing and structuring the issue, preparing the sale document, arranging for the rating, coordinating sale advertising, verifying bids/interest rates, and assisting with closing. Commonly, government pays financial advisors on a flat fee for services basis, but government can pay them based on the amount of the debt issued depending on state laws and industry practices. If done on the basis of the debt issue, the agreement with the advisor states that payment is in terms of a dollar amount per note or bond issues (for example, \$.75 per \$1,000 of the principal amount of the issue).

Some states permit pooling of debt issues of more than one local government to reduce costs and enhance marketability of the bonds. A state bond bank assists local governments to sell their debts. Since 1970, states like Vermont have created a state authority to pool the debt of small communities into a single larger authority issue. This permits the state to use its stronger credit to provide small communities access to national credit markets at reduced borrowing costs. Given the large need for government investments in infrastructure, state efforts to create infrastructure banks give local jurisdictions a sustained and predictable bond proceed revenue for capital improvements without burdening a state's own general obligation borrowing capacity. Some states permit umbrella bond insurance programs, thus reducing the bond risk and lowering borrowing costs.

Purchasers of bonds want assurance that the bond itself is legal, and they prefer not to check the public record themselves. Therefore, they want a bond counsel to certify the following:

- the legal existence of the government offering the bond,
- the propriety of authorization of the bond,
- the correctness of the procedures that the government followed in the conduct of the sale,
- the absence of litigation with respect to the validity of the bond issue, and
- the correctness of the signatures on the bond.

This assurance carries more weight if the bond counsel commands wide respect among investment bankers and investors.

Bond Prospectus, Notice of Sale, and Sale

Since the mid-1970s, investors require a more elaborate bond prospectus (see Exhibit 8-8). The prospectus is merely the information needed by investors to decide whether or not they wish to invest in the bonds. Key information in the prospectus often includes the following:

- description of the bonds,
- security for the bonds,
- description of the government,
- financial procedures pertinent to the issue,
- fund revenues and disbursements,
- explanation of the fund's budget,
- local economic factors,

EXHIBIT 8-8 Sample Bond Prospectus

PRELIMINARY OFFICIAL STATEMENT DATED APRIL 1, 2002

Moody's Aa3

S&P: A+

Rating: See "Ratings" herein

NEW ISSUE — BOOK-ENTRY ONLY

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series 2002A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, and is exempt from State of California personal income taxes. In the further opinion of Bond Counsel, interest on the Series 2002A Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Bond Counsel observes that such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Series 2002A Bonds. See "TAX MATTERS" herein.



\$174,820,000*

TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY SYSTEMWIDE REVENUE BONDS SERIES 2002A

Dated: April 1, 2002

Due: November 1, as shown on inside cover

The Trustees of the California State University Systemwide Revenue Bonds Series 2002A (the "Series 2002A Bonds") are being issued by the Trustees of the California State University (the "Board") pursuant to an Indenture dated as of April 1, 2002 (the "Indenture") between the Board and the Treasurer of the State of California, as trustee (the "State Treasurer") which constitutes the Fifty-Second Supplemental Bond Resolution under the 1968 Bond Resolution (as defined herein). The Series 2002A Bonds are being issued (i) to finance and refinance the acquisition, construction, renovation and improvement of certain facilities of the California State University, including, but not limited to student housing, parking, student union, and student centers facilities, and (ii) to refund certain outstanding indebtedness of the Board. See "REFUNDING PLAN," "THE PROJECTS" and Appendix H — "PROJECTS FINANCED AND BONDS REFUNDED WITH SERIES 2002A BONDS."

The Series 2002A Bonds are being issued on a parity with other bonds issued by the Board pursuant to the 1968 Bond Resolution. Upon purchasing the Series 2002A Bonds, the Underwriters, as initial purchasers, will consent to certain amendments to the 1968 Bond Resolution prior to delivering the Series 2002A Bonds to individual purchasers. See "SECURITY FOR THE SERIES 2002A BONDS — Amendments to 1968 Bond Resolution."

The Series 2002A Bonds will be issued in fully registered form in denominations of \$5,000 each or any integral multiple thereof, and following their purchase by the Underwriters will be registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"), New York, New York. DTC will act as securities depository of the Series 2002A Bonds. Individual purchases will be made in book-entry form only, in principal amounts of \$5,000 and integral multiples thereof. Purchasers will not receive certificates representing their interests in the Series 2002A Bonds purchased. See "THE BONDS — Book Entry Only System."

Interest on the Series 2002A Bonds is payable on November 1, 2002, and semiannually thereafter on May 1 and November 1 of each year, and principal of and interest on the Series 2002A Bonds are payable by the State Treasurer, as trustee, to DTC. DTC is required to remit such principal and interest to its Participants for subsequent disbursement to the Beneficial Owners of the Series 2002A Bonds, as described herein. See Appendix G — "BOOK-ENTRY ONLY SYSTEM."

The Series 2002A Bonds are subject to redemption prior to their stated maturities, as described herein. See "THE BONDS — Redemption," MATURITIES, AMOUNTS, INTEREST RATES, AND PRICES OR YIELDS
SEE INSIDE COVER

THE SERIES 2002A BONDS ARE LIMITED OBLIGATIONS OF THE BOARD, PAYABLE UNTIL THE TRANSITION DATE (AS HEREINAFTER DEFINED) FROM NET REVENUES AND OTHER FUNDS FLEDGED UNDER THE 1968 BOND RESOLUTION AND, AFTER THE TRANSITION DATE FROM GROSS REVENUES AND OTHER AMOUNTS FLEDGED UNDER THE INDENTURE. NEITHER THE PAYMENT OF THE PRINCIPAL OF THE SERIES 2002A BONDS NOR ANY PART THEREOF, NOR ANY INTEREST THEREON, CONSTITUTES A DEBT, LIABILITY OR OBLIGATION OF THE STATE OF CALIFORNIA. THE SERIES 2002A BONDS ARE NOT SECURED BY A LEGAL OR EQUITABLE PLEDGE OF, OR CHARGE, LIEN OR OTHER ENCUMBRANCE UPON, ANY OF THE PROPERTY OF THE STATE OF CALIFORNIA OR OF THE BOARD, EXCEPT TO THE EXTENT OF THE FOREMENTIONED PLEDGES. THE OWNERS OF THE SERIES 2002A BONDS HAVE NO RIGHT TO COMPEL THE EXERCISE OF ANY TAXING POWER OF THE STATE OF CALIFORNIA. THE BOARD HAS NO TAXING POWER.

The pledge and lien on certain Net Revenues under the 1968 Bond Resolution and Gross Revenues under the Indenture is subordinate to the pledge and lien of certain other indebtedness of the Board and on a parity with certain other indebtedness of the Board. See "SECURITY FOR THE SERIES 2002A BONDS," "Senior Lien Indebtedness" and "Parity Lien Indebtedness."

This cover page contains information for quick reference only. It is not a summary of this issue. Potential investors must read the entire Official Statement to obtain information essential to making an informed investment decision.

The Series 2002A Bonds are offered when, as and if issued, subject to the approval of certain legal matters by Orrick, Herrington & Sutcliffe LLP, San Francisco, California, Bond Counsel. Certain legal matters will be passed upon for the Board by its General Counsel and for the Underwriters by Strading Yocca Carlson & Rauth, a Professional Corporation, Newport Beach, California. It is anticipated that the Series 2002A Bonds will be available for delivery to DTC in New York, New York, on or about April 30, 2002.

Lehman Brothers

Bank of America Securities LLC
E.J. De La Rosa
Jackson Securities Inc.
RBC Dain Rauscher
The Chapman Company

Siebert Brandford Shank & Co., LLC
Great Pacific Securities
Loop Capital Markets, LLC
Salomon Smith Barney
UBS PaineWebber

Dated: April 1, 2002

* Preliminary, subject to change.

This Preliminary Official Statement and the information contained herein are subject to completion or amendment. These securities may not be sold nor may offers to buy be accepted prior to the time the Official Statement is delivered in final form. Under no circumstances shall this Preliminary Official Statement be used as a basis for any investment decision. These securities in any jurisdiction in which such offer, solicitation or sale would be prohibited by law.