
Public Finance Task Force Final Report

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I. Executive Summary

Georgia is one of the fastest growing states in the nation. Requirements for funding various projects and initiatives necessary to ensure that the State meets the needs of its citizens are expanding rapidly. The Public Finance Options task force was commissioned to ensure that Georgia's public finance mechanisms and capital programs are state of the art and appropriately conservative to maintain the State's AAA bond rating.

The members of the Public Finance Options Task Force include some of the most prominent individuals in Georgia's financial community, representing industry, the public sector, academia and multiple ethnicities. The members of the Task Force are listed in the table below.

Public Finance Task Force Members	
Phil Humann, Chair <i>SunTrust</i>	Matt Nichols <i>Sutherland Asbill and Brennan, LLP</i>
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Tom Fanning <i>Southern Company</i>	Richard Woodward <i>King & Spalding LLP</i>
John Huntz <i>Fuqua Ventures</i>	Jim Young <i>Citizen Trust Bank</i>
Jeffrey Leavitt <i>Arnall Golden Gregory LLP</i>	
Consultants: Rick Fitzgerald and Justin Goldstein <i>Goldman, Sachs & Co.</i>	

In order to focus on the primary goals of the Public Finance Options Task Force, we established the following scope.

Scope

The task force examined public sector finance options, including alternative borrowing methods, off-balance sheet financing, and increasing domiciled risk capital.

The vision of the Public Finance Task Force echoes the charge of the Commission to increase the competitiveness and capabilities of the State's financial tools, while maintaining the conservative roots that earned the State AAA bond ratings.

Vision

Georgia's public finance mechanisms and capital programs should be state-of-the-art, while remaining prudent and conservative to maintain the State's AAA bond rating.

II. State of Georgia Credit Considerations

The maintenance of AAA/Aaa ratings requires conservative budget forecasting, structurally balanced budgets, a strong balance sheet including budgetary reserves, timely action to restore balances, and a debt management policy. In addition, the executive and legislative branches must demonstrate a commitment to maintain a strong financial profile despite economic cycles over which they have no control.

Conservative Budgeting Practices

The ability to maintain structural balance and adequate reserves is central to a strong financial profile. Achievement of these requires a budget process that begins with economic assumptions that are provided by an independent body. These estimates should be conservative and based upon consensus from a nonpartisan committee. Once a budget has been adopted based on objective and conservative revenue estimates, frequent monitoring (ideally monthly) of revenues and expenditures is necessary to determine if mid-year adjustments are required. In addition, it is important that there be a statutory framework for addressing potential budgetary shortfall. In order for the response to be timely, it is recommended that there be automatic reductions that do not require action of the legislature. The ability to restore budgetary balance is enhanced with frequent monitoring and automatic adjustment mechanism. In addition to providing a mechanism for expenditure reductions, there should be a limitation on mid-year expenditure increases unless reserves are fully funded. To ensure maintenance of the highest ratings, financial management policy must include conservative budgeting, frequent monitoring and automatic adjustment mechanism.

Financial Reporting

Confidence in financial management and reporting is more important today than ever before. Timely dissemination of audited financial statements is now just as important to maintaining the highest ratings as is balance sheet strength. The inability to produce audited financial statements in a timely manner (six to nine months after fiscal year end) raises questions about the quality of financial information systems and adequacy of financial investment in those systems. The lack of timely financial information may negatively impact the perception of an otherwise fiscally sound entity.

Budget Stabilization Reserves

A well-funded budget reserve position is a necessity for a state to respond to the volatility of revenues and expenditures. A commitment to establish and maintain a meaningful budget stabilization reserve fund is key to maintaining the financial strength necessary to achieve the highest ratings. Ideally, there should be a constitutionally established budgetary reserve that is funded at a minimum level. If reserves are utilized, there is a mechanism to replenish within three (3) years. This reserve should be in addition to the unreserved General Fund balances which will fluctuate with economic cycles. To the extent there are no surplus monies with which to replenish the reserve fund at the end of a given fiscal year, it will be necessary to budget a surplus to restore the required balance within three years. The size of the required budgetary reserve funds for various states ranges from 3 - 8% of prior year revenues. The appropriate level depends in part on how volatile a state's revenue base has been historically.

Debt Policy

A debt management policy should consist of multi-year planning that incorporates the needs of the State and all of its issuing agencies and includes a debt affordability analysis. There are several measures of debt burden which include debt service relative to expenditures and total debt relative to population and personal income. In addition, some states have growth limitations such as growth in debt relative to GDP or revenue (i.e. personal income tax or sales tax) growth. It is actually less important what the guideline is in terms limiting debt burden as the process itself. Higher levels of debt can be tolerated in the near term if they are the result of thoughtful analyses and realistic assumptions about future revenue growth that will reduce debt burden in the future.

In terms of debt structure approximately 20% unhedged variable is considered prudent for any issuer and in some instances a higher amount can be supported.

Recommendations

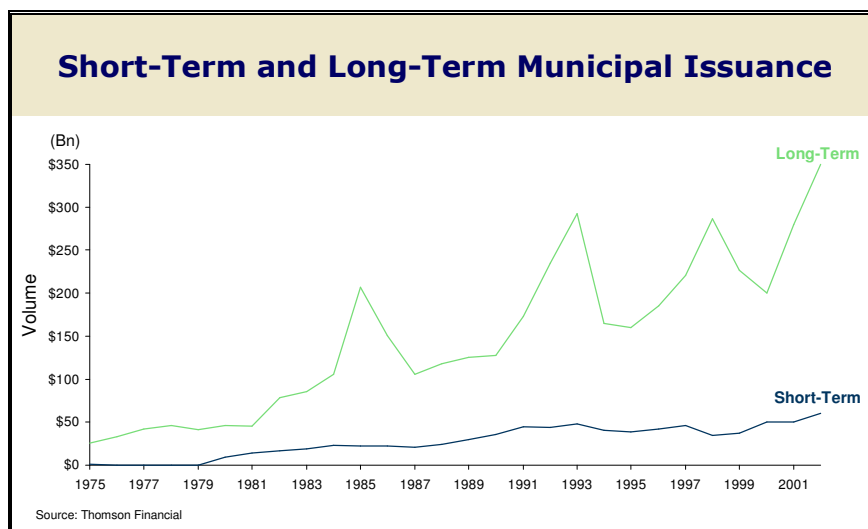
The Task Force recommends the following actions to strengthen the State's credit position, bolster its ability to weather economic cycles, and protect its AAA ratings:

1. Adopt formal multiyear financial planning (3-5 years) and multiyear capital planning (5-10 years) which incorporates the needs of the State and all of its agencies
2. Maintain the Revenue Shortfall Reserve Fund at a minimum of 5% of prior year's revenues
3. Adopt legislation that requires that positive mid-year revenue estimates be budgeted on a priority basis to restore the Revenue Shortfall Reserve Fund (in an amount sufficient to support a 3-year replenishment schedule)
4. Adopt a debt management policy that limits the amount of general obligation debt service to 7% of the prior year's revenues
5. Upgrade State financial information systems to provide timely financial data
6. Ensure that annual financial statements are completed within six months of the end of each fiscal year
7. Relieve pressure on the State's general obligation credit ratings by providing for the issuance of standalone revenue bonds. Acceptable ratings for these bonds should be in the "A" category.

III. Constitution of Matters

Georgia's Constitutional Limitations

When the Constitution of the State of Georgia was written in 1972, the public finance provisions were designed to achieve triple-A ratings. The strong legal protections of the new constitution, coupled with the State's conservative fiscal management, quickly led to lowered debt burdens and triple-A ratings from all three major rating agencies. Many of the provisions are indicative of a municipal marketplace that was very different than the large, sophisticated market that exists today. Major developments have occurred in public finance over the past 30 years – the development of a tax-exempt variable rate market, tremendous growth of the derivatives market including specific financial products for tax-exempt issuers and dramatically increased use of revenue bonds. As the municipal market rapidly grew from less than \$25 billion in 1975 to over \$350 billion today, the municipal market has matured with levels of sophistication and complexity previously reserved for the larger (government and corporate) taxable markets that include securitizations, privatizations, mergers and acquisitions.



Many of the public finance provisions in the State's constitution remain prudent today and continue to help preserve the State's triple-A ratings. However, because of new infrastructure demands and innovations in public finance, the constitutional provisions that once served the State's requirements is in need of being modernized. Thus, we have identified five primary constraints that are now outdated in the marketplace. Addressing these issues could help Georgia obtain a lower cost of capital, increase flexibility, ensure fairness to taxpayers, and accelerate the State's ability to meet its growing infrastructure needs. We describe each of these five constraints below.

CONSTRAINT #1: PROHIBITION OF THE ISSUANCE OF CONVENTIONAL REVENUE BONDS PREVENTS THE STATE FROM LEVERAGING A WIDE VARIETY OF REVENUES TO MEET INCREASING INFRASTRUCTURE DEMANDS.

Article VII, Section VI, Paragraph I

"The state may incur: ... General obligation debt to acquire, construct, develop, extend, enlarge, or improve land, waters, property, highways, buildings, structures, equipment, or facilities of the state ... obligation debt to provide educational facilities for county and independent school systems and to provide public library facilities ... Guaranteed revenue debt by guaranteeing the payment of revenue obligations issued by an instrumentality of the state..."

This section limits State debt issuance to general obligation and guaranteed revenue bonds. This prevents the State from issuing bonds secured solely by the revenues of a particular debt revenue source. The State cannot secure many common revenue sources such as sales taxes, various users fees, fines, etc. It also prevents the State from pursuing many new developments in public finance, such as pension obligation bonds, deficit financings, tobacco securitizations, and various revolving loan programs. Such revenue bonds have been particularly helpful for many states in the recent recession to balance their budgets and continue funding for important programs.

When this provision is coupled with the State's provisions on maximum general obligation debt levels, it can become severely constraining. Maximum annual debt service on all the State's general obligation bonds cannot exceed 10% of the prior fiscal year revenues. The State could legally issue about \$3 to \$3.5 billion of additional general obligation debt today. This is likely inadequate to meet the State's rapidly increasing needs for capital to replace and expand its aging infrastructure, especially for transportation, education and water resources.

Georgia's Constitutional Debt Limit	
Max annual debt service as of (7/04):	\$1,046,335,878
10% of FY03 State revenues (debt limit):	\$1,473,754,122
Total State debt (as of 7/04):	\$7,465,205,000
Current % of debt limit:	7.10%

While the State can issue revenue bonds through authorities, this is further complicated in Georgia under current law due to the "certain contracts prohibited" section described below. If any funds flow through the State Treasury, they are protected under this provision and not available to secure debt issuance.

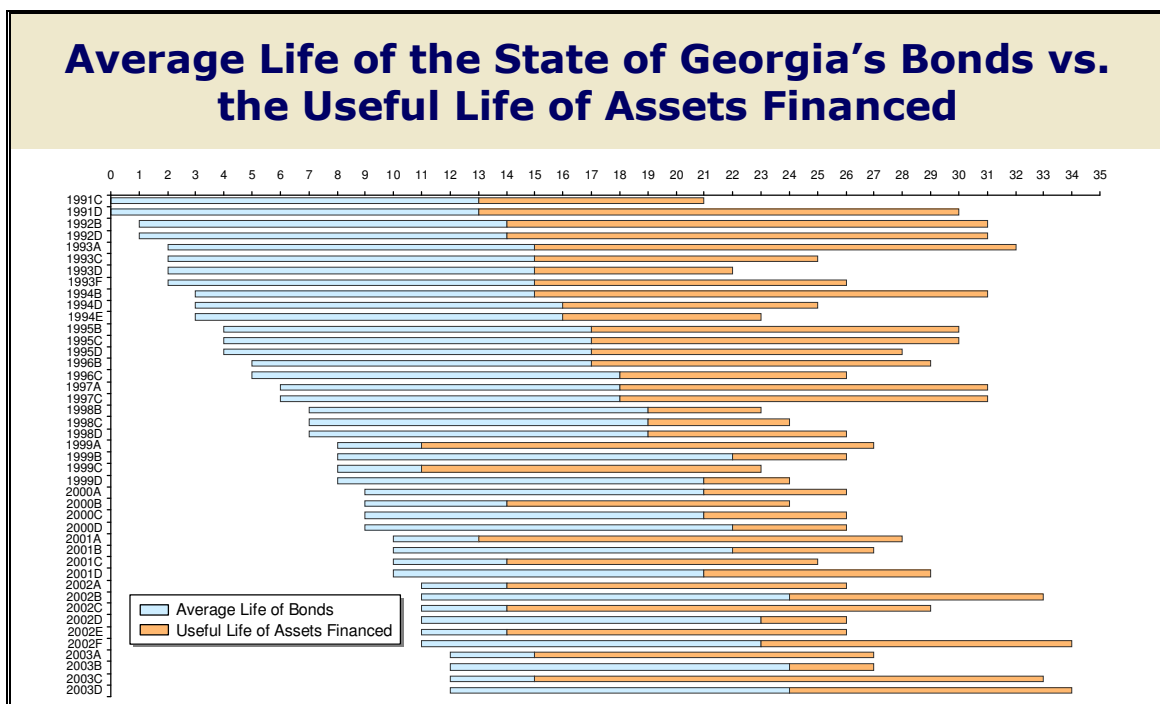
CONSTRAINT #2: BY LIMITING GO ISSUES TO A 25-YEAR TERM, HIGHER NEAR-TERM DEBT LOADS CREATE BUDGET STRESS AND DISPROPORTIONATE DEBT BURDEN ON CURRENT TAX PAYERS.

Article VII, Section VI, Paragraph I

"...No debt may be incurred ... any time when the term of the debt is in excess of 25 years."

The State's limitation of debt to 25 years once reflected a common approach that was followed by many municipal bond issues. Recently, the State has issued 20-year or shorter amortizing debt, with a maximum average life of less than 15 years. The bond market has matured significantly and it is now common to see 40-year bonds. Many issuers use long dated debt for two key reasons.

1. In a normal yield curve environment, it is not significantly more expensive to issue longer maturities. For example, 5-year AAA bonds had an approximate yield of 2.76% on November 10, 2004, while the 20-year maturity had a yield of 4.41%, a 165 basis point difference. However, a 40 year bond has a yield of approximately 4.79%, only 38 basis points more than a 20 year bond.
2. An emerging principle in financing public infrastructure is that of "generational equity." This notion is based on the proposition that users should pay for infrastructure in an equitable amount as they "consume" its value. Thus, a project that has a 30-year useful life should be paid for over 30 years. When the supporting bond issue is significantly shorter than the useful life of the asset, today's users (taxpayers) are overpaying for benefits they derive from the assets. The chart below analyzes the life of the State's bond issues versus the useful life of the financed assets.

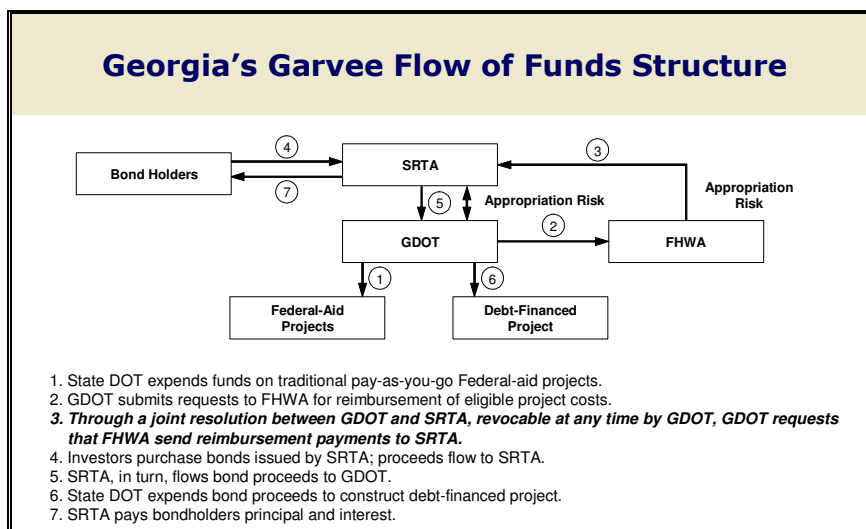


CONSTRAINT #3: PROHIBITING CONTRACTS BETWEEN PUBLIC ENTITIES FOR THE PURPOSE OF SECURING BONDS SEVERELY LIMITS THE ABILITY TO LEVERAGE A WIDE VARIETY OF REVENUES.

Article VII, Section IV, Paragraph IV – Certain Contracts Prohibited

“The state, and all state institutions, departments and agencies of the state are prohibited from entering into any contract, except contracts pertaining to guaranteed revenue debt, with any public agency, public corporation, authority, or similar entity if such contract is intended to constitute security for bonds or other obligations issued by any such public agency, public corporation, or authority and, in the event any contract between the state, or any state institution, department or agency of the state and any public agency, public corporation, authority or similar entity, or any revenues from any such contract, is pledged or assigned as security for the repayment of bonds or other obligations, then and in either such event, the appropriation or expenditure of any funds of the state for the payment of obligations under any such contract shall likewise be prohibited.”

All monies that flow through the Georgia Treasury Department, irrespective of source, are considered trapped under this provision. There have been strategies that mitigate this constraint, such as the redirection of Title 23 monies in the GARVEE bond issue of the State Road and Tollway Authority. However, it is very difficult to replicate this structure for other revenues of the State and does not provide the same level of security and credit quality that would be achieved if the issuance of conventional revenue bonds were permitted.



CONSTRAINT #4: RESTRICTIONS ON REFUNDINGS CAN COST THE STATE MONEY AND SEVERELY LIMIT OPPORTUNITIES TO RESTRUCTURE EXISTING DEBT.

Article VII, Section IV, Paragraph V

“... The term of a funding or refunding issue pursuant to this Paragraph shall not extend beyond the term of the original debt or obligation and the total interest on the funding or refunding issue shall not exceed the total interest to be paid on such original debt or obligation. The principal amount of any debt issued in connection with such funding or refunding may exceed the principal amount being funded or refunded to the extent necessary to provide for the payment of any premium thereby incurred.”

This provision restricts refunding debt to the final maturity of the refunded bonds. It further restricts total interest of the refunding bonds to the refunded interest costs. These provisions prevent the state from taking advantage of restructuring opportunities and limit flexibility to access opportunities that may occur in the market. The only tax code constraint on the length of an issue is that the average life of bonds cannot exceed 125% of the useful life of the assets being financed. As noted previously, issues up to 40 years are commonly used to take advantage of interest rate and restructuring opportunities.

CONSTRAINT #5: THE STATE HAS NOT ISSUED VARIABLE RATE DEBT.

Article VII, Section IV, Paragraph III (a)(1)

“...General obligation debt may not be incurred until legislation is enacted ... appropriating an amount at least sufficient to pay the highest annual debt service requirements for such issue.”

This provision of the Georgia constitution provides that debt service must be appropriated “...to pay the highest annual debt service requirements...” of outstanding debt. The efficient marketing of tax-exempt variable rate securities would (effectively) require that interest rates be permitted in the 12-15% range. As we describe further

in Section II of this report, variable rate debt has consistently provided a lower cost of funds and many other benefits.

Recommendations for Amending the Constitution

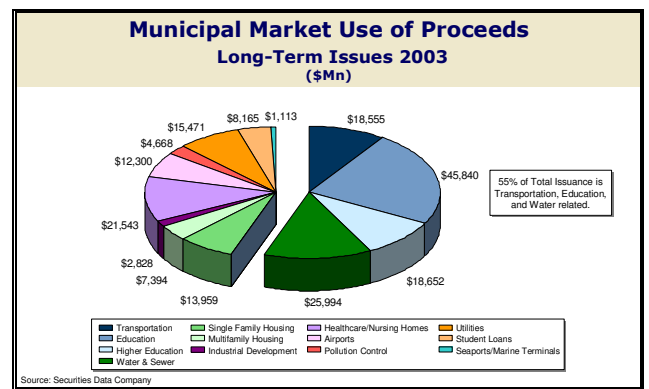
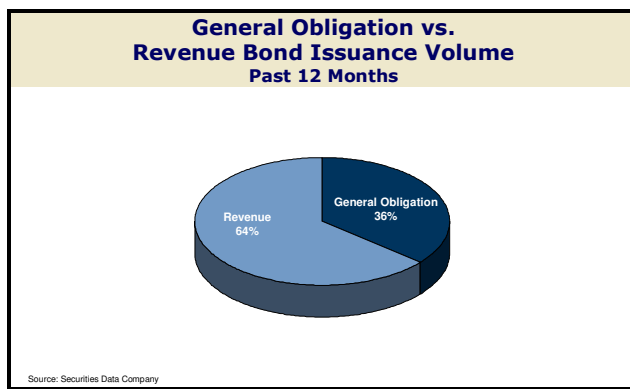
We recommend that the State consider the following five changes to the Constitution to provide state-of-the-art financial tools and flexibility for the 21st century:

1. Permit the issuance of traditional revenue bonds (not guaranteed by the State).
2. Permit the State to divert specific revenues to authorities and agencies of the State for the purpose of securing bonds.
3. Permit the term of State debt to exceed the current limitation of 25 years.
4. Permit flexible refunding structures that are not constrained by savings and term restrictions.
5. Permit the issuance of variable rate debt without having to budget at the maximum annual rate.

IV. Best Public Finance Practices of Other States

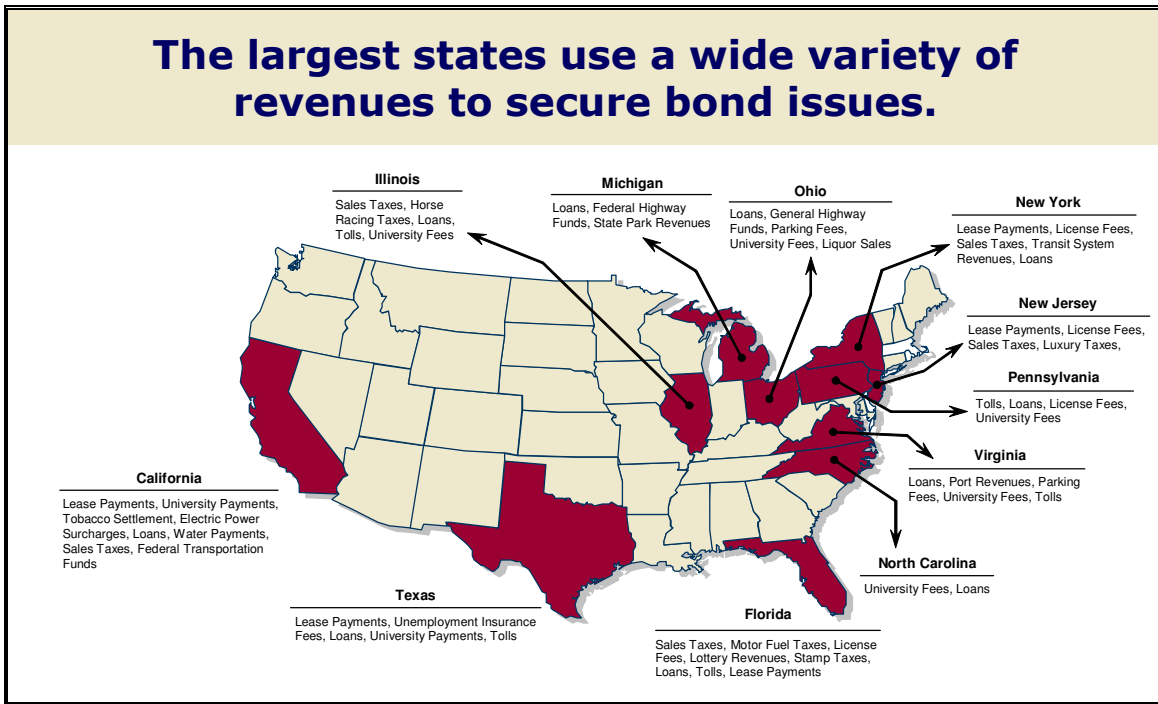
Revenue Bonds

The municipal bond market can be broken down into two key security types, general obligation bonds and revenue bonds. Broadly defined, general obligation bonds (and the State's guaranteed revenue bonds) are supported by the full faith and credit of the issuer and its taxing power. Revenue bonds are solely supported by certain revenues, often the revenues generated by the project being financed. Today, revenue bond issuance dominates total municipal market volume, with a 64% share over the past year. Revenue bonds are used to finance a wide variety of projects, from airports to public power to multi-family housing. The largest sectors are basic infrastructure needs, primarily in transportation, education and water resources. These three segments combined for over 50% of revenue bond issuance in 2003.



Many issuers that have the ability to use general obligation bonds often turn to revenue bonds as a more attractive financing vehicle for several reasons, including their desire to preserve general obligation debt capacity. In fact, the majority of revenue bonds are issued by state or local government sponsored authorities that have been dedicated to a particular purpose. In the map below we highlight the variety of revenues the largest states have used to secure standalone revenue bonds. This survey includes bonds issued by state sponsored authorities.

The largest states use a wide variety of revenues to secure bond issues.



Variable Rate Debt

SHORT-TERM AND VARIABLE RATE BORROWING

Many short-term and variable rate securities have been developed that allow municipalities to borrow at variable interest rates. This includes variable rate demand obligations, commercial paper, and auction rate securities. These products are structured as a rolling series of short-term instruments that are resold periodically, and are priced at the short-end of the yield curve. By managing variable rate debt, the State can take advantage of the lowest rates available in the tax-exempt market.

By conservative estimates, a variable rate program could have saved the State \$1.48 billion over the past 10 years. This savings number is based on a conservative set of assumptions and estimates described below.

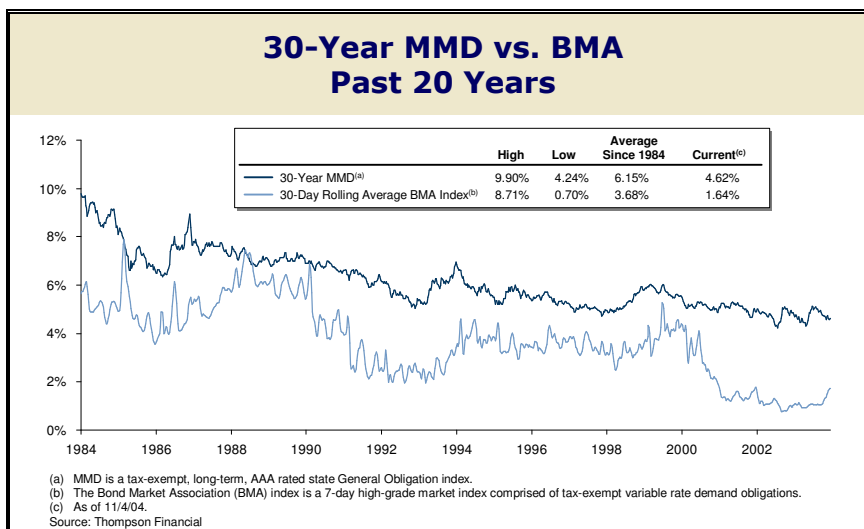
Estimated Historical Savings of a Variable Rate Program

Fiscal Year	Historical Interest Due	Interest Due if 25% of the Net Debt Was Variable	Theoretical Savings
1994	\$176,601,439	\$84,542,549	\$92,058,890
1995	186,826,275	89,828,416	96,997,859
1996	218,523,118	108,464,433	110,058,685
1997	236,835,498	113,306,707	123,528,791
1998	263,587,830	120,494,955	143,092,875
1999	273,874,752	123,360,062	150,514,690
2000	288,774,941	131,594,689	157,180,252
2001	306,898,165	133,810,634	173,087,531
2002	314,200,690	153,300,366	160,900,324
2003	344,757,107	171,215,833	173,541,274
Gross Savings			\$1,380,961,169
Assumptions:	Amount of debt assumed in variable rate mode based on estimated annual average cash balance plus 25% of outstanding debt. The rate assumed on variable rate debt is: BMA Average (widely quoted short-term tax-exempt index) plus ten basis points for estimated annual liquidity costs plus 6 basis points for annual broker-dealer fees less 5 basis points of estimated trading advantage = BMA + 11 basis points		

In this section we describe the key issues for the State to consider in implementing a variable rate program. We recognize that the State’s constitutional requirement to budget at the maximum rate presents a challenge for issuing variable rate debt.

OBJECTIVES OF VARIABLE RATE DEBT

- 1) **To achieve an expected lower net cost of borrowing (with respect to the State’s debt) by accepting a limited level of interest rate risk.** Since the inception of municipal variable rate products in the early 1980’s, variable interest rates have borne an average rate that is substantially below the average for fixed rates. For example, since 1990, the average rate on tax-exempt variable rate bonds has been 3.11%, 242 basis points lower than the average 20-year tax-exempt rate experienced over this same period (5.53%). As shown in the chart below, the 30-day rolling average of tax-exempt variable rates has never exceeded long-term fixed rate borrowing costs in the past 20 years.

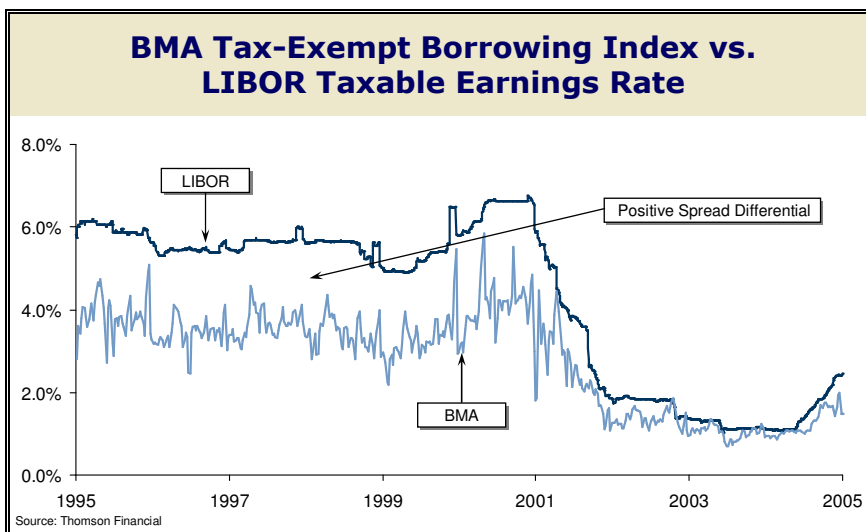


- 2) **As a balance sheet management tool, offsetting the risks inherent in variable rate assets.** The maintenance of variable rate debt liabilities in an amount equal to or less than the amount of variable rate assets prudently reduces the State’s risk of exposure to changes in interest rates. The State currently has significant exposure from variable rate assets in the form of the short-term investment of available cash. The average daily balance of the State general fund over the last fiscal year, based on month end balances, was \$1,559,456,746. The vast majority of the State’s liabilities are in the form of fixed rate debt. When interest rates fall, the budget experiences reduced revenues. Offsetting this exposure with variable rate liabilities would serve to hedge against such interest rate risk.
- 3) **As a tool for interim financing and maintaining ongoing flexibility.** Since the expectations of variable rate investors are, by their nature, short-term, variable rate debt can be redeemed at short notice without any penalty in the form of a call premium or higher initial interest rates. This feature makes variable rate debt a preferred tool for financing projects for which a prepayment or restructuring is a high probability. Certain variable rate products – most notably, commercial paper – can be issued incrementally as funds are needed to finance current construction, and can reduce the long-term cost of construction financing. With a permanent variable rate component in the State’s debt structure, there will always be a quick, low cost refunding or restructuring option available.
- 4) **In conjunction with swap structures, to lower fixed rate borrowing costs.** In some markets, the State can simultaneously issue variable rate debt and enter into corresponding swap agreements that have the effect of creating a net fixed rate obligation at a significantly lower net interest cost than the cost of issuing traditional fixed rate debt. For example, in today’s market 20-year tax-exempt fixed rate bonds yield approximately 4.39%, while a LIBOR-based swap rate of 3.59% could be achieved, an 80 basis point savings (a percentage of taxable swap rates is used to approximate tax-exempt rates). The use of variable rate debt should be considered in those instances where the issuance of synthetic fixed rate debt is a viable and cost-effective alternative, subject to the consideration of additional risks.

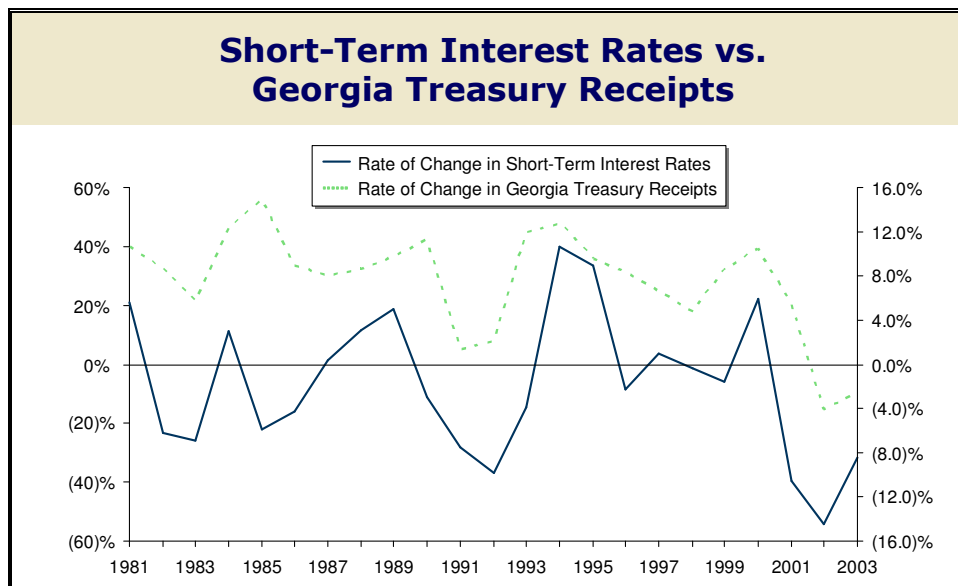
RISKS OF VARIABLE RATE DEBT MITIGANTS AND OTHER FACTORS TO BE CONSIDERED

The single most important risk to evaluate when considering variable rate debt is interest rate risk. Short-term interest rates can fluctuate over the life of a bond issue. However, the benefits of variable rate debt are substantial and not limited to interest rate savings, as noted above. Below we list the key risks and issues to be considered when issuing variable rate debt.

Short-Term Assets Act as a Hedge to Variable Rate Debt. As discussed earlier, the State has over \$1.5 billion of funds on hand in its general fund during the year. The short-term earnings that the State receives on the investment of these funds can offset the fluctuating liability on its variable rate debt program. The rating agencies evaluate an issuer's variable rate exposure on a *net* basis. Since the State's tax-exempt variable borrowing rate is lower than a typical taxable variable rate investment, a positive spread could be earned. This relationship is depicted in the chart below.



Fluctuations in Treasury Receipts also Serve as a Natural Hedge to Short-Term Interest Rate Risk. The primary sources of the State's revenue are personal income tax and sales taxes. In times of strong economic growth, the Fed typically increases short-term interest rates to moderate growth and ease inflationary pressures. It is at these same high growth times that the State's taxes experience rapid growth. The opposite is true during sluggish economies as the Treasury lowers short-term rates to fuel investment. This phenomenon is demonstrated in the chart below, in which we plot the change in State's revenue receipts versus the change in short-term interest rates since 1980.



Tax Exemption Could be Eliminated. This is the risk that the federal government changes the tax code to reduce or eliminate the federal tax exemption of tax-exempt bonds. This risk is extremely difficult to evaluate because of the multitude of ways in which a tax change could be implemented. It could be viewed that the risk is greater for variable rate debt, because the rate Georgia would pay would change if the interest earned on variable rate securities became taxable. While there are no guarantees regarding tax reform risk, it is considered a small risk due to the success and popularity of tax exempt investments. The tax-exempt variable rate market alone has over half a trillion in debt outstanding.

Some Variable Rate Products Require Bank Support. The most popular tax-exempt variable rate instrument, and the cheapest for the State, is Variable Rate Demand Obligations (or "VRDOs"). Since VRDOs allow investors to put the bonds back to the State, short-term liquidity is required to support the purchase of bonds in the remote

event they cannot be remarketed. This can either be secured with a bank or provided by the State. Very few issuers provide their own liquidity, due to the current low cost of bank facilities and the large level of coverage required (generally 1.2x liquid assets for the amount of debt supported). If the State were to purchase liquidity from a bank, it would cost approximately 7-12 basis points per annum in today's market. There are two main risks with these facilities: 1) the Bank's credit could deteriorate and hurt the performance of the State's bonds, and 2) the facilities typically need to be renewed every three to five years and the cost of liquidity can fluctuate.

Variable Rate Costs Should be Compared to Fixed Rate Debt. The costs of issuing variable rate debt are generally comparable to costs associated with fixed rate bonds, depending on the product used. In today's market, the cheapest product for the State would likely be VRDOs. In addition to the 7-12 basis point liquidity fee, there would also be an annual remarketing fee of 5-7 basis points. The takedown, or up-front fee, is generally much less than fixed rate issues – usually about \$1 per bond, or 0.1% of the issue size. There are a few other legal and administrative up-front costs that are generally somewhat lower than those of fixed rate issue. The State's strong credit rating should support a slight trading advantage below BMA, the most widely quoted AA tax-exempt short-term index.

Interest Rate Products can be used to Protect Against Interest Rate Spikes. Derivative products, such as interest rate caps and collars, can be used to limit the maximum variable interest rate. To give a sense of the cost of this protection, limiting the interest rate to 7% for the next 25 years would cost approximately 33 basis points per annum.

DETERMINING THE APPROPRIATE AMOUNT OF VARIABLE RATE DEBT

There is no absolute limit or rule of thumb governing the percentage of an issuer's overall debt that can or should be in a variable rate mode. The analysis is as much subjective as it is quantitative. The State of Georgia is one of the strongest credits in the US, as evidenced in the triple A ratings it has maintained for over 30 years. With a clear and prudent variable rate debt management program, coupled with strong controls in place to maintain sufficient liquidity all year, the State could likely make the case to the rating agencies for over 30% of its debt portfolio in variable rate mode without overburdening its credit. In adding variable rate debt to its portfolio, the State should evaluate its own risk and reward preferences to determine an optimal portfolio mix. In general, municipal issuers, in conjunction with various rating agency publications, have settled on roughly 20% to 30% of net variable rate exposure as a prudent level.

State Variable Rate Debt	
State	Variable Rate Debt ^(a) (\$Mn)
New York	\$5,700
Pennsylvania	4,000
California	3,400
New Jersey	1,800
North Carolina	940
Illinois	626
Texas	577
Ohio	309
Virginia	278
Michigan	230

(a) Includes data of state agencies and authorities.

Maintaining the State's AAA Rating- The rating agencies recognize the unique characteristics of each individual borrower, and there is no set formula for determining the maximum variable rate debt load appropriate for a given rating. Ratings assigned to short-term debt instruments incorporate the assessment of the degree to which an issuer is exposed to these risks as well as the issuer's general credit quality and ability to accommodate adverse interest rate and liquidity events while still meeting all debt service payments in a timely fashion. Many issuers will not have the financial flexibility to assume much of their debt as variable rate borrowing without adversely affecting their ratings, whereas some with particular liquidity strengths can assume a high percentage. We believe the State could have net variable exposure of at least 20% of total debt without affecting its current ratings.

Alternative Financial Products

In the section below we describe the various capital market products. As we detail below, the swap market has experienced explosive growth in the past decade and is many times larger than the bond market today with over \$150 trillion of contracts outstanding. Municipal issuers have been increasingly relying on swap based solutions to their borrowing needs, including many states. The benefits of swaps commonly include:

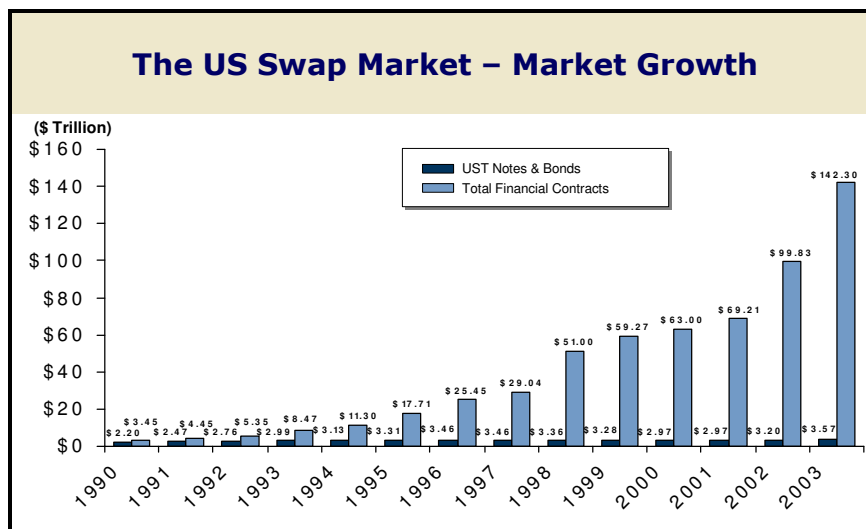
- a lower cost of funds,
- increased flexibility,
- reduced interest rate risk, and
- a more diversified investor base.

Swaps have their own set of risks and must be reviewed carefully in this context. However, municipal issuers are quickly increasing their levels of sophistication and are growing more comfortable with their ability to manage these risks. In fact, there is a very active tax-exempt BMA swap market that is solely for municipal issuers. There are many applications for the State of Georgia to benefit from swap based financings – a few of which we detail below.

Georgia’s constitution presents several challenges if the State were to attempt to execute a derivative contract. In particular, the difficulties with issuing variable rate debt, which often underlies swap financing structures, prevent many applications. Since there is no contemplation of swaps in the Constitution, it may be difficult for the State to engage in any swaps until the Constitution is amended.

INTEREST RATE SWAP MARKET GROWTH

The interest rate swap market in the United States has grown significantly in the last few years. Fueled by increased sophistication among market participants on the use of financial products and by favorable market conditions, the size of financial contracts has risen by 50% in every year since 2001. As shown in the chart below, this growth has expanded the U.S. swap market to approximately 40 times the size of the Treasury market.



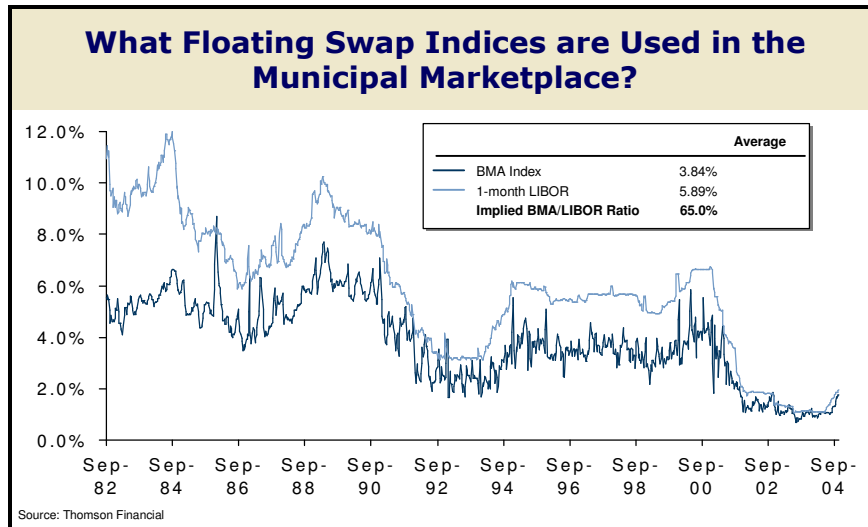
In the past few years, a large number of U.S. states have either entered into interest rate swap contracts, have passed legislation authorizing the use of derivative contracts as a capital management tool, or have implemented derivative/swap policies outlining the goals and prudent use of derivatives in the framework of overall debt management. A sample of these states includes: Alabama, California, Colorado, Florida, Illinois, Iowa, Maryland, Massachusetts, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Puerto Rico and Texas. Municipal entities within individual states, such as not-for-profit hospitals, higher education institutions, K-12 organizations, housing agencies and power cooperatives have also accessed the swap market.

SWAP MECHANICS

An interest rate swap is a contract between two counterparties, committing them to exchange cash flows on a periodic basis. These cash flows are calculated based on a principal notional amount which is not actually exchanged; the only exchanges involve coupon payments. The most widely utilized interest rate swap is one where floating rate payments are exchanged for fixed rate payments – a “fixed payer” (Municipal Issuer pays a fixed rate and receives a floating rate) or a “fixed receiver” (Municipal Issuer receives a fixed rate and pays a floating rate) swap.

Interest rate swaps in the municipal marketplace are commonly based on one of two floating rate indices – LIBOR and the BMA Index. LIBOR, or the London Interbank Offering Rate, is the short-term rate at which banks lend each other money. BMA, or the Bond Market Association Index, is a composite of approximately 200 highly rated variable rate tax-exempt programs actively traded in the bond market; BMA may be viewed as LIBOR’s equivalent in tax-exempt space. As shown below, based on more than 20 years of history, the BMA tax-exempt short-term

index has traded at approximately 65-67% of its taxable equivalent. This ratio is a good proxy for the value of “tax exemption” in the municipal marketplace – 1 minus the Maximum Marginal Tax Rate of 35%.

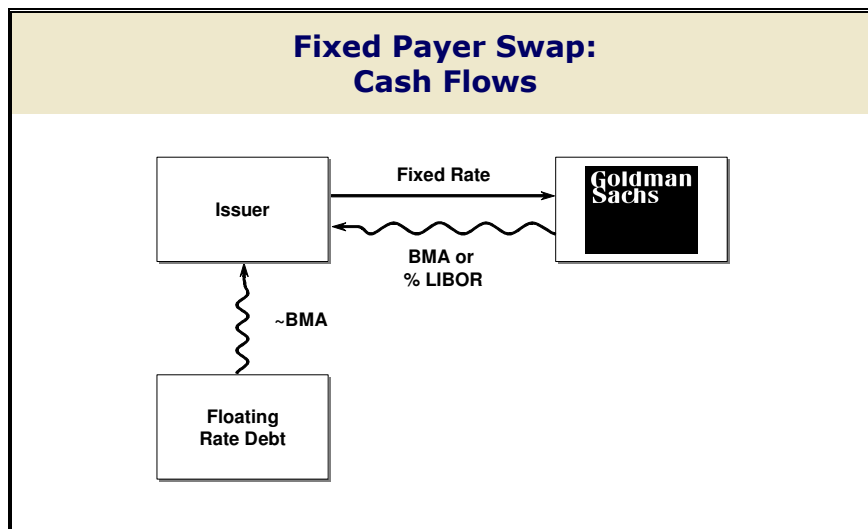


PRUDENT USE OF DERIVATIVE PRODUCTS IN THE MUNICIPAL MARKETPLACE

Derivative Policies. In the past 3-5 years, a number of states have implemented debt management and interest rate swap policies to outline and guide the proper use of derivative products in relation to the state’s general capital management goals. Some of these states include: California, Connecticut, Illinois, New York, Ohio and Pennsylvania, among others.

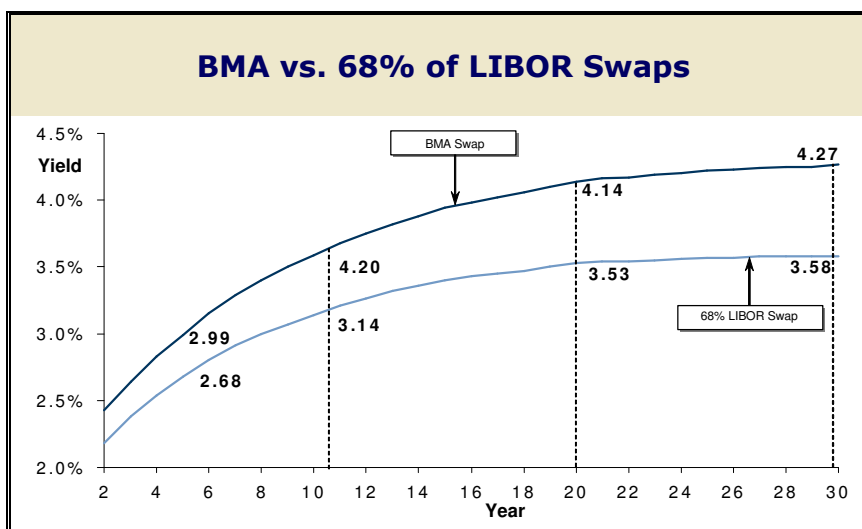
Case Study: Interest Rate risk management Policy for the State of Illinois. In the fall of 2003, the State of Illinois worked with its swap advisors and banks to put in place an exhaustive Interest Rate Risk Management Policy, governing both the use of variable rate debt and interest rate swap products. The Policy was adopted in October 2003 and can be found on the following website: <http://www.state.il.us/budget/>

Hedging Activities. The current low interest rate market environment has generated a significant amount of bond issuance related to new money financings and the advance refunding of outstanding high-coupon debt. While issuing traditional fixed rate bonds has resulted in attractive borrowing costs, a number of municipal issuers have found the use of synthetic fixed rate debt to be even more cost-effective. “Synthetic fixed rate debt” constitutes issuing variable rate bonds and entering into a floating-to-fixed interest rate swap to hedge the bonds’ future interest rates. As shown in the chart below, the Municipal Issuer remains responsible for its variable rate debt obligations; simultaneously, the Issuer begins paying a fixed rate and receiving a variable rate from its swap counterparty. It is expected that the variable rate receipt will approximate the variable rate obligation on the underlying bonds.



In the past 3-5 years, synthetic fixed rate structures have been largely associated with LIBOR-based swaps. The LIBOR-based swap is based on a certain percentage of 1-month LIBOR, such as 68% of LIBOR, so as to approximate the trading performance of the short-term tax-exempt BMA Index. As shown in the chart below,

LIBOR-based swaps offer a considerable pricing advantage vs. BMA swaps, because they are associated with **tax risk**.



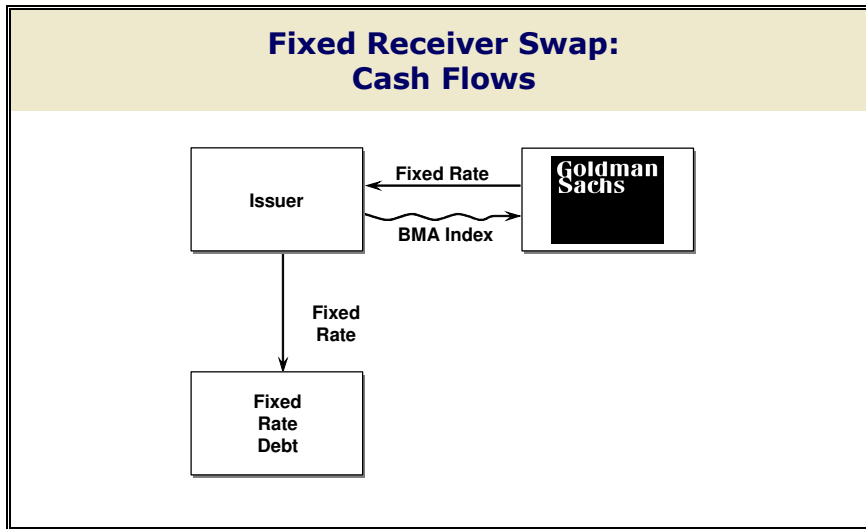
Tax risk refers to the possibility of potential significant revisions in the US tax code which would erode (or enhance) the value of tax-exemption. The current tax code implies that tax-exempt paper should trade at approximately 65% of its taxable equivalent; if a Municipal Issuer pays a tax-exempt index on its bonds, BMA, and receives at least 65% of the taxable index LIBOR from a swap, the Issuer should have an effective hedge. However, if tax exemption was eliminated and the BMA Index began trading at or close to 100% of LIBOR, the swap-based hedge would be only partially effective for the Municipal Issuer. Tax risk is borne by the Issuer and is inherent in all LIBOR-based swaps hedging tax-exempt variable rate debt. The Issuer is compensated for retaining this risk by the lower fixed payer swap rate on its LIBOR-based swap.

Case Study: Synthetic Fixed Rate Debt for the Commonwealth of Puerto Rico.

In April-May 2004, the Commonwealth of Puerto Rico took advantage of the low interest rate market environment to refund some of its outstanding high-coupon fixed rate debt with a synthetic fixed rate structure and realize some needed budget relief in fiscal years 2004 and 2005. The Commonwealth issued \$447.875 million of tax-exempt variable rate refunding bonds swapped to a fixed rate using a LIBOR-based swap. The synthetic fixed rate structure generated \$60 million refunding savings for the Commonwealth, concentrated in fiscal years 2004-2005.

The variable rate bond issuance was the first substantial entry into the short-term bond market by the Commonwealth, and the interest rate swap was the Commonwealth's first swap transaction ever. To enable the seminal use of each of these financial structures, the Commonwealth performed an in-depth analysis of different variable rate bond structures, the risks associated with variable rate exposure, historical performance of variable rate programs issued by states, and the number of states which had utilized the variable rate bond market. In addition, the Commonwealth passed formal legislation authorizing use of interest rate swaps for debt management purposes.

Increasing Variable Rate Exposure. Municipal Issuers who have predominantly fixed rate debt obligations have used interest rate swaps to increase their exposure to variable rates without new debt issuance. This can be done through a fixed receiver swap, where the Issuer receives a fixed swap rate and pays the BMA Index.



Municipal Issuers looking for cash flow relief in the near term have also considered incorporating interest rate options into their fixed receiver swaps. An interest rate option sold to a swap counterparty can increase the swap rate received by the Issuer or can provide the Issuer with substantial upfront cash, in return for retaining some uncertainty in its debt portfolio.

Case Study: Fixed Receiver Option for the State of Alabama.

In June, 2004, the State of Alabama entered into a forward-starting fixed receiver swap and sold to swap counterparties the annual option to cancel the swap beginning in April, 2007. If the counterparties do not exercise the option, a swap commences where the State receives 4.19% and pays the BMA Index on \$350 million initial notional amount. The swap's final maturity is 2019. In exchange for selling this option to its swap counterparty, the State received an upfront payment of \$19.4 million which it will retain regardless of whether or not the counterparties exercise the cancellation option beginning in 2007. If the swap is exercised, the State's obligations on \$350 million bonds will convert from a synthetic variable rate to a fixed rate.

Dynamic Management of Variable Rate Exposure. Municipal Issuers who have issued variable rate bonds in the last 3-5 years have benefited substantially from the low levels of market interest rates. However, as interest rates begin to rise, the cost of variable rate debt will also increase. The swap market provides a number of tools that offer protection against rising interest rates. For a limited annual cost, the Municipal Issuer can purchase interest rate protection through a **Barrier Swap**. The Barrier Swap allows the Issuer both to benefit from today's low interest rates and have protection in the future when interest rates are higher. A Barrier Swap is a swap which becomes effective only if a certain level of the BMA Index is breached. For example, if the 90-day BMA average reaches or exceeds 4.00%, a swap commences in which the Issuer begins receiving 68% of LIBOR and paying 4.00%.

Case Study. A Hospital in Massachusetts.

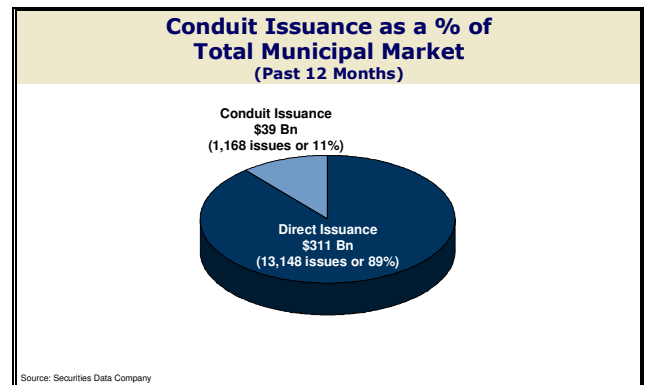
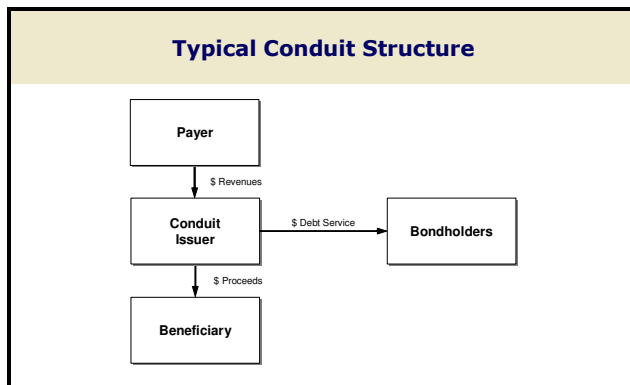
In July 2004, the a Hospital in Massachusetts sought to mitigate the potential risk of rising interest rates on its debt portfolio, consisting of 46% variable rate debt. The Hospital considered synthetically fixing out a \$70 million portion of its variable rate bonds with a LIBOR-based floating-to-fixed rate swap, resulting in a sub-4% fixed debt cost. With an interest rate swap, however, the Hospital would have forgone the advantage of today's historically low variable interest rates, and its debt cost would have immediately increased by 200 basis points. To continue benefiting from today's low variable interest rates, it chose the Barrier Swap structure instead. Under the Barrier Swap, the Hospital's \$70 million bonds will remain in variable rate mode as long as the BMA Index resets below 4.50%; if the 90-day BMA average reaches or exceeds 4.50%, an interest rate swap commences where the Hospital will begin paying 4% and receiving 68% of LIBOR from Goldman Sachs. The swap will then remain in effect until the bonds' final maturity. The cost of this structure for the Hospital was a basis-point annuity whose payments begin today until the bonds' maturity, regardless of the swap's exercise. As a result, the Hospital's debt cost on the \$70 million bonds is the variable bond rate plus the annuity, with a maximum level of 4.50% plus the annuity as rates increase in the future.

V. Conduit Issuers

Overview of Conduit Issuers

Conduit issuers are commonly used in the municipal bond market for a variety of purposes. One key reason is that many entities do not have authority to access the capital markets on their own, so they use conduit issuers to borrow funds. Conduit issuers can also help lower borrowing costs, especially for smaller borrowers. By pooling many similar small issues, issuers can save on issuance costs, credit spreads, and size premiums. Another common reason for using a conduit is that some states have laws which restrict an issuer from bonding with the optional structure – e.g., approvals, timing, credit, structure, etc.

The typical conduit structure is quite simple. Bonds are sold to investors by the conduit issuer on behalf of a beneficiary. The beneficiary receives the bond proceeds and remits money to the conduit issuer to make debt service payments, as determined by a contract between the conduit issuer and the beneficiary. Conduit issuance represents a significant share of total municipal volume. As shown in the chart below, there were over 1,000 conduit issues over the past year totaling close to \$40 billion in par.



Many states and local governments use conduit issuers to centralize a variety of debt sales, such as Illinois, Ohio, New Jersey, and Texas. Below we describe the Texas Public Finance Authority. The State uses the Authority as a particularly comprehensive conduit issuer for all state sales as well as many other issues.



CONDUIT ISSUER CASE: TEXAS PUBLIC FINANCE

The Texas Public Finance Authority (“TPFA”) operates under broad legislation to finance a wide array of issues for the state and local governments across Texas as shown in the table below:







TPFA Permitted Financing Types
<ul style="list-style-type: none"> • Fixed and variable rate bonds • General obligation bonds for the State • Revenue bonds for the State and other qualified entities • Commercial paper and other short-term borrowing • Lease revenue obligations • Various derivative products

In the table below we highlight the most significant programs that utilized the TPFA.

General Obligation Bonds	Revenue Bonds
Department of Criminal Justice	Texas Building and Procurement Commission (formerly GSC)
Youth Commission	Parks & Wildlife Department
Juvenile Probation Commission	State Preservation Board (History Museum)
Department of Mental Health and Mental Retardation	Department of Health (Laboratory)
Department of Public Safety	Military Facilities Commission
Parks & Wildlife Department	Department of Criminal Justice
National Research Laboratory Commission (Super Conducting Super Collider)	Texas State Technical College
	Midwestern State University
	Stephen F. Austin University
	Texas Southern University

Potential Application and Benefits of a Central Conduit Issuer for Georgia

Constitutional constraints eliminate or restrict many financing modes and techniques that could be used by the State of Georgia to accelerate funding for its critical infrastructure needs.

Overview of Georgia's Constraints	
	Traditional Premium Bonds
	Limited Restructuring Opportunities for Refunding Bonds
	Efficient Use of Variable Rate Debt
	Swap and Derivative Contracts
	Traditional Securizations
	Lease Payment Bond Structures

If the State were to create a conduit issuer for infrastructure needs, traditional general obligation bond issues would continue to be sold by the State itself. In order for the conduit to issue revenue bonds, any revenues pledged to bondholders would have to be routed directly to the conduit to avoid constitutional constraints. As with many other state conduit issuers, the General Assembly could maintain general authorization rights over all bonds issuers.

VI. Financing of Higher Education Facilities

The current methods that are used to finance improvements for the University System of Georgia are general obligation bonds of the State, as authorized by the General Assembly, and the issuance of revenue bonds by local industrial development authorities and other local conduit issuers. As budget pressures have developed over the last few years, the issuance of general obligation bonds for higher education purposes has diminished.

General Obligation Bonds

As noted earlier in this report, the preservation of the State's triple-A rating is, in part, dependent upon the State's maintaining reasonable levels of debt. Given the general infrastructure needs of the State, particularly in the areas of transportation, public education and water resources management, it is probably that competition for (limited) general obligation debt capacity will increase.

Local Issuance of Bonds for Higher Education Facilities

Background – Because general obligation bonds have not been widely used to finance higher education facilities in the last several years, many schools in the University System have turned to conduit-type issuers who issue bonds based upon the pledge of annual rent payments by the Board of Regents. The terms of such rental agreements are subject to a year-to-year cancellation provision. However, insurers have agreed to provide credit facilities for the issuance of such bonds on the basis that the essentiality nature of the facilities will cause the annual rental payments to be made. The interest rates achieved from the issuance of these bonds have varied significantly and, at times, the rates achieved have not been favorable or efficient.

Rating Agency Issues – At the present time, only one rating service (Moody's) has agreed to rate these bond issues. The underlying ratings have ranged from low to high "A" grade ratings even though the basic security for the bonds (rent payments from the Board of Regents) is the same for all issues. Because the debt is not authorized by the State and there is no obligation on the part of the State to pay debt service on the bonds, the credit for these bonds could weaken in the future.

Disclosure Issues – Until recently, an inventory of the outstanding debt associated with the University System was not available. The State Auditor has compiled a list that shows that there is almost \$1 billion of such outstanding debt. While it is not currently a disclosure requirement for the State, it is conceivable that such related (or unrelated) debt may be required in future financial audits. **[Description of outstanding debt to come]**

Local versus Centralized Debt Issuance – When it approves capital projects within the University System, the Board of Regents may enter into rental agreements with as many conduit foundations as there are colleges and universities. Greater efficiencies and standardized practices could be achieved if one issuer were used for all capital projects. Moreover, various borrowings could be combined so as to create fewer debt issuances. The use of a central issuer would also be a repository for inventorying all issues and (potentially) meeting all disclosure requirements. There is also the opportunity to improve the creditworthiness of bonds issued for higher education purposes.

Use of the Georgia Education Authority (University)

The Georgia Education University (University), though in statutory existence since 1949, has not been dormant for decades. However, it (or a similar authority) could be revived to be the central issuer for capital projects approved by the Board of Regents. Some modernization of the Section 20-3 of the Georgia Code would be needed, but an active GEA(U) could achieve these benefits:

- The all-in interest costs associated with financing capital projects of the System would likely be lowered.
- The Board of Regents could exercise more diligence and control over project design and costs.
- The Board of Regents could plan for the addition of future capital projects on a System-wide and coordinated basis.
- More effective debt management could be put in place.
- The existence of the Authority would provide central disclosure for audit purposes.

VII. Investment in Private Equity

The State of Georgia's election to include private equity in its investment portfolio would mitigate risk while increasing stakeholder return. Moreover, investment in private equity could generate additional positive externalities at the local level, such as the creation of new jobs, enhancement of state tax revenue, and encouragement of innovation.

In general, private equity has become a well-accepted component of institutional investment portfolios. One study found that the average allocation to private equity among the top 100 public pension funds is approximately 5%,^{1[1]} while a more recent survey of 271 large endowments, foundations, and pension plans showed that pension plans allocate an approximate average of 6% to private equity investments.^{2[2]} Georgia is currently one of only eight states without any portion of its public pension investment capital allocated to private equity.

I. Definition of Private Equity

Private equity as an asset class generally refers to investments in venture capital funds (“VC”) and buyout funds (“LBO”) that take advantage of certain market inefficiencies to outperform more efficient asset classes. The free availability of company information in public equity markets and the generally efficient investor response to such information inhibits an individual investor's ability to achieve above-average returns. The private equity markets, in contrast, have limited public information and weak market efficiency. These conditions enable fund managers to take advantage of specialized access and knowledge to exploit unusual opportunities and achieve extraordinary returns. These higher potential returns, of course, do not come without the according high risk. However, private equity's low correlation to alternative investment vehicles make this risk manageable (see section III(b) below).

II. Georgia is an Underserved Private Equity Market

Strong Entrepreneurial Drivers: Georgia has historically supported a prosperous and innovative entrepreneurial community. The state's several universities, including Georgia Tech, UGA, Georgia State, and Clark University, all contribute to a healthy innovative base of new enterprise creation, while growing industries such as food processing, biotechnology, media, software, and communications attract and retain executive talent. Georgia is generally considered an innovative state with a significant output of patent and invention disclosures each year.^{3[3]} This entrepreneurial supply fosters a surprisingly strong demand for private equity financing. Consequently, Georgia has recently ranked 5th in the nation in the number of employees at privately financed companies (551,400), 6th in the nation in the level of sales revenue generated by privately financed companies (\$91 billion), and 10th in the nation in the amount of private capital received from private investors (\$344.3 million).^{4[4]}

Strong Entrepreneurial Infrastructure: Growing symbiotically around this increasing supply of entrepreneurial drivers is a potent and sophisticated ecosystem of professional services. Several legal, accounting, recruiting, and consulting firms throughout the state, whether as departments within large

1[1] Joel Chernoff, “It is a Different World for Institutional Managers,” *Investment News*, January 24, 2000, pp.20-21.

2[2] *Alternative Assets – Private Equity Fund of Funds*, Special Report by Piper Jaffray Private Capital, August 2003.

3[3] The Milkin Institute.

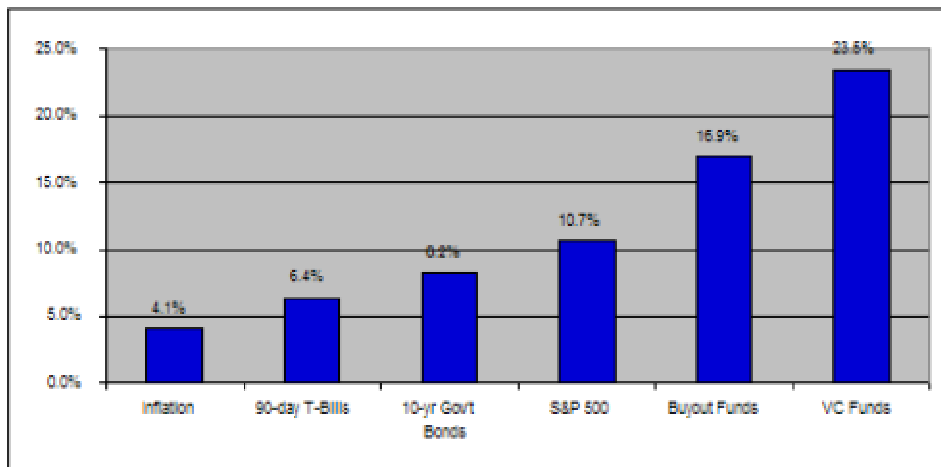
4[4] *Venture Impact 2004* by Global Insight and National Venture Capital Association 2004 Yearbook prepared by Thomson Venture Economics. All data is for 2003. 2004 data is not yet available in comparable granularity, but preliminary data suggests that Georgia's ranking in the area of private capital received has significantly improved from 10th to 4th place.

firms or as a specialized boutiques, have established some form of a growth company practice with expertise in issues particular to entrepreneurial ventures. Bankers and broker/dealers have also sprouted throughout Georgia, eager to service and benefit from Georgia's promising investment opportunities. Most of the time, unfortunately, they're forced to look for remote investors.

Weak Supply of Private Capital: While Georgia's entrepreneurial companies received \$344.3 million in 2003, only \$29.3 million of that came from Georgia-based investment firms. The rest, constituting 91% of the total, came from investors in states such as California, Illinois, Florida, Massachusetts, New York, Pennsylvania, and others.^{5[5]} While a first reaction to this statistic impinges on one's sense of egalitarianism, there are more tangible and economic concerns. Frequently, a non-Georgia investor will force the company to move its headquarters out of Georgia so as to be geographically close to the investor, particularly if the company is in the early growth stages of its development. Moreover, a remote investor will often hand pick its own management team and professional service firms to work with the investee company, often selecting such executives and firms from outside of Georgia. Accordingly, while Georgia's receipt of \$344.3 million in investment capital from private investors is a tremendous feat, it is no less of a tremendous tragedy that a significant portion of that amount never yields any direct benefit to Georgians.

III. Financial Benefits

Superior Historical Returns: Private equity investment, as an asset class comprised of buyout and venture capital funds, is a riskier investment vehicle than other alternatives. One study found that the standard deviation of 148 venture capital funds formed and liquidated from 1960 through 1999 was approximately 115.6%.^{6[6]} This extra risk, however, is compensated by extra return potential. The chart below demonstrates the annual returns of buyout and venture capital funds in the United States as compared to more common asset classes during the period from 1980 through 2002.^{7[7]}



One large endowment which has benefited from an aggressive allocation in private equity recently commented that “[p]rivate equity offers extremely attractive long-term risk-adjusted return characteristics, stemming from the [endowment’s] strong stable of value-added managers that exploit

^{5[5]} National Venture Capital Association Yearbook 2004, p.34.

^{6[6]} Peng Chen, Gary T. Baierl, and Paul D. Kaplan, Venture Capital and its Role in Strategic Asset Allocation, The Journal of Portfolio Management, Winter 2002, p. 83. The correlation coefficient, however, was very low, as discussed in the Section III(b) below.

^{7[7]} Sources: U.S. Department of Labor, U.S. Federal Reserve, FactSet and Thomson Financial Venture Economics / NVCA.

market inefficiencies. ... Since inception [in 1973], private equity investments have generated a 31.4% annualized return to the [endowment fund].”⁸[8]

]

Portfolio Risk Management: Private equity, as its name suggests, represents investments in companies that are not particularly susceptible to the whims of public market dynamics. The risk in private investments comes almost entirely from unsystematic risk (or investment-specific risk). In other words, the success or failure of a private investment in a given innovation, technology or idea depends nearly entirely on the merits of that innovation, technology or idea, independent of the overall stock market performance.

Accordingly, private equity has a weak correlation to many of the more common mainstay investments in an institution’s diversified investment portfolio. Venture capital returns have been found to have a –17% correlation to U.S. bonds⁹[9] and only a 0.04% correlation with large cap stocks. The chart below shows the average returns, standard deviation, and correlation with large-cap stocks of various asset classes, including venture capital:¹⁰[10]

	<u>Average Returns</u>	<u>Standard Deviation</u>	<u>Correlation with Large-Cap Stocks</u>
Large-Cap Stocks (S&P 500)	13.34%	15.65%	100.0%
U.S. Small-Cap Stocks	17.16%	24.96%	67.0%
U.S. Long-Term Government Bonds	7.57%	11.41%	35.0%
U.S. 30-Day Treasury Bills	6.02%	2.68%	-4.0%
U.S. Inflation	4.51%	3.16%	-29.0%
International Stocks	15.16%	21.60%	48.0%
Venture Capital	45.00%	115.60%	0.04%

The low correlations to other asset classes enable portfolio managers to use private equity as a tool to improve a portfolio’s returns and/or reduce its overall volatility. Managers may use private equity to move their portfolio allocations closer to the efficient frontier of a diversified portfolio. Using historical public equity returns from 1960 through 1999, a minimum-variance portfolio would include an allocation of 2% to venture capital. A portfolio with the same standard deviation as the S&P 500 index would include a 4% allocation to venture capital while the maximum Sharpe ratio portfolio would allocate 9% to venture capital. This analysis suggests that a prudent allocation of a portfolio to venture capital should be between 2% and 9%.¹¹[11]

IV. Recommendations

We recommend the following four specific near-term steps toward Georgia’s achievement of a maximum risk-reward balance in its investment portfolio:

⁸[8] The Yale University Endowment 2002 Annual Report.

⁹[9] Cambridge Associates data through 2002.

¹⁰[10] See Chen et al., supra note 5.

¹¹[11] See id.

- Permit the State to invest public pension funds in private equity investment vehicles.
- Establish a unified platform program and appoint officers (both state employees and private sector professionals) responsible for coordinating, monitoring, and reporting on the State's private equity investment initiative.
- Engage a professional private equity advisory firm to work in conjunction with the State Pension Fund managers to assess the appropriate level of portfolio allocation for Georgia and design a plan to begin private equity investments gradually growing toward that allocation.
- Engage one or more professional private equity "fund of funds" to work in conjunction the State Pension Fund managers to identify and monitor individual private equity fund investments.
- The importance of investing a portfolio's private equity allocation into top quality investment firms cannot be overstated, and doing so is not necessarily an easy task. Access to the top firms is one of the benefits of utilizing a fund of funds as an investment conduit. Fund of funds are organizations that pool the capital of investors and commit it to a portfolio of direct-investing private equity funds. They have access to such funds, specialized knowledge in how to assess them, and techniques in identifying the right level of diversification within the asset class. They also enable the outsourcing of what would otherwise be an expensive in-house position, and can help achieve high returns and minimize risk.