Debt Affordability Study
January 2008

Texas Bond Review Board

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Executive Summary

With the passage of Senate Bill 1332, the 80th Legislature assigned responsibility for the Debt Affordability Study (DAS) to the Texas Bond Review Board in consultation with the Legislative Budget Board. This report is the second such Debt Affordability Study after the original was published in February 2007.

This study provides data on the state's historical, current and projected debt positions and develops financial data from which policymakers can review various debt strategies by use of the study's Debt Capacity Model (DCM). Using debt affordability to define acceptable levels of annual debt service and thereby total issuance will assist policymakers to use available revenues to meet the state's highest priority needs.

The DCM is used to assess the impact of the state's annual debt service required for current and projected levels of not self-supported debt on general revenue over the next 5 years. The model uses a series of five ratio calculations to measure the state's debt capacity. It is important to note that rating agencies examine variations of these debt capacity measures to assess the state's debt burden, a key factor affecting the state's credit rating and thus capacity for debt issuance.

Overview of Current State Debt

The state uses long-term debt financing for a variety of projects and program areas. At the end of fiscal year 2007, Texas had $26.37 billion in debt outstanding. Of this amount, 44 percent is for business and economic development, 32 percent is for higher education, and 16 percent is for natural resources. The remaining debt is allocated among criminal justice and public safety, 6 percent; health and human services, 1 percent; and general government, 1 percent.

The state's total debt outstanding has increased from $11.81 billion in fiscal year 1997 to the current $26.37 billion as of August 31, 2007. Of this amount, not self-supporting debt comprised $2.8 billion and self-supporting debt comprised $23.6 billion.

As of the same date the Constitutional Debt Limit calculation was 1.45 percent for outstanding debt and 1.99 percent for outstanding and authorized debt. The Texas Constitution prohibits the legislature from authorizing additional state debt if the annual debt service in any fiscal year on state debt payable from the General Revenue Fund exceeds 5 percent of the average of unrestricted general revenue from the preceding three fiscal years. The Texas Constitution also stipulates that state debt payable from the General Revenue Fund does not include debt that, although backed by the full faith and credit of the state, is reasonably expected to be paid from other revenue sources and is not expected to create a general revenue draw.

When compared to the top ten populous states, Texas remains below the median for four debt-burden measures calculated by Moody's. See Chapter 4 for a discussion of how Texas compares on state and local debt.

Changes in the Constitutional Debt Limit and the Five DCM Ratios: February 2007 to January 2008

The 80th Legislature passed and the general public authorized nearly $10 billion in new general obligation debt. Of this debt, $9.25 billion may be considered not self-supporting. The impact of this newly authorized debt on the state's Constitutional Debt Limit is illustrated in *Figure 1*.

Figure 1
Constitutional Debt Limit Including Newly Authorized Debt

Constitutional Debt Limit	Outstanding Debt	Outstanding and Authorized Debt
As of August 31, 2007	1.45%	1.99%
With newly authorized debt (excluding $5 billion for transportation)	1.45%	3.21%
With newly authorized debt (including $5 billion for transportation)	1.45%	4.64%

SOURCE: Texas Bond Review Board.

The 80th Legislature also appropriated general revenue to the Texas Water Development Board for not-self supporting water programs including State Participation, Economically Distressed Areas Program (EDAP), Water Infrastructure Fund (WIF) and significant capital improvement projects.

Based on existing and new authorizations, approximately $7.06 billion in new, not self-supporting debt is expected to be issued between fiscal years 2008 and 2012. The impact of these issuances on each DCM ratio is depicted in *Figures 1 thru 5*. Furthermore, an additional $3.50 billion is planned to be issued from 2013 thru 2017.

Ratio 1: Debt Service as a Percentage of Unrestricted Revenues

Although the legislature has not established target or cap guideline ratios, historically Texas has appropriated less than 2 percent of its unrestricted revenues for not self-supporting debt service. This study utilizes the historical appropriations level of 2 percent as the target ratio and 3 percent for the maximum (or cap) ratio. *Figure 1* shows debt service as a percentage of projected unrestricted revenue for fiscal years 2008 through 2012 before and after the new debt authorizations (February 2007 and January 2008, respectively).

Figure 2
Ratio 1: Debt Service as a Percentage of Unrestricted Revenues - February 2007 to January 2008

	2008	2009	2010	2011	2012
February 2007	1.28%	1.35%	1.36%	1.24%	1.11%
January 2008	1.33%	1.57%	1.91%	2.18%	2.33%

SOURCE: Legislative Budget Board and Texas Bond Review Board.

Using the 2 percent target guideline, approximately $228.7 million would be available for additional debt service in fiscal year 2008 and up to $571.2 million would be available at the 3 percent cap level. This debt-service capacity would support an estimated $2.5 billion at the target guideline and up to $6.5 billion at the cap level in new debt capacity at current interest rates. If issued, debt authorized after 2012 will utilize some of the projected capacity.

Ratio 2: Debt Service as a Percentage of Budgeted General Revenue

This ratio is similar to Ratio 1 but is more restrictive because the pool of available general revenue in this ratio is limited to budgeted general revenue, a figure that is less than unrestricted general revenue available for debt service. Historically, Texas' not self-supporting debt-service commitment has been less than 1.5 percent of budgeted general revenues. *Figure 2* shows that debt service as a percentage of budgeted general revenue remains below 1.5 percent through fiscal year 2009 even after including the impact of the new bond authorizations.

Figure 3
Ratio 2: Debt Service as a Percentage of Budgeted General Revenue - February 2007 to January 2008

	2008	2009
February 2007	1.34%	1.33%
January 2008	1.14%	1.39%

SOURCE: Legislative Budget Board and Texas Bond Review Board.

Ratio 3: Not Self-Supporting Debt to Personal Income

Ratio 3 is a strong indicator of a governmental borrower's ability to repay debt obligations by transforming personal income into governmental revenues through taxation. This ratio plays an important role in determining the state's credit ratings. (Standard and Poor's considers up to 3 percent to be a low debt burden for this ratio.)

Figure 4
Ratio 3: Not Self-Supporting Debt to Personal Income - February 2007 to January 2008

	2008	2009	2010	2011	2012
February 2007	0.34%	0.31%	0.28%	0.23%	0.19%
January 2008	0.37%	0.45%	0.55%	0.65%	0.69%

SOURCE: Legislative Budget Board and Texas Bond Review Board.

Ratio 4: Not Self-Supporting Debt per Capita

Ratio 4 measures the dollar amount of debt per person. Like Ratio 3, Ratio 4 plays an important role in determining the state's credit rating. When comparing Texas to a peer group of the ten most populous states, Moody's reports that Texas has the lowest debt per capita.

Figure 5
Ratio 4: Not Self-Supporting Debt per Capita - February 2007 to January 2008

	2008	2009	2010	2011	2012
February 2007	$ 119.24	$ 114.39	$ 107.87	$ 93.45	$ 80.33
January 2008	$ 136.48	$ 170.32	$ 219.53	$ 270.13	$ 299.38

SOURCE: Legislative Budget Board and Texas Bond Review Board.

Ratio 5: Rate of Debt Retirement

This ratio highlights the rate at which the state's not self-supporting debt is retired. A high ratio indicates rapid debt retirement. The rating agencies consider a retirement rate of 50 percent principal at 10 years to be the average. Texas' rate of retirement is higher than the average because most of the not self-supporting debt is issued by the Texas Public Finance Authority, which uses a level principal debt-service structure.

Figure 6
Ratio 5: Rate of Debt Retirement - February 2007 to January 2008

	Not Self-supporting	Self-supporting
February 2007	78.3%	39.7%
January 2008	71.9%	35.1%

SOURCE: Legislative Budget Board and Texas Bond Review Board.

Other Considerations

Policymakers may wish to review both tax-supported debt service as well as other state-supported debt-service commitments to have a full perspective on general revenue debt-service expenditures. Chapter 3 and Appendix F show the impact on Ratio 1 of funding special commitments such as tuition revenue bonds, the Instructional Facilities Allotment and the Existing Debt Allotment.

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Chapter 1 - Introduction

The 80th Legislature assigned responsibility for the Debt Affordability Study (DAS) to the Texas Bond Review Board in consultation with the Legislative Budget Board, with the passage of Senate Bill 1332. This report is the second such Debt Affordability Study after the original was published in February 2007.

This study provides data on the state's historical, current and projected debt positions and develops financial data from which policymakers can review various debt strategies by use of the study's Debt Capacity Model (DCM). Using debt affordability to define acceptable levels of annual debt-service and thereby total issuance will assist policymakers to prioritize the use of available revenues to meet the highest priority needs.

The DCM is used to assess the impact of the state's annual debt-service requirements for current and projected levels of not self-supporting debt on general revenue over the next 5 years. The model uses a series of ratio calculations to measure the state's debt capacity. It is important to note that rating agencies examine variations of these debt capacity measures to assess the state's debt burden, a key factor affecting the state's credit rating and thus capacity for debt issuance.

Defining Debt Affordability

Debt affordability is an integrated approach that helps analyze and manage state debt by factoring in historical debt use, financial and economic resources of the state and long-term goals for capital needs. A key component of debt affordability is the determination of the state's additional debt capacity. The DAS presents the state's current debt burden with an overview of the state's historical and current debt.

Benefits and Goals of Using a Debt Affordability Study

Other states have used a debt affordability study to assist in managing the state debt and making financing decisions. The major benefits of using a debt affordability study include:

- Provides an overview of the state's debt position;
- Matches available debt funding with prioritized capital needs by providing a tool to integrate debt management in the capital planning process;
- Establishes a systemic approach to debt management;
- Helps centralize debt management and authorization decisions;
- Helps assess the impact of individual or a group of new debt authorizations on the state's debt burden;
- Evaluates the effect of fluctuating revenues on the state's ability to meet existing debt-service obligations and to issue new debt;
- Ensures sufficient cash balances and reserves;
- Provides important data to the credit rating agencies to protect the state's bond rating and outlook; and
- Helps achieves the lowest cost financing for taxpayers.

States primarily use available revenues and/or debt proceeds to fund long-term capital and program needs. Legislators must strike a balance between prioritizing those needs and using available revenues for debt-service to fund them. A debt affordability approach assists in maximizing resources for debt financing.

Debt Management in Texas

Texas has a decentralized approach to debt management. When the legislature considers the issuance of new debt, the authorizing legislation is typically considered by legislative finance committees. The legislature usually appropriates debt-service payments for existing debt in the General Appropriations Act which is organized by article based on governmental function. Subsequently, this process leads policymakers to review, develop and approve proposed budget requests by agency or program. (More information on this process is available in Appendix B.)

Projected Debt Issuance

The 80th Legislature authorized \$9.75 billion in additional general obligation (GO) debt that was approved by the voters in the November 2007 general election. Of the \$9.75 billion, \$9.25 billion may be not self-supporting. Based on existing and new authorizations, approximately \$7.06 billion in new, not self-supporting debt is expected to be issued between fiscal years 2008 to 2012. For purposes of this Debt Affordability Study, the new debt issuances listed above are included in each of the Ratio analyses.

Chapter 2 - Current Debt Position of the State

Debt used by the state of Texas falls into one of two major categories: 1) general obligation (GO) debt and 2) non-general obligation (revenue) debt. GO and revenue debt are typically issued to provide long-term financing for projects. Texas employs debt financing to achieve a variety of program goals. *Figure 7* provides program examples for each type of debt.

Figure 7
Debt Type and Program Examples

Bond Type	Debt Type	Bond Program
General Obligation	Not self-supporting	Water Development Bonds - State Participation Higher Education Constitutional Bonds
General Obligation	Self-supporting	Mobility Fund Bonds Veterans' Land and Housing Bonds
Revenue	Not self-supporting	Texas Military Facilities Commission Bonds Parks and Wildlife Improvement Bonds
Revenue	Self-supporting	Permanent University Fund (PUF) Texas State Affordable Housing Corporation Bonds

SOURCE: Texas Bond Review Board.

Growth in Debt Outstanding

Texas' use of debt financing has increased over the last decade. At the end of fiscal year 2007, the state had approximately $26.37 billion in total debt outstanding (*Figure 8*).

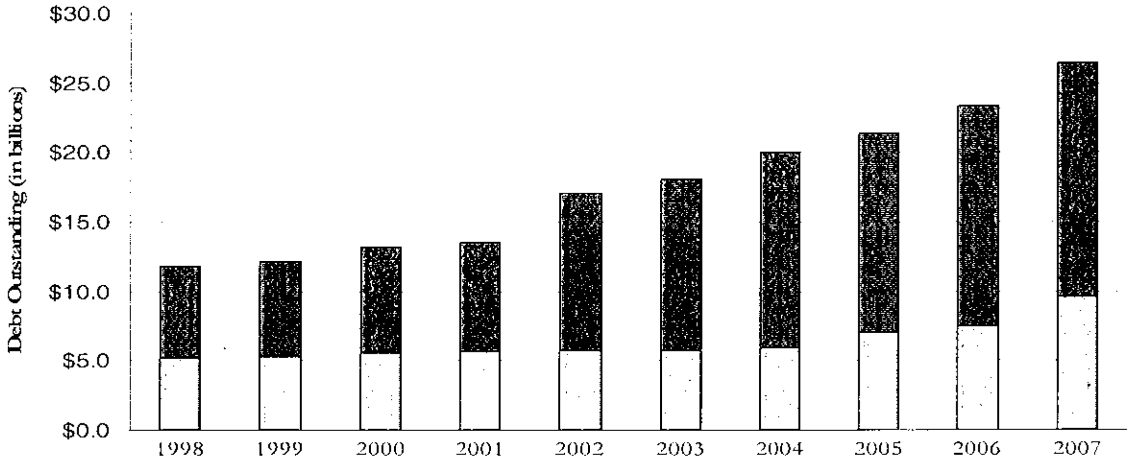
Figure 8
Debt Outstanding by Bond Type, Fiscal Year 2007

Bond Types	Self-supporting	Not Self-Supporting	Total
General Obligation	$ 7,363,334,000	$ 2,231,003,000	$ 9,594,337,000
Revenue	$ 16,258,257,000	$ 520,295,000	$ 16,778,552,000
Total	$ 23,621,591,000	$ 2,751,298,000	$ 26,372,889,000

SOURCE: Texas Bond Review Board.

The state's total debt outstanding has increased from $11.79 billion in fiscal year 1998 to the current $26.37 billion, an increase of 124 percent over the 10-year period. Although the growth came in both GO and revenue debt, GO bond debt increased 85 percent from $5.20 billion in 1998 to $9.59 billion in 2007 while revenue debt increased 155 percent from $6.60 billion in 1998 to $16.78 billion in 2007. *Figure 9* shows Texas' debt outstanding from 1998 thru 2007 by type of debt.

Figure 9
Texas' Debt Outstanding: Revenue and General Obligation, Fiscal Years 1998 to 2007

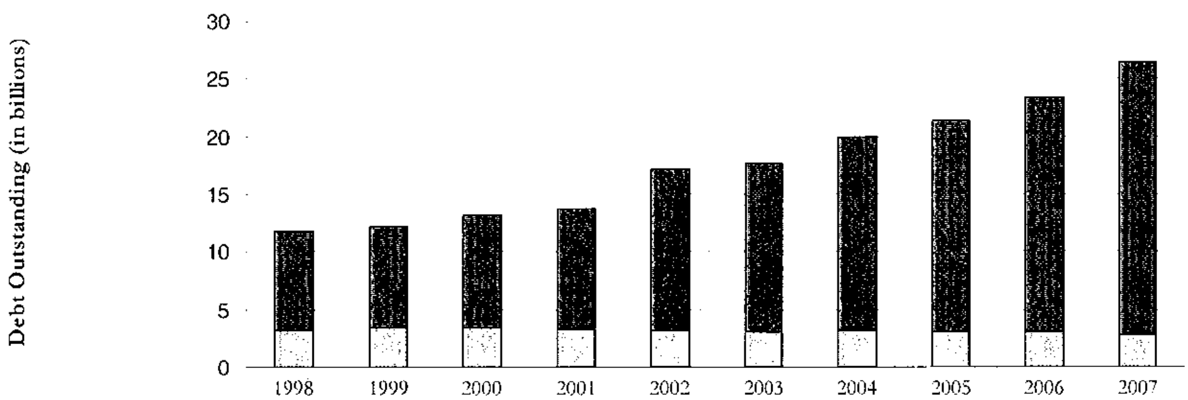


	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
REV	$6.6	$6.9	$7.6	$7.8	$11.3	$12.3	$14.1	$14.4	$15.8	$16.8
GO	$5.2	$5.3	$5.6	$5.7	$5.8	$5.8	$5.9	$7.0	$7.5	$9.6

SOURCE: Texas Bond Review Board.

The increase in total debt outstanding occurred in self-supporting debt while not self-supporting debt actually decreased during the period. As noted in *Figure 10*, at fiscal year-end 2007, self-supporting debt which is repaid with program revenues increased 176 percent from $8.55 billion in 1998 to $23.62 billion in 2007. During the same time period not self-supporting debt which is typically repaid with General Revenue, decreased 15 percent from $3.24 billion in 1998 to $2.75 billion in 2007

Figure 10
Texas' Debt Outstanding: Self-supporting and Not Self-supporting, Fiscal Years 1998 to 2007



	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Self-Supporting	8.6	8.8	9.8	10.4	13.9	14.6	16.8	18.3	20.4	23.6
Not Self-Supporting	3.2	3.4	3.4	3.3	3.2	3.1	3.2	3.1	3	2.8

SOURCE: Texas Bond Review Board.

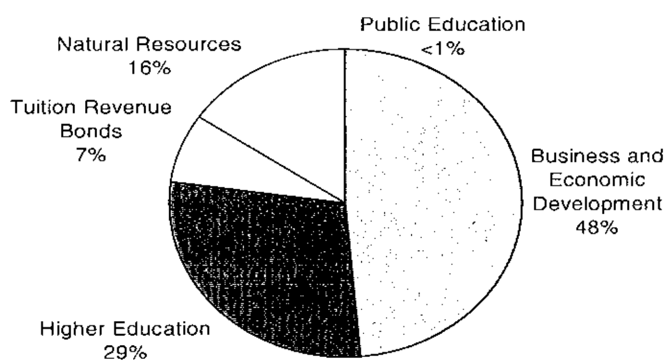
Self-Supporting Debt

The increase in self-supporting debt from fiscal years 1998 to 2007 was $15.07 billion or 176 percent. As of fiscal year-end 2007, the state had a total of $23.62 billion in self-supporting debt outstanding. Such debt which is repaid with program revenue, has increased as a percent of total debt outstanding from 73 percent in 1998 to 90 percent in 2007. Self-supporting debt includes GO bonds such as Veterans' Land and Housing Bonds and revenue bonds such as Permanent University Fund Bonds.

Of the total self-supporting debt outstanding as of fiscal year-end 2007, 69 percent was revenue debt and 31 percent was GO debt. This allocation between debt types is consistent with the state's historical outstanding debt levels. From fiscal years 1998 to 2007, revenue debt comprised from 69 percent to 80 percent of self-supporting debt, and during the same period GO debt has comprised 22 percent to 31 percent of self-supporting debt.

A variety of programs and areas use self-supporting debt as shown in *Figure 11*. Of the $23.6 billion outstanding at the end of fiscal year 2007, 48 percent was issued for business and economic development projects such as roads; 36 percent was issued for higher education (7 percent was issued for tuition revenue bonds); 16 percent was issued for natural resources and less than 1 percent was issued for public education.

Figure 11
Self-supporting Debt Outstanding, Fiscal Year 2007



SOURCE: Texas Bond Review Board.

The amount for higher education in *Figure 11* reflects $6.74 billion of university revenue bonds of which $1.70 billion were tuition revenue bonds. All college and university revenue bonds are equally secured by, and payable from a pledge of all or a portion of certain revenue funds as defined by Chapter 55, Texas Education Code, of the applicable system or institution of higher education.

Historically, the state has appropriated funds to the schools in an amount equal to all or a portion of the debt-service for tuition revenue bonds.

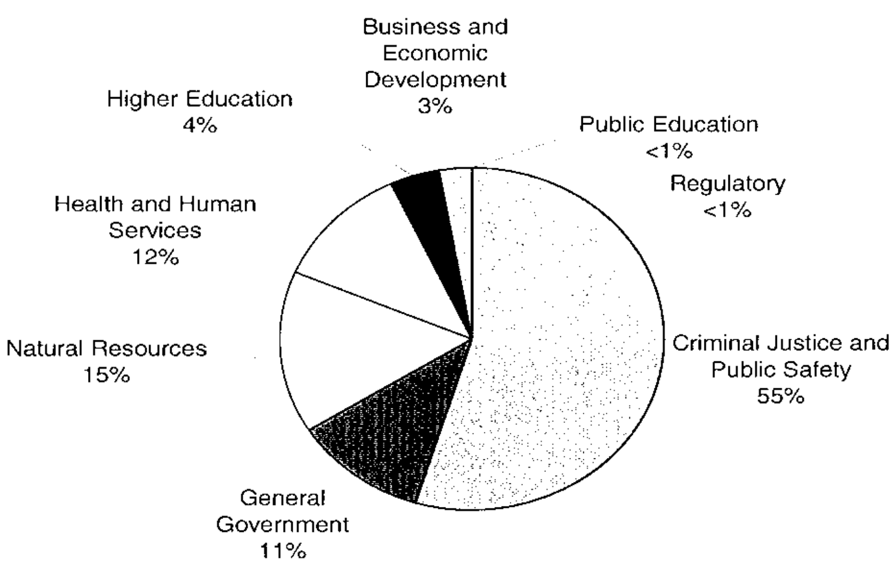
Not Self-Supporting Debt

Not self-supporting debt is typically repaid with General Revenue Funds and currently comprises 10 percent of the state's total debt outstanding. Not self-supporting debt includes both GO and revenue debt. At the end of fiscal year 2007, the state had a total of $2.75 billion in not self-supporting debt outstanding as shown in *Figure 12.* This represents a decrease over the last decade of $484.1 million or 15 percent.

Of this debt, 81 percent is GO debt and 19 percent is revenue debt. This allocation between debt types is consistent with historical outstanding debt: from 1998 to 2007, GO debt has comprised 78 percent to 81 percent of not self-supporting debt; during the same period revenue debt have comprised 19 to 22 percent of not self-supporting debt.

Most of the state's not self-supporting debt is issued by the Texas Public Finance Authority and is used to finance projects in a variety of programs and areas. Of the $2.75 billion debt outstanding at the end of fiscal year 2007, 55 percent was issued for criminal justice and public safety; 11 percent was issued for general government; 15 percent was issued for natural resources and 12 percent was issued for health and human services. The remaining was divided among the following areas: higher education, 4 percent; business and economic development, 3 percent; public education, less than 1 percent and regulatory, less than 1 percent

Figure 12
Not Self-Supporting Debt Outstanding, Fiscal Year 2007



SOURCE: Texas Bond Review Board.

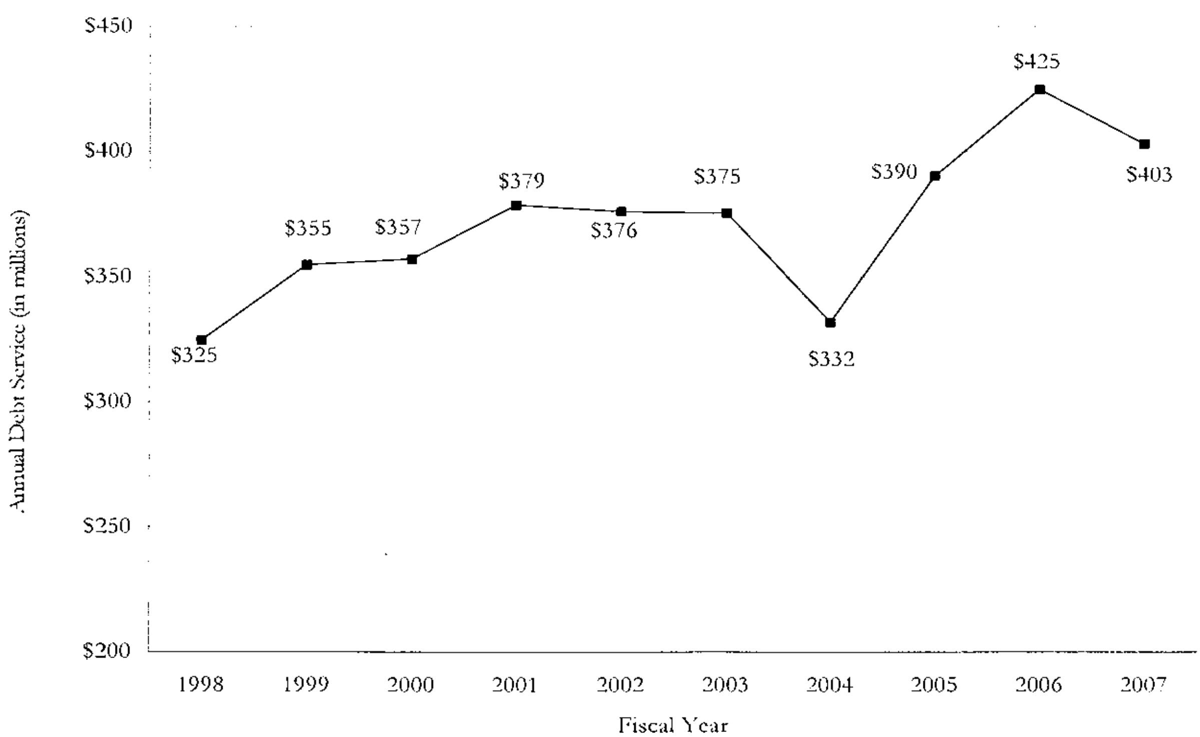
Volume of Debt Issued

The volume of debt financing for capital projects and other critical needs has increased over the last decade. The average annual issuance of new-money bonds and refunding bonds from 1998 to 2007 has been $3.07 billion. During fiscal year 2007, the state issued $4.08 billion in new-money bonds and $1.79 billion in refunding bonds for a total of $5.87 billion. This represents an increase of 72 percent from fiscal year 2006 when $3.41 billion was issued. The current estimate for issuances for fiscal year 2008 totals $9.6 billion with increases largely attributable to capital projects for certain agencies including the Texas Public Finance Authority, Texas Department of Transportation, Texas Water Development Board and revenue financings for institutions of higher education including tuition revenue bonds.

Debt-Service Commitments

The state's total annual debt-service payments for both not self-supporting and self-supporting debt have increased 84 percent over the last decade, rising from $1.14 billion in 1998 to $2.11 billion in 2007. Not self-supporting debt increased 24 percent from $324.6 million in 1998 to $403.1 million in 2007. Self-supporting debt-service has doubled, rising 108 percent from $817.4 million to $1.70 billion over the 10-year period. *Figure 13* shows the historical annual debt-service for not self-supporting debt for fiscal years 1998 thru 2007.

Figure 13
Historical Annual Debt-Service for Not Self-Supporting Debt, Fiscal Years 1998 to 2007



NOTE: In FY2003, TPFA restructured $48.425M of GO debt to later fiscal periods in response to fiscal constraints and decreased debt-service appropriations by the 78th Legislature.
SOURCE: Texas Bond Review Board.

Projections for future annual debt-service will be a major determinant for the additional not self-supporting debt burden the state can accommodate. (Debt ratios and debt guidelines are intended as decision-making tools for state policymakers and are discussed in more detail in Chapter 3.)

Rate of Debt Retirement

As part of their analysis, credit rating agencies review the length of time necessary for debt retirement to occur. They prefer to see an average principal retirement of 50 percent in 10 years. For Texas' not self-supporting debt, 71.9 percent of the outstanding principal will be retired in 10 years, indicating rapid debt retirements. However for the state's self-supporting debt, 35.1 percent of the outstanding principal will be retired in 10 years. The faster rate of retirement for the not self-supporting debt creates additional capacity in future years. The DCM utilizes the rate of debt retirement in its computations as Ratio 4. (Refer to the Chapter 3 and Appendix E for more details.)

Credit Ratings

The three major rating agencies are Moody's, Standard & Poor's and Fitch. Ratings from these agencies provide investors with a measure of an issuer's risk and financial soundness and have a direct bearing on the interest rate the issuer must pay on debt issues. Higher credit ratings result in lower financing costs.

Ratings for the state's general obligation debt are the most important because GO debt pledges the state's full faith and credit to the repayment of the debt and thus sets the benchmark rate for all the state's other debt. *Figure 14* shows the current bond ratings for Texas. Currently, Texas' GOs receive the second highest rating from Moody's and Fitch and the third highest rating from Standard & Poor's. (Each rating agency has similar rating scales detailed in Appendix C.)

Figure 14
State of Texas General Obligation Bond Ratings

Credit Agency	Credit Rating	Outlook
Fitch	AA+	Stable
Moody's	Aa1	Stable
Standard and Poor's	AA	Stable

SOURCE: Fitch Ratings; Moody's; Standard & Poor's.

Rating agencies consider four factors in determining a state's general obligation bond rating: economy, finances, debt and management. Specific items considered are shown in *Figure 15*.

Texas is generally perceived in the municipal bond market as a strong credit. As such, the state's, long-term debt usually trades at interest rates within 10 basis points of AAA-rated states. However, the credit rating agencies cite a number of reasons why the state's general obligation ratings are unlikely to be upgraded in the near future. These include rapid population growth and resulting capital needs for state-financed infrastructure, the state's heavy reliance on the sales tax for general revenue, continuing concerns about school finance issues and the state's modest reserve levels including the Rainy Day Fund.

Figure 15
Factors Affecting State General Obligation Bond Ratings

Economy	**Finances**
Population trends	Change in major general revenue sources
Wealth	Change in permanent or FTE positions
Economic diversity	Spending per capita
Economic stability	General fund balances, rainy day fund balance
Infrastructure needs	Accounting and financial reporting practices
	Tax and revenue administration
	Investment practices
Debt	**Management**
Pay-down price for net long-term debt	Coherent structure of governance
Net debt per capita	Constitutional constraints
Net debt as a percent of personal income	Initiatives and referenda
Net debt as a percent of tax valuation	Executive branch controls
Annual debt service on net debt as a percentage of general fund	Mandates to balance budget
	Fund reserve policies

SOURCE: Texas Bond Review Board.

Chapter 3 - Debt Ratios in the Debt Capacity Model

An analysis of state debt ratios helps to assess the impact of bond issues on the state's fiscal position. Credit rating agencies use ratios to evaluate a state's debt position and to help determine its credit rating. In developing a mechanism for the state to determine debt affordability or the amount of debt the state can prudently accommodate, the Debt Capacity Model (DCM) calculates five key ratios that provide an overall view of Texas' debt burden. Projections of these ratios under varying debt assumptions can provide state leadership with guidelines for decision-making for future debt authorization and debt-service appropriations.

[One of the ratios in this edition of the Debt Affordability Study has been renumbered from Ratio 5 in the first edition to Ratio 2 (not self-supporting debt-service as a percentage of budgeted general revenue) to reflect its relative importance in the debt-ratio analysis.]

Constitutional Debt Limit

Article III, Section 49-j of the Texas Constitution prohibits the legislature from authorizing additional state debt if the annual debt-service in any fiscal year on state debt payable from the General Revenue Fund exceeds 5 percent of the average of unrestricted general revenue from the preceding three fiscal years. The Texas Constitution also stipulates that state debt payable from the General Revenue Fund does not include debt that, although backed by the full faith and credit of the state, is reasonably expected to be paid from other revenue sources and is not expected to create a general revenue draw.

As of August 31, 2007, the debt limit was 1.45 percent for outstanding debt and 1.99 percent for outstanding and authorized debt. Appendix H provides further discussion of the Constitutional Debt Limit and the historical debt limit calculations from 1997 through 2007.

The 80th Legislature authorized $9.75 billion in additional general obligation (GO) debt that was approved by the voters at the November 2007 general election. Of the $9.75 billion, $9.25 billion may be not self-supporting. These include HJR 90 (Proposition 15) for $3 billion to finance cancer research; SJR 65 (Proposition 4) for $1 billion to finance capital projects for certain state agencies; SJR 64 (Proposition 12) to finance $5 billion for transportation projects and SJR 20 (Proposition 16) for $250 million to fund water projects. The impact of the newly authorized debt on the Constitutional Debt Limit is shown in *Figure 16*.

The $5 billion for transportation projects (SJR 64 - Proposition 12) has no enabling legislation and will require further legislative action before the debt is issued. Specific details such as whether or not the debt will be self-supporting will be determined by the legislature. For purposes of this study, this debt was assumed to be not self-supporting.

Figure 16
Constitutional Debt Limit Including Newly Authorized Debt

Constitutional Debt Limit	Outstanding Debt	Outstanding and Authorized Debt
As of August 31, 2007	1.45%	1.99%
With newly authorized debt (excluding $5 billion for transportation)	1.45%	3.21%
With newly authorized debt (including $5 billion for transportation)	1.45%	4.64%

Projected Debt Issuance

Based on existing and the new authorizations approved by voters in November 2007 and for which the approximate timing for issuance is known, approximately $7.06 billion in new, not self-supporting debt is expected to be issued between fiscal years 2008 to 2012. These figures include authorized but unissued debt but exclude tuition revenue debt. This debt is comprised of the following items:

- $392.6 million in GO debt for capital projects for certain state agencies (TPFA);
- $95.0 million in GO debt for Colonias roadway projects (TPFA);
- $1.00 billion in GO debt for capital projects for certain state agencies (TPFA), related to Proposition 4;
- $3.00 billion in GO debt, related to Proposition 12 for transportation projects (TTC);
- $1.50 billion in GO debt, related to Proposition 15 for cancer research (TPFA);
- $249.5 million in GO bonds for the Texas Water Development Board EDAP series;
- $449.2 million in GO/Revenue bonds for the Texas Water Development Board WIF series;
- $326.1 million in GO bonds for the Texas Water Development Board SP series; and
- $52.5 million in GO bonds for Higher Education Fund (HEF) Bonds.

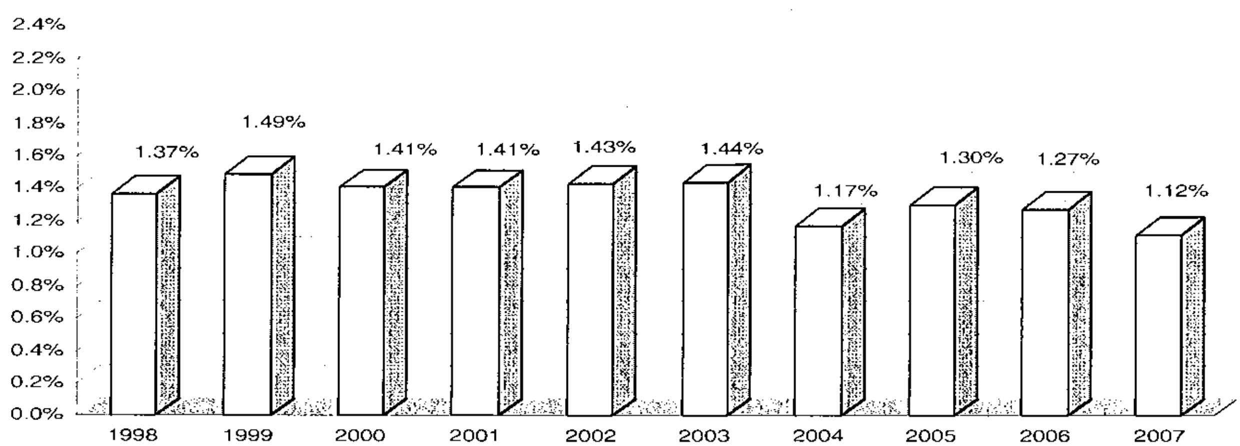
For purposes of this Debt Affordability Study, the debt issuances listed above are included in each of the ratio analyses.

Ratio 1: Debt-Service as a Percentage of Unrestricted Revenues

Ratio 1 is calculated by dividing not self-supporting debt-service by unrestricted revenues. This ratio is a critical determinant of debt capacity because both the ability to generate revenue through taxation and to appropriate funds for debt-service are within the state's control. State revenues available to pay debt-service are determined by legislatively-determined taxation on such items as sales, business franchises, fuels, crude oil production and natural gas production. The legislature then appropriates required debt-service based on the amounts needed for both existing and newly authorized debt.

By setting target and cap limits for Ratio 1, the legislature has more realistic benchmarks against which to weigh the fiscal impact of new bond authorizations. For the purposes of this report, guideline ratios include a 2 percent target ratio and a 3 percent maximum, or cap. Two percent is used as the target ratio because not self-supporting debt-service as a percent of unrestricted revenues has historically been less than 2 percent as shown in *Figure 17*. (Neither *Figure 17* nor Ratio 1 should be confused with the Constitutional Debt Limit calculation. See Appendix H for further discussion of the Constitutional Debt Limit.)

Figure 17
Historical Debt-Service as a Percentage of Unrestricted Revenues, Fiscal Years 1998 to 2007



SOURCE: Texas Bond Review Board.

At the 2 percent target guideline, approximately $228.7 million would be available for additional debt-service for fiscal year 2008 and up to $571.2 million would be available at the 3 percent cap. *Figure 18* shows available debt-service capacity by fiscal year from 2008 to 2012.

The required annual debt-service amounts on authorized, issued, unissued and projected not self-supporting debt from fiscal years 2008 to 2012 will increase from $456.2 million to $905.3 million through fiscal 2012. If unrestricted revenues and debt-service appropriations remain stable, debt-service as a percentage of unrestricted revenues will increase from 1.33 percent to 2.33 percent during the five-year period of fiscal years 2008 to 2012.

Figure 18
Ratio 1: Debt-Service as a Percentage of Unrestricted Revenues, Fiscal Years 2008 to 2012

Fiscal Year	2008	2009	2010	2011	2012
Projected Unrestricted Revenues	$ 33,852,837,548	$ 35,991,782,476	$ 37,341,090,181	$ 38,892,657,222	$ 40,388,225,065
Not Self-Supporting					
Authorized and Issued Debt	$ 419,363,778	$ 421,248,829	$ 376,518,764	$ 358,801,900	$ 326,935,638
Authorized and Unissued Debt	$ 33,399,537	$ 127,093,396	$ 288,884,266	$ 429,146,826	$ 543,690,624
Projected Debt	$ 3,388,125	$ 6,776,375	$ 16,230,000	$ 26,674,980	$ 34,683,362
Total Debt Service	$ 456,151,440	$ 555,118,600	$ 681,633,030	$ 814,623,706	$ 905,309,623
Debt Service as a % of Unrestricted Revenues					
Authorized and Issued Debt	1.22%	1.19%	1.05%	0.96%	0.84%
plus Authorized and Unissued Debt	1.32%	1.55%	1.86%	2.11%	2.24%
plus Projected	1.33%	1.57%	1.91%	2.18%	2.33%
Additional Debt Service Capacity					
Target (2.0%)	$ 228,719,107	$ 151,377,259	$ 32,938,371	$ (66,453,507)	$ (127,829,807)
Cap (3.0%)	$ 571,154,380	$ 504,625,188	$ 390,224,072	$ 307,631,593	$ 260,910,101

SOURCE: Texas Bond Review Board.

It is important to note that *Figure 18* only considers the projected debt-service ratios for not self-supporting debt for which the state's general revenue is required for repayment. *Figure 19* shows the impact on Ratio 1 of the use of general revenue for certain special debt commitments such as tuition revenue bonds (TRBs) for higher education and the Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) for public education.

Figure 19
Impact of Special Debt Commitments on Ratio 1, Fiscal Years 2008 to 2012

Scenario	2008	2009	2010	2011	2012
Debt Service					
Annual Debt Service	$ 456,151,440	$ 555,118,600	$ 681,633,030	$ 814,623,706	$ 905,309,623
with Tuition Revenue Bonds (TRBs)	$ 794,942,921	$ 901,685,293	$ 993,316,622	$ 1,124,330,051	$ 1,214,489,837
with TRBs and all special debt commitments	$ 1,136,009,114	$ 1,763,261,766	$ 1,810,310,222	$ 1,912,827,279	$ 1,974,635,141
Debt Service as a Percent of Unrestricted Revenues					
Annual Debt Service	1.33%	1.57%	1.91%	2.18%	2.33%
with Tuition Revenue Bonds (TRBs)	2.33%	2.56%	2.74%	2.98%	3.10%
with TRBs and all special debt commitments	4.49%	4.99%	5.07%	5.11%	5.08%
Additional Debt Service Capacity					
Target (2.0%)					
Actual	$ 228,719,107	$ 151,377,259	$ 32,938,371	$ (66,453,507)	$ (127,829,807)
with Tuition Revenue Bonds (TRBs)	$ (113,780,670)	$ (197,605,093)	$ (267,971,223)	$ (370,908,091)	$ (430,143,597)
with TRBs and all special debt commitments	$ (851,138,567)	$ (1,056,765,908)	$ (1,095,738,821)	$ (1,164,657,080)	$ (1,197,155,324)
Cap (3.0%)					
Actual	$ 571,154,380	$ 504,625,188	$ 390,224,072	$ 307,631,593	$ 260,910,101
with Tuition Revenue Bonds (TRBs)	$ 226,800,456	$ 154,435,008	$ 94,701,476	$ 5,802,888	$ (37,970,478)
with TRBs and all special debt commitments	$ (508,703,294)	$ (703,517,979)	$ (738,453,120)	$ (790,571,980)	$ (808,415,416)

SOURCE: Texas Bond Review Board.

Although the special debt commitments do not count against the Constitutional Debt Limit, they are paid from general revenue and therefore impact the state's financial flexibility to meet other needs. For not self-supporting debt only, Ratio 1 equals 1.33 percent in fiscal year 2008. The ratio increases to 2.33 percent with the addition of tuition revenue bonds, and with the inclusion of all special debt commitments (TRBs, EDA, and IFA), Ratio 1 for fiscal year 2008 increases to 4.49 percent. (See Appendix F for more information on the impact of special debt commitments.)

Ratio 2: Not Self-Supporting Debt-Service as a Percentage of Budgeted General Revenue

This ratio measures the percentage of the state's general revenue budgeted for debt-service. This ratio is similar to Ratio 1 but is more restrictive because the pool of available general revenue in this ratio is limited to budgeted general revenue which is less than all unrestricted general revenue available for debt-service. To the extent that the percentage of the budgeted general revenue reserved for debt-service increases, the state has less financial flexibility for responding to economic slowdowns, unexpected expenditures or changes in budget priorities for operational or capital expenditures. Historically, Texas' not self-supporting debt-service commitment has been less than 1.5 percent of expended general revenues as shown in *Figure 20*.

Texas expended from 1.31 percent in fiscal year 2000 to 1.14 percent in fiscal 2007 of budgeted general revenue for not self-supporting debt-service. Based on the amounts in the 2008-09 General Appropriations Bill, the current biennium projections are 1.14 percent for fiscal year 2008 and 1.39 percent for fiscal year 2009 including debt-service for authorized and issued, authorized and unissued as well as projected debt (*Figure 20*).

Figure 20
Ratio 2: Debt-Service as a Percentage of Budgeted General Revenue, Fiscal Years 2000 to 2009

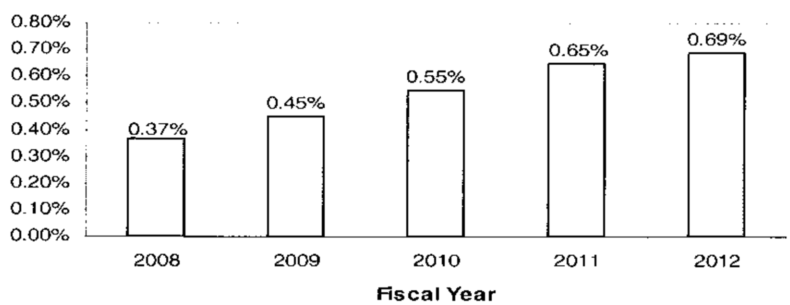
SOURCE: Texas Bond Review Board.

Ratio 3: Not Self-Supporting Debt to Personal Income

Ratio 3 is not self-supported debt divided by total personal income and is a strong indicator of a governmental borrower's ability to repay debt obligations by transforming personal income into governmental revenues through taxation. This ratio plays an important role in determining the state's credit ratings.

Figure 21 shows that Texas' ratio projections range from 0.37 percent in 2008 to 0.69 percent for fiscal year 2012. Standard and Poor's considers up to 3 percent to be a low debt burden for this ratio.

Figure 21
Ratio 3: Not Self-Supporting Debt to Personal Income, Fiscal Years 2008 to 2012



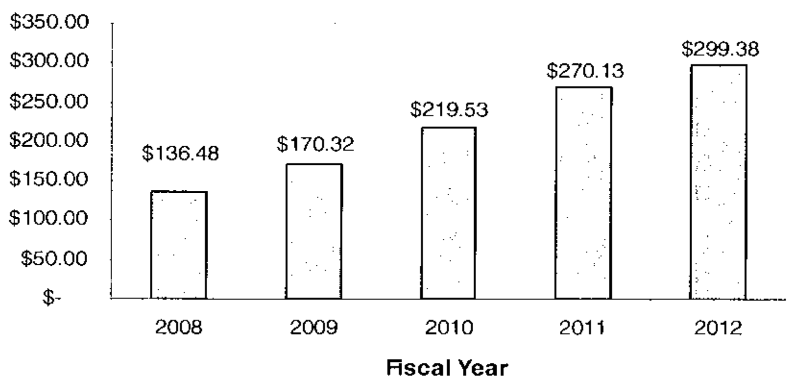
SOURCE: Texas Bond Review Board.

Ratio 4: Not Self-Supporting Debt per Capita

Ratio 4 is the amount of not self-supporting debt divided by the state's population and measures the dollar amount of debt per person. Like Ratio 3, Ratio 4 plays an important role in determining the state's credit rating

The not self-supporting debt per capita is $136.48 in fiscal 2008 and is projected to increase to $170.32 and $219.53 in fiscal 2009 and 2010, respectively (*Figure 22*). Standard & Poor's considers less than $1,000 of state debt per capita to be low. Although tax-supported debt per capita and as a percent of personal income at the state level is low, it is important to note that Texas' local debt burden is relatively higher than other states. Among the ten most populous states, Texas ranks second in population, ninth in state debt per capita but third in local debt per capita with an overall rank of sixth for total (state and local) debt per capita. In Texas, 84 percent of total debt held is at the local level.

Figure 22
Ratio 4: Not Self-Supporting Debt per Capita, Fiscal Years 2008 to 2012



SOURCE: Texas Bond Review Board.

Ratio 5: Rate of Debt Retirement

The rate at which long-term debt is repaid measures the extent to which new debt capacity is created for future debt issuance. As stated previously, credit rating agencies examine the length of time it takes for debt to be retired with the expectation that on average, the principal amount of debt with a 20-year maturity is 25 percent retired in five years and 50 percent retired in 10 years.

The focus of this Debt Affordability Study is Texas' not self-supporting debt. For fiscal years 2007 to 2016, this debt is retired at a rate of 71.9 percent, far exceeding the rating agencies' benchmark of 50 percent. This rapid rate of debt retirement is primarily due to the fact that the Texas Public Finance Authority (TPFA), the agency that issues most of the state's not self-supporting debt structures general revenue supported debt with level principal payments rather than level debt-service. When bonds are structured with level principal payments, the principal payments are the same throughout the amortization period. Although annual debt-service will be higher in the earlier years, it will steadily decline as the bonds are paid off.

In comparison, bonds can be structured with level debt-service payments each fiscal period much like a home mortgage or car loan. Since the payments are the same in each fiscal period, level debt-service can be easier for budgeting purposes, and level debt-service is frequently appropriate for revenue-based financings where project revenues support the debt-service such as low-income housing or water utilities. However, level debt-service results in a slower repayment of principal in the early years of the debt and thus more interest is paid over the life of the debt than with the level principal amortization structure.

Approximately 35.1 percent of the principal amount of Texas' self-supporting debt is retired in 10 years, less than the rating agencies' standard of 50 percent. The slower rate of retirement for self-supporting debt is due in part to the use of level debt-service or other forms of delayed principal repayment as well as the issuance of debt with maturities of 30 years or more to match the useful life of the projects financed such as housing and water development programs.

Chapter 4 - Comparison to Other States

The use of debt affordability studies and debt capacity models is becoming more common, particularly by states with a "highest" or "high" credit rating from rating agencies. Of the nine states that receive a Aaa rating from Moody's, five of them – Georgia, Maryland, North Carolina, South Carolina, and Virginia – use a debt affordability tool. In addition, California, Florida, Kentucky, Minnesota, New York, Ohio, Oregon, Washington and West Virginia use a debt affordability tool. *Figure 23* provides a comparison of highly-rated states and those that use debt affordability tools.

Figure 23
Comparison of Highly-Rated States and Debt Affordability Usage

State	Debt Affordability Study?	Moody's	Standard & Poor's	Fitch
Delaware	No	Aaa	AAA	AAA
Georgia	Yes	Aaa	AAA	AAA
Maryland	Yes	Aaa	AAA	AAA
Missouri	No	Aaa	AAA	AAA
North Carolina	Yes	Aaa	AAA	AAA
Utah	No	Aaa	AAA	AAA
Virginia	Yes	Aaa	AAA	AAA
Minnesota	Yes	Aa1	AAA	AAA
South Carolina	Yes	Aaa	AAA	AA+
Florida	Yes	Aa1	AAA	AA+
Vermont	No	Aaa	AA+	AA+
Nevada	No	Aa1	AA+	AA+
New Mexico	No	Aa1	Not Rated	AA+
Ohio	Yes	Aa1	AA+	AA+
Tennessee	No	Aa1	AA+	AA+
Texas	Yes	Aa1	AA	AA+

SOURCE: Moody's, Standard & Poor's and Fitch Ratings.

Moody's annual State Debt Medians report provides a helpful framework to compare Texas' debt-burden with other states. This report tracks four major debt measures: net tax-supported debt, gross tax-supported debt, net tax-supported debt per capita and net tax-supported debt as a percentage of personal income. The measure of gross tax-supported debt is intended to capture the extent to which a state has indirectly leveraged it resources, providing a more complete view of debt while net debt is only that debt issued for not self-supporting programs. Moody's cites these debt-burden measures as the most commonly used measurements in determining state bond ratings. (The numbers listed throughout this section for Texas are slightly different from the calculations in the DCM due to timing differences for data available to Moody's at the time its report was created.)

As shown in *Figure 24*, compared to peer states based on population, Texas ranks below the median on all four measures of debt-burden. For net tax-supported debt, Texas ranks seventh with $9.8 billion, compared to the group median of $10.90 billion. For gross tax-supported debt, Texas ranks seventh with $13.10 billion, compared to the group median of $18.00 billion. For net tax-supported debt per capita and net tax-supported debt as a percentage of personal income, Texas is lower than both its peer group and national medians. For net tax-supported debt per capita, Texas ranks tenth with $415, compared to the group median of $945. For net tax-supported debt as a percentage of 2005 personal income, Texas ranks tenth with 1.3 percent, compared to the group median of 3.0 percent.

Figure 24
State Debt: Texas Compared to Ten Most Populous States, 2007

State	Population	Moody's Credit Rating	Net Tax-Supported Debt (billions)		Gross Tax-Supported Debt (billions)		Net Tax-Supported Debt per Capita		Net Tax-Supported Debt as a % of 2005 personal income	
California	36,457,549	A1	59.2	1	66.7	1	$1,623	1	4.4	3
Texas	**23,507,783**	**Aa1**	**9.8**	**7**	**13.1**	**7**	**415**	**10**	**1.3**	**10**
New York	19,306,183	Aa3	52.0	2	52.0	2	2,694	6	6.7	1
Florida	18,089,888	Aa1	18.5	4	22.6	4	1020	2	3.1	4
Illinois	12,831,970	Aa3	25.4	3	25.7	3	1,976	4	5.5	2
Pennsylvania	12,440,621	Aa2	10.6	6	14.1	6	852	9	2.4	7
Ohio	11,478,006	Aa1	11.2	5	11.3	8	974	8	3.0	5
Michigan	10,095,643	Aa2	7.5	9	21.9	5	747	5	2.2	9
Georgia	9,363,941	Aaa	8.6	8	8.6	9	916	3	3.0	6
North Carolina	8,856,505	Aaa	6.4	10	6.4	10	728	7	2.4	8
Ten Most Populous Mean			**$20.92**		**$24.24**		**$1,195**		**3.4%**	
Ten Most Populous Median			**$10.90**		**$18.00**		**$945**		**3.0%**	
					National Mean		**$1,101**		**3.2%**	
					National Median		**$787**		**2.4%**	

SOURCE: Texas Bond Review Board; Moody's Investors Service; U.S. Census Bureau.

For comparison purposes, *Figure 25* provides selected tax-supported debt measures for all fifty states. Texas' net tax-supported debt as a percent of 2005 personal income is 1.3 percent, forty-first among the states and below the national median and mean of 2.4 percent and 3.2 percent, respectively. With net tax-supported debt per capita at $415, Texas ranked forty-first and below the national median of $1,101 and mean of $787.

As of fiscal year 2006 (the latest year for which data are available), Texas local governments had $127.42 billion in debt outstanding which represents a 34.2 percent (or $32.5 billion) increase since fiscal year 2002. In recent years, the majority of local debt issued has been used for school facilities (37.4 percent), water-related infrastructure (19.8 percent) and general purpose (18.6 percent).

Figure 25
Selected Debt Measures by State

State	Moody's Rating	Net Tax-Supported Debt as a % of 2005 Personal Income	Rank	Net Tax-Supported Debt Per Capita	Rank
Hawaii	Aa2	10.6%	1	$3,630	3
Massachusetts	Aa2	9.4%	2	4,153	1
Connecticut	Aa3	7.8%	3	3,713	2
New Jersey	Aa3	7.6%	4	3,317	4
New York	Aa3	6.7%	5	2,694	5
Illinois	Aa3	5.5%	6	1,976	7
Delaware	Aaa	5.5%	7	1,998	6
New Mexico	Aa1	5.3%	8	1,435	12
Washington	Aa1	5.1%	9	1,765	8
Louisiana	A2	4.9%	10	1,294	14
Mississippi	Aa3*	4.9%	11	1,247	15
Oregon	Aa3	4.6%	12	1,464	11
Rhode Island	Aa3	4.6%	13	1,687	9
California	A1	4.4%	14	1,623	10
Kentucky	Aa2*	4.3%	15	1,204	17
Wisconsin	Aa3	4.2%	16	1,405	13
West Virginia	Aa3	3.9%	17	1,071	19
Kansas	Aa1*	3.7%	18	1,218	16
Florida	Aa1	3.1%	19	1,020	20
Georgia	Aaa	3.0%	20	916	23
Ohio	Aa1	3.0%	21	974	21
Maryland	Aaa	2.8%	22	1,171	18
Alaska	Aa2	2.7%	23	939	22
Pennsylvania	Aa2	2.4%	24	852	24
North Carolina	Aaa	2.4%	25	728	27
Utah	Aaa	2.3%	26	621	32
South Carolina	Aaa	2.3%	27	630	31
Michigan	Aa3	2.2%	28	747	26
Minnesota	Aa1	2.2%	29	827	25
Vermont	Aaa	2.1%	30	706	28
Indiana	Aa1*	2.1%	31	657	30
Alabama	Aa2	2.0%	32	590	37
Arizona	Aa3*	2.0%	33	594	35
Missouri	Aaa	1.9%	34	613	33
Maine	Aa3	1.9%	35	603	34
Virginia	Aaa	1.8%	36	692	29
Nevada	Aa1	1.7%	37	591	36
Oklahoma	Aa3	1.5%	38	450	39
Montana	Aa2	1.5%	39	439	40
Arkansas	Aa2	1.4%	40	370	42
TEXAS	**Aa1**	**1.3%**	**41**	**415**	**41**
New Hampshire	Aa2	1.3%	42	492	38
North Dakota	Aa2*	1.0%	43	322	44
Colorado	NGO**	0.9%	44	343	43
South Dakota	NGO**	0.8%	45	261	45
Tennessee	Aa1	0.7%	46	213	46
Idaho	Aa2*	0.6%	47	157	47
Iowa	Aa1*	0.3%	48	104	48
Wyoming	NGO**	0.3%	49	97	49
Nebraska	NGO**	0.1%	50	24	50
Mean		**3.2%**		**$1,101**	
Median		**2.4%**		**$787**	

* Issuer Rating (No G.O. Debt)

** No general obligation debt

Source: Moody's Investors Service, *2007 State Debt Medians.*

It is important to note that states with higher state debt levels may have lower local debt levels and vice-versa. Texas' local debt accounts for 84 percent of the state's total debt. Among the ten most populous states, Texas ranks second in population, ninth in state debt per capita but third in local debt per capita with an overall rank of sixth for total debt per capita.

The most recent data from the U.S. Census Bureau (2004) on state and local debt outstanding shows that Texas ranks 3rd among the then ten most populous state in terms of Local Debt Per Capita, 9th in State Debt Per Capita and 6th in total State and Local debt Per Capita (*Figure 26*). In fiscal 2004, 84.3 percent of Texas' total state and local debt burden was at the local level. Local debt includes debt issued by cities, counties, school, hospital and special districts.

Figure 26
Total State and Local Debt Outstanding

	Total State and Local Debt				State Debt				Local Debt			
State	Population (thousands)	Per Capita Rank	Amount (millions)	Per Capita Amount	Per Capita Rank	Amount (millions)	% of Total Debt	Per Capita Amount	Per Capita Rank	Amount (millions)	% of Total Debt	Per Capita Amount
New York	19,281	1	$219,358	$11,377	1	$95,710	43.6%	$4,964	1	$123,648	56.4%	$6,413
Illinois	12,712	2	102,304	8,048	3	48,726	47.6%	3,833	6	53,578	52.4%	4,215
Pennsylvania	12,394	3	96,374	7,776	5	25,996	27.0%	2,097	2	70,378	73.0%	5,678
California	35,842	4	269,935	7,531	4	104,008	38.5%	2,902	5	165,927	61.5%	4,629
New Jersey	8,685	5	64,272	7,400	2	35,770	55.7%	4,119	8	28,502	44.3%	3,282
TEXAS	**22,472**	**6**	146,009	**6,497**	**9**	**22,926**	**15.7%**	**1,020**	**3**	**123,084**	**84.3%**	**5,477**
Florida	17,385	7	108,764	6,256	8	25,740	23.7%	1,481	4	83,024	76.3%	4,776
Michigan	10,104	8	57,609	5,702	6	20,960	36.4%	2,074	7	36,649	63.6%	3,627
Ohio	11,450	9	57,898	5,057	7	22,183	38.3%	1,937	9	35,715	61.7%	3,119
Georgia	8,918	10	34,848	3,908	10	8,664	24.9%	972	10	26,184	75.1%	2,936
MEAN			**$115,737**	**$6,955**		**$41,068**	**35.1%**	**$2,540**		**$74,669**	**64.9%**	**$4,415**

Note: Detail may not add to total due to rounding.
Source: U.S. Census Bureau, *State and Local Government Finances by Level of Government and by State: 2003-2004*, the most recent data available.

Chapter 5 - Conclusion

Senate Bill 1332 has tasked the Texas Bond Review Board to annually complete a Debt Affordability Study (DAS). The DAS and its Debt Capacity Model will serve as useful tools to Texas policymakers, providing a comprehensive approach to evaluating current and proposed debt levels.

For analysis of debt-service as a percentage of unrestricted revenues (Ratio 1), the DAS utilizes a target of 2 percent and a cap of 3 percent. Although the Legislature has not established specific target and cap guidelines for this ratio, those targets are based on historically budgeted percentages.

The 80th Legislature authorized $9.75 billion in additional general obligation debt that was approved by the voters at the November 2007 general election. Of the $9.75 billion, $9.25 billion may be considered not self-supporting. Based on existing and the new authorizations, approximately $7.06 billion in new, not self-supporting debt is expected to be issued between fiscal years 2008 to 2012. *Figure 27* illustrates the impact on the state's debt-service capacity for both current and projected debt as measured by Ratios 1-5.

Figure 27
Summary of Ratios 1 – 5

Fiscal Year	2008	2009	2010	2011	2012
RATIO 1: Debt-service as a Percent of Unrestricted Revenues					
Authorized and Issued	1.22%	1.19%	1.05%	0.96%	0.84%
plus Authorized and Unissued	1.32%	1.55%	1.86%	2.11%	2.24%
plus Projected	1.33%	1.57%	1.91%	2.18%	2.33%
Additional Debt-service Capacity					
Target (2%)	$ 228,719,107	$ 151,377,259	$ 32,938,371	$ (66,453,507)	$ (127,829,807)
Cap (3%)	$ 571,154,380	$ 504,625,188	$ 390,224,072	$ 307,631,593	$ 260,910,101
RATIO 2: Not Self-supporting Debt-service as a Percentage of Budgeted General Revenue					
	1.14%	1.39%			
RATIO 3: Not Self-supporting Debt to Personal Income					
	0.37%	0.45%	0.55%	0.65%	0.69%
RATIO 4: Not Self-supporting Debt Per Capita					
	$ 136.48	$ 170.32	$ 219.53	$ 270.13	$ 299.38
RATIO 5: Rate of Retirement (Fiscal Years 2007 - 2016)					
Self-supporting Debt:	35.11%				
Not Self-supporting Debt:	71.87%				

SOURCE: Texas Bond Review Board.

Appendix A - Methodology and Revenue Forecasting

The core of the Debt Affordability Study is the Debt Capacity Model (DCM) which uses revenue and debt information to calculate the five debt ratios described in the study. This financial model provides a platform for economic sensitivity analyses by considering the state's financial condition, economic and demographic trends and outstanding debt levels. Local debt was omitted from the analysis in the DCM.

Economic Assumptions

The DCM contains three separate scenarios of revenue available for debt-service to show the affect of economic factors on additional debt capacity. The model uses information and projections for fiscal years 2008 to 2017 for revenues, personal income and population changes. Scenario A (base scenario) uses a 10-year average for revenues available for debt-service (i.e., 4.00 percent growth), a 10-year annual average for personal income (i.e., 5.99 percent growth) and a 10-year annual average (i.e., 1.78 percent growth) for population change. All the figures listed in this report are based on Scenario A.

As described in *Figure A1*, Scenario B (positive scenario) reflects a 0.5 percent increase in available revenues over the base scenario. Total personal income and population change are based on the highest annual growth in a 10-year period. Scenario C (negative scenario) assumes a 0.5 percent decrease relative to the base scenario in revenues available for debt-service. Total personal income and population change are based on the lowest rates in a 10-year period.

Figure A1
Percentage Change in Economic Factors in the Debt Capacity Model

Economic Factor	Base Scenario (A)	Positive Scenario (B)	Negative Scenario (C)
Revenues Available for Debt-service	4	4.5	3.5
Total Personal Income	5.99	6.71	5.52
Population Change	1.78	1.96	1.67

SOURCE: Texas Bond Review Board.

Using the DCM for economic sensitivity analyses, none of the three scenarios had a material impact on incremental debt-service capacity. For example, with a 2 percent target, Ratio 1 (debt-service as a percentage of unrestricted revenues) yielded only slight differences among the three scenarios in the amount of incremental debt-service capacity available for fiscal year 2009.

Revenues Available for Debt-Service

A revenue forecast was required to determine the ratios calculated in the DCM. Table 11 from the *Texas Comptroller of Public Accounts 2007 Cash Report* was recreated and matched at the revenue object code level. The Comptroller's November 2007 revenue estimate was used for fiscal 2008 to 2009. In general, estimates for fiscal year 2010 and beyond were based on the estimated average annual growth rate for each revenue object from 2005 through 2009.

Some exceptions to this method must be noted. For example, cigarette tax revenues were adjusted to reflect their irregular collections cycle. Natural gas and oil production tax revenues were estimated using the Comptroller's forecast for natural gas and oil prices and production. The revenue forecast does not include tax revenue deposited to the Property Tax Relief Fund because those revenues are statutorily dedicated. The estimate assumes that the repeal of the federal estate tax will not be allowed to expire; as a result, no state inheritance tax revenue is included after 2009.

Any number of various scenarios can be created by simply varying the forecast assumptions in the DCM. The model can be rerun at any time when the Comptroller's office issues new revenue updates.

Appendix B - Texas' Debt Overview

Currently, eighteen state agencies and institutions of higher education in Texas have authority to issue debt (*Figure B1*). As the state's debt oversight agency, the Texas Bond Review Board approves all state debt issues and lease purchases that have an initial principal amount greater than $250,000 or a term longer than five years unless a state bond issue is specifically exempt. The Texas Public Finance Authority (TPFA) is authorized to issue debt on behalf of eighteen state agencies and three universities as well as for specific projects as authorized by the legislature and thus issues a significant portion of the state's not self-supporting debt payable from general revenue. In addition, the TPFA also administers the state's Master Lease Purchase Program (MLPP).

Figure B1
State Debt Issuers

Texas Public Finance Authority	Texas Tech University System
Texas Department of Transportation	The University of North Texas System
Texas Water Development Board	Texas State Affordable Housing Corporation
Texas Veterans Land Board (General Land Office)	Texas Higher Education Coordinating Board
The Texas A&M University System	The University of Texas System
Texas Department of Housing and Community Affairs	University of Houston System
Office of Economic Development and Tourism	Texas Woman's University
Texas State Technical College System	Texas Agricultural Finance Authority
Texas State University System	TPFA Charter School Finance Corporation

SOURCE: Texas Bond Review Board

Types of Debt Used by the State of Texas

Municipal bonds are interest-bearing certificates issued by a governmental entity as evidence that a debt obligation exists, and they specify the bond's maturity date, interest rate, repayment (amortization) schedule and the revenue source pledged to make debt-service payments. Interest earnings on municipal bonds are typically exempt from federal income taxes, and investors will therefore accept lower interest rates than the rates for taxable bonds such as corporate bonds and U.S. Treasury bonds. Federal tax law limits the issuance, investment and use of proceeds of tax-exempt bonds.

General obligation (GO) bonds are legally secured by a constitutional pledge of the first monies coming into the state treasury that are not constitutionally dedicated for another purpose. GO bonds must initially be approved by a two-thirds vote of both houses of the legislature and by a majority of the voters. After this approval bonds may be issued in installments as determined by the issuing agency or institution. GO bonds are issued for general government functions such as prisons, MHMR facilities and parks.

Revenue bonds are legally secured by a specific revenue source(s) and do not require voter approval. Revenue bonds are typically issued for enterprise activities such as utilities, airports and toll roads. Lease Revenue or Annual Appropriation Bonds are also revenue bonds.

Commercial Paper (CP) can be secured by the state's general obligation pledge or by a specified revenue source. Maturity for CP ranges from 1 to 270 days. As the CP matures, it can be either paid off or reissued ("rolled over") at a new interest rate. The interest rate on CP is usually considerably lower than long-term interest rates.

Tax and Revenue Anticipation Notes (TRANs) are issued by the Texas Comptroller of Public Accounts, Treasury Operations to address cash-flow shortages caused by the mismatch in the timing of revenues and expenditures in the General Revenue Fund. TRANs must be repaid by the end of the biennium in which they are used, but are usually repaid by the end of each fiscal year. TRANs are repaid with tax receipts and other revenues in the General Revenue Fund and must be approved by the Cash Management Committee that is comprised of the Governor, Lieutenant Governor, Comptroller of Public Accounts and Speaker of the House as a non-voting member.

Master Lease Purchase Program (MLPP) is a lease revenue-financing program established in 1992 primarily to finance capital equipment for state agencies as authorized by the Texas Government Code, §1232.103. The MLPP may also be used to finance other types of projects that have been specifically authorized by the legislature and approved by the TPFA Board. The financing vehicle for the MLPP program is a tax-exempt, revenue commercial paper program.

General Revenue Affect – Self-Supporting vs. Not Self-Supporting Debt

Self-supporting debt is repaid with revenues other than general revenue and can be issued as either general obligation debt or revenue debt. Examples of self-supporting debt include GO bonds issued by the Texas Water Development Board that are repaid from loans made to communities for water and wastewater projects.

Not self-supporting debt is intended to be repaid with state general revenue and can be issued as either general obligation debt or revenue debt. Examples of not self-supporting general obligation debt include: HEF Bonds, Texas Water Development Board Economically Distressed Areas Program, State Participation and Water Conservation bonds and certain TPFA bonds. Not self-supporting revenue bonds include bonds issued for TPFA's Master Lease Purchase Program, the Military Facilities Commission, Parks and Wildlife Improvement and certain TPFA bonds.

Refunding bonds are issued to refinance existing bonds. They may be issued to obtain lower interest rates, change bond covenants or change repayment schedules (i.e., "restructure" the bonds). Federal tax law allows only one advance refunding for tax-exempt bonds issued after 1986.

Debt Issued by Universities

Under Chapter 55 of the Texas Education Code, universities may issue revenue bonds or notes to finance permanent improvements for their institution(s). Most universities have established system-wide revenue financing ("Revenue Financing System") programs that pledge all system-wide revenue except legislative appropriations to the repayment of the revenue bonds and notes.

Tuition revenue bonds (TRBs) – In addition to the general authority in Chapter 55 of the Texas Education Code, the legislature periodically authorizes TRBs for specific institutions for specific projects or purposes. TRBs are revenue bonds issued by the institution, equally secured by and payable from the same pledge for the institution's other revenue bonds. However, historically the legislature has appropriated general revenue to the institution to offset all or a portion of the debt-service on the bonds. For the purposes of the DAS, TRB are considered self-supporting debt.

PUF/HEF – The University of Texas and Texas A&M University Systems may issue obligations backed by income of the Permanent University Fund (PUF) in accordance with the Texas

Constitution, Art. VII, Section 18. The state's other institutions may issue Higher Education Fund (HEF) bonds in accordance with the Texas Constitution, Art. VII, Section 17.

Constitutional Limit on Debt Payable from General Revenue Funds

Article III, Section 49-j of the Texas Constitution prohibits the legislature from authorizing additional state debt if the annual debt-service in any fiscal year on state debt payable from the General Revenue Fund exceeds 5 percent of the average of unrestricted general revenue from the preceding three fiscal years. The Constitution also stipulates that state debt payable from the General Revenue Fund does not include debt that, although backed by the full faith and credit of the state, is reasonably expected to be paid from other revenue sources and is not expected to create a general revenue draw.

As of August 31, 2007, the debt-limit ratio for outstanding debt was 1.45 percent for authorized and issued bonds. With the inclusion of authorized but unissued debt, the debt-limit ratio was 1.99 percent as defined by the Constitutional Debt Limit.

Bond Issuance Process

The state's bond issuance process is initiated with the legislature's authorization of projects or programs and the authorization to issue bonds through statute or the General Appropriations Act. General obligation bonds must be approved by a two-thirds vote of both houses of the legislature and by a majority of the voters. The state issuer then develops the capital project and obtains necessary approval(s) from its board including preliminary authorization of the project, the financing mechanism (CP, lease-purchase or long-term debt), par amount, method of sale, finance team and any parameters deemed necessary by the issuer's governing board.

The financing team typically includes:

1) bond counsel to analyze legal and tax issues and prepare legal and tax opinions;
2) financial advisor to assist with structuring the bond issue, selecting the method of sale, obtaining bond rating and/or credit enhancement and negotiating the sale with the underwriter or conducting the bid opening;
3) underwriter to act as a dealer that purchases the new issue of municipal securities for resale to investors; and
4) disclosure counsel to advise on continuing disclosure requirements.

Once the issuer and the finance team have structured the transaction and prepared the legal documents, the issuer must obtain Bond Review Board approval unless the transaction is an exempt issue. Upon evaluation of issuance and finance costs, the agency approves the maximum par amount, cost of issuance and underwriter's spread per $1,000 for the bond issuance.

The issuer will then proceed with the bond sale as a competitive, negotiated or private placement sale. After the sale of bonds, the Office of the Attorney General issues an opinion on the legal issuance of the bonds and approves the bond issue before delivery. The Texas Comptroller of Public Accounts then registers the bonds and records the sale.

Appendix C - Credit Ratings

The three major credit rating agencies for state debt are Moody's, Standard & Poor's and Fitch. Their ratings have a significant impact on interest rates for a given issue and thus the cost of the financing. *Figure C1* provides a summary of the investment grade ratings scale by each agency.

Figure C1
Investment Grade Bond Ratings by Rating Agency

Rating	Fitch	Moody's	Standard & Poor's
Highest	AAA	Aaa	AAA
High	AA+ AA AA-	Aa1 Aa2 Aa3	AA+ AA AA-
Medium	A+ A A-	A1 A2 A3	A+ A A-
Lower medium	BBB+ BBB BBB-	Baa1 Baa2 Baa3	BBB+ BBB BBB-

SOURCE: Fitch Ratings; Moody's; Standard and Poor's.

Appendix D – Texas' Debt Outstanding

Figure D1
Total Debt Outstanding, Fiscal Year 2007

Bond and Debt Type	8/31/2007
General Obligation Bonds	
Veterans' Land and Housing Bonds	$1,845,912
Water Development Bonds	$847,905
Economic Development Bank Bonds	$45,000
Park Development Bonds	$1,805
College Student Loan Bonds	$661,367
Farm and Ranch Security Bonds	$0
Texas Agricultural Finance Authority	$25,000
Texas Mobility Fund Bonds	$3,886,750
Texas Public Finance Authority - TMVRLF	$49,595
Total - Self-supporting	$7,363,334
Higher Education Constitutional Bonds	$58,310
Texas Public Finance Authority Bonds	$1,810,644
Park Development Bonds	$16,544
Agriculture Water Conservation Bonds	$5,040
Water Development Bonds - EDAP	$180,185
Water Development Bonds - State Participation	$160,280
Total - Not self-Supporting	$2,231,003
Total - General Obligation Bonds	$9,594,337
Non-General Obligation Bonds	
PUF - The Texas A&M University System	$409,344
PUF - The University of Texas System	$1,062,625
College and University Revenue Bonds	$6,305,867
Texas Dept. of Housing and Community Affairs Bonds	$2,606,999
Texas State Affordable Housing Corporation	$621,887
Texas Small Business I.D.C. Bonds	$99,335
Economic Development Program	$8,235
Texas Water Resources Finance Authority Bonds	$15,830
College Student Loan Bonds	$0
Texas Department of Transportation Bonds - CTTS	$2,075,063
Texas Workers' Compensation Fund Bonds	$0
Veterans' Financial Assistance Bonds	$24,444
TPFA Charter School Finance Corporation*	$10,380
Texas Workforce Commission Unemp Comp Bonds	$396,060
State Highway Fund	$1,689,740
Water Development Board Bonds - State Revolving Fund	$932,448
Total - Self-supporting	$16,258,257
Texas Public Finance Authority Bonds	$337,015
TPFA Master Lease Purchase Program	$110,800
Texas Military Facilities Commission Bonds	$20,150
Parks and Wildlife Improvement Bonds	$52,330
Total - Not Self-supporting	$520,295
Total - Non-General Obligation Bonds	$16,778,552
Total - Debt Outstanding	**$26,372,889**

* Includes only debt authorized by the Bond Review Board. Total outstanding debt for TPFA CSFC as of 08.31.07 was $120.53 million.

SOURCE: Adapted from the 2007 Annual Report of the Texas Bond Review Board.

Appendix E - Debt Capacity Model (DCM) Ratios

The information presented in Appendix E focuses on existing and projected debt issuances for not self-supporting debt. Existing debt consists of both authorized and issued as well as authorized and unissued debt with a line-item for each in the Ratio analyses.

Figure E1 illustrates Ratio 1 (Debt-Service as a Percentage of Unrestricted Revenues) assuming current and projected debt levels for fiscal years 2008 to 2012. As discussed in Chapter 4, if no new debt is added to the existing or projected issuances, debt-service as a percentage of unrestricted revenues will be less than 3 percent - ranging from 1.33 percent in fiscal years 2008 to a high of 2.33 percent in 2012.

The report uses 2 percent as the target and 3 percent as the cap for Ratio 1. At these levels, state debt will remain well below the Constitutional Debt Limit of 5 percent. If these guidelines are maintained and no new debt is authorized, the 2 percent target for Ratio 1 would be exceeded in 2011. Under the proposed 3 percent cap, an additional debt-service capacity of $571.2 million to $260.9 million would be available during these years.

Figure E1

Ratio 1: Debt-Service as a Percentage of Unrestricted Revenues, Fiscal Years 2008 to 2012

Fiscal Year	2008	2009	2010	2011	2012
Projected Unrestricted Revenues	$ 33,852,837,548	$ 35,991,782,476	$ 37,341,090,181	$ 38,892,657,222	$ 40,388,225,065
Not Self-supporting					
Authorized and Issued Debt	$ 419,363,778	$ 421,248,829	$ 376,518,764	$ 358,801,900	$ 326,935,638
Authorized and Unissued Debt	$ 33,399,537	$ 127,093,396	$ 288,884,266	$ 429,146,826	$ 543,690,624
Projected Debt	$ 3,388,125	$ 6,776,375	$ 16,230,000	$ 26,674,980	$ 34,683,362
Total Debt-service	$ 456,151,440	$ 555,118,600	$ 681,633,030	$ 814,623,706	$ 905,309,623
Debt Service as a % of Unrestricted Revenues					
Authorized and Issued Debt	1.22%	1.19%	1.05%	0.96%	0.84%
plus Authorized and Unissued Debt	1.32%	1.55%	1.86%	2.11%	2.24%
plus Projected	1.33%	1.57%	1.91%	2.18%	2.33%
Additional Debt-service Capacity					
Target (2.0%)	$ 228,719,107	$ 151,377,259	$ 32,938,371	$ (66,453,507)	$ (127,829,807)
Cap (3.0%)	$ 571,154,380	$ 504,625,188	$ 390,224,072	$ 307,631,593	$ 260,910,101

SOURCE: Texas Bond Review Board.

The DCM provides policymakers with the ability to review the impact on the state's finances of a state-bond financed project or projects of any size. *Figure E2* shows the impact of new debt authorizations on Ratio 1. The first scenario assumes a $20 million project, and the second scenario assumes a $250 million project. For purposes of this analysis, the debt was assumed to be issued in September of 2008 with first payments in February 2009. The examples also assume a 20-year repayment term with 6 percent interest and level principal payments.

Figure E2

Impact of Additional Debt on Ratio 1

Fiscal Year	2008	2009	2010	2011	2012
Debt-service as a Percent of Unrestricted Revenues					
Actual	1.33%	1.57%	1.91%	2.18%	2.33%
With $20M Project	1.33%	1.58%	1.91%	2.18%	2.33%
With $250M Project	1.33%	1.63%	1.97%	2.24%	2.38%
Additional Debt-service Capacity					
Target (2.0%)					
Actual	$ 228,719,107	$ 151,377,259	$ 32,938,371	$ (66,453,507)	$ (127,829,807)
With $20M Project	$ 228,719,107	$ 149,642,259	$ 31,201,471	$ (68,190,907)	$ (129,565,607)
With $250M Project	$ 228,719,107	$ 129,682,259	$ 11,245,071	$ (88,146,607)	$ (149,521,907)
Cap (3.0%)					
Actual	$ 571,154,380	$ 504,625,188	$ 390,224,072	$ 307,631,593	$ 260,910,101
With $20M Project	$ 571,154,380	$ 502,890,188	$ 388,487,172	$ 305,894,193	$ 259,174,301
With $250M Project	$ 571,154,380	$ 482,930,188	$ 368,530,772	$ 285,938,493	$ 239,218,001

SOURCE: Texas Bond Review Board.

The $20 million bond issuance has a small impact on the annual debt-service capacity – less than 0.1 percent over the five-year period. Debt-service for this project reduces annual debt-service capacity by the amount of debt-service for the $20 million project each year.

The $250 million authorization for a group of projects would lessen annual debt-service capacity by $21.7 million in each fiscal year beginning in 2009, and Ratio 1 would rise from 1.63 percent in fiscal year 2009 to 2.38 percent in fiscal year 2012. Not Self-Supporting Debt as a Percentage of Budgeted General Revenue (Ratio 2) would increase slightly from 1.39 percent to 1.44 percent in fiscal year 2009.

Figure E3 illustrates Ratio 3 (Not Self-Supporting Debt to Personal Income) for fiscal years 2008 to 2012. The three credit rating agencies consider this ratio when determining bond ratings. For fiscal years 2008 to 2012, Texas will maintain a ratio of not self-supporting to personal income from 0.37 percent in 2008 to 0.69 percent in 2012. This ratio increases by 86 percent over the five-year period due to projected debt issuances during the period for existing authority and new debt authorized by the 80th Legislature and approved by the voters in November 2007. Even at 0.69 percent, the rating agencies consider the ratio to be low.

Figure E3.

Ratio 3: Not Self-Supporting Debt to Personal Income, Fiscal Years 2008 to 2012

Fiscal Year	2008	2009	2010	2011	2012
Not Self-Supporting Debt					
Beginning Outstanding	$ 2,640,498,748	$ 3,317,905,292	$ 4,217,311,638	$ 5,531,042,795	$ 6,921,652,835
Planned Issuances	953,323,000	1,231,625,000	1,681,448,000	1,836,094,000	1,362,400,000
Retirements - Existing Debt	(273,731,456)	(293,421,504)	(263,702,106)	(259,372,106)	(240,282,106)
Retirements - New Debt	(2,185,000)	(38,797,150)	(104,014,737)	(186,111,854)	(242,156,506)
Ending Outstanding	$ 3,317,905,292	$ 4,217,311,638	$ 5,531,042,795	$ 6,921,652,835	$ 7,801,614,223
Total Personal Income	889,051,000,000	945,842,000,000	1,004,490,000,000	1,064,714,000,000	1,125,435,000,000
NSS Debt to Personal Income	0.37%	0.45%	0.55%	0.65%	0.69%

SOURCE: Texas Bond Review Board and Comptroller of Public Accounts.

The $250 million example mentioned in Ratio 1 also impacts Ratio 3. If the $250 million group of projects is authorized and debt issued in September 2009, the debt to personal income ratio would increase from 0.45 percent to 0.47 percent in fiscal year 2009 and from 0.69 percent to 0.71 percent in fiscal 2012.

Figure E4 illustrates Ratio 4 (Not Self-Supporting Debt per Capita). Like Ratio 3, this ratio is also important to credit rating agencies. For fiscal years 2008 to 2012, Texas will have a low debt per capita, ranging from $136.48 in 2008 to $299.38 in fiscal year 2012. The $250 million group of projects impacts Ratio 4: in fiscal year 2009, debt per capita would rise from $170.32 to $180.09 and increase to $307.79 in fiscal 2012

Figure E4
Ratio 4: Not Self-Supporting Debt per Capita, Fiscal Years 2008 to 2012

Fiscal Year	2008	2009	2010	2011	2012
Not Self-supporting Debt Outstanding	$ 3,317,905,292	$ 4,217,311,638	$ 5,531,042,795	$ 6,921,652,835	$ 7,801,614,223
Projected Population	24,310,894	24,761,214	25,195,487	25,623,084	26,059,131
Not Self-supporting Debt Per Capita	$ 136.48	$ 170.32	$ 219.53	$ 270.13	$ 299.38
Ratio 4 with $250.0 million project	$ 136.48	$ 180.09	$ 228.85	$ 279.00	$ 307.79

SOURCE: Texas Bond Review Board and Comptroller of Public Accounts.

The $250 million project was structured with level debt-service over the twenty-year term and does not impact Ratio 5 (rate of debt retirement). For fiscal years 2007 to 2016, the not self-supporting debt issued for the $250 million project is retired at a rate of 71.9 percent.

Appendix F - Debt Capacity Model Ratios and Special Debt Commitments

Two distinct versions of the Debt Capacity Model (DCM) have been calculated. The first considers only debt service for not self-supporting debt for which the state is legally obligated. The second shows the impact of special debt commitments on the DCM ratios. Although not legal obligations of the state, these commitments require debt service appropriated from general revenue. They include tuition revenue bonds for higher education and the existing debt allotment (EDA) and instructional facilities allotment (IFA) for public schools. The tables below illustrate the impact of these special debt commitments and provide policymakers with metrics to review not only the impact of not self-supporting debt for which the state is legally obligated, but also the impact of related debt-service obligations that are paid with general revenue.

Description of Special Debt Commitments

Three special debt-service commitments are either reimbursed by, or receive a contribution from the state. These obligations include:

<u>Tuition Revenue Bonds (TRB)</u>: TRBs are revenue bonds issued by the individual higher education institutions, systems or the Texas Public Finance Authority (on behalf of certain institutions) for new building construction or renovation. All college and university revenue bonds are equally secured by, and payable from a pledge of all or a portion of certain "revenue funds" as defined in the Texas Education Code, Chapter 55. Though legally secured through an institution's tuition and fee revenue, historically the state has reimbursed the universities for the debt service for these bonds with general revenue. House Bill 153 passed during the 79th Legislature's Third Called Session, 2005, authorized $1.8 billion for TRBs. Debt service was appropriated during the 80th Legislative Session.

<u>Existing Debt Allotment (EDA)</u>: In 1999, the legislature added Subchapter B to Chapter 46 of the Texas Education Code to create the Existing Debt Allotment (EDA). The EDA is similar to the Instructional Facilities Allotment (IFA) program in that it provides tax-rate equalization for local debt-service taxes. The original qualification for EDA eligibility was debt "for which the district levied and collected taxes in the 1998–99 school year." In addition, EDA must be used for debt that is not receiving IFA funds. In the initial biennium of operation, the EDA was limited to $0.12 per $100 of valuation but was raised in 2001 to the current level of $0.29 per $100 of valuation.

EDA funding is shared between state and local resources. State assistance is based on the lesser of actual debt-service or the tax-rate limit established by the restructured school financing efforts of the 79th Legislature. The EDA program operates without applications and has no award cycles. Instead, the program is based on a statutory definition of eligible debt, presently defined as those debts for which the first payment was made during the 2004–05 school year (Texas Education Code §46.033). Only general obligation debt is eligible for the program. The projects originally financed by the debt do not impact eligibility since no restriction to instructional facilities existed.

<u>Instructional Facilities Allotment (IFA)</u>: The Instructional Facilities Allotment (IFA) program was authorized in House Bill 4 by the 75th Legislature, 1997. The provisions that authorize the IFA program are incorporated into the Texas Education Code as Chapter 46. The IFA program that became effective on September 1, 1997, provides assistance to school districts in making debt-service payments on qualifying bonds and lease-purchase agreements. Districts must make application to the Texas Education Agency (TEA) to receive assistance. Bond or lease-purchase

proceeds must be used for the construction or renovation of an instructional facility. A maximum allotment is determined based upon the lesser of annual debt-service payments or $250 per student in average daily attendance (ADA).

Figure F1 shows the expected annual debt-service payments to be made for TRBs, EDA and IFA assuming no further statutory changes are made to EDA eligibility or new grants are made to IFA appropriations

Figure F1
Annual Debt-Service Payments for Special Debt Commitments, Fiscal Years 2008 to 2012

Commitment	2008	2009	2010	2011	2012
Existing Tuition Revenue Bonds	$ 145,738,111	$ 161,527,858	$ 155,489,992	$ 153,515,245	$ 152,987,313
New Tuition Revenue Bonds	$ 193,053,370	$ 185,038,835	$ 156,193,600	$ 156,191,100	$ 156,192,900
Existing Debt Allotment	$ 454,320,792	$ 499,955,434	$ 467,891,335	$ 451,122,466	$ 435,018,792
Instructional Facilities Allotment	$ 286,745,401	$ 361,621,039	$ 349,102,265	$ 337,374,762	$ 325,126,512
Annual Payments Total	**$ 1,079,859,682**	**$ 1,208,145,175**	**$ 1,128,679,202**	**$ 1,098,205,584**	**$ 1,069,327,529**

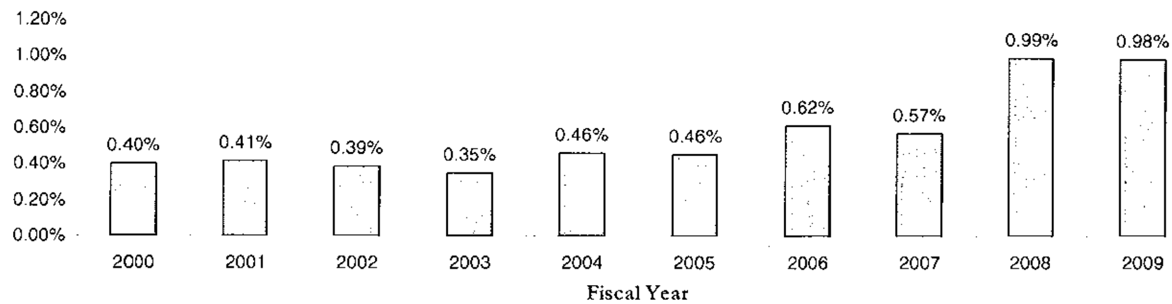
SOURCE: Texas Bond Review Board and Legislative Budget Board.

The Texas Legislature has two options if it wishes to assess the impact of these special debt commitments on the five debt ratios. As shown in the main text of this report, the first option is to add these items to the total sum of not self-supporting debt service. This method is useful if the object is to assess overall general revenue-supported debt commitments in a comprehensive manner. *Figure 17* demonstrates the impact of the special debt commitments on Ratio 1. It should be noted that TRB are classified as self-supporting revenue debt. Although TRB, EDA and IFA are paid from general revenue, these commitments do not count against the Constitutional Debt Limit.

The second option is to establish a Ratio 1 target and cap specifically for special debt commitments. TRBs provide a good example of how to employ this method, and the information below describes this option. Appropriated debt-service levels for TRBs have historically remained at less than 0.65 percent of available unrestricted General Revenues and usually have been less than 0.50 percent.

The 80th Legislature appropriated debt service for both the TRBs authorized by House Bill 153 from the 79th Legislature's Third Called Session, 2005, as well as a few additional projects. *Figure F2* illustrates the impact of the new authorizations on the already-existing debt service. As a result of the new authorizations, historical TRB debt service as a percentage of unrestricted General Revenue nearly doubles from 0.57 percent in fiscal 2007 to 0.99 percent and 0.98 percent for fiscal years 2008 and 2009, respectively.

Figure F2
Tuition Revenue Bond Payments as a Percentage of Unrestricted General Revenue, Fiscal Years 2000 to 2009



SOURCE: Texas Bond Review Board.

If target and cap guidelines assumed for Ratio 1 were applied to TRB debt service, historical appropriations data suggest that the legislature could use 0.5 percent as a target and 1.0 percent as a cap. If these guideline ratios were in place for TRB debt service, the state's capacity to handle additional TRB debt is significantly reduced at the 2 percent target for Ratio 1 but improves if the higher cap of 3 percent is assumed. *Figure F3* shows the impact of existing and new TRB debt service using sample target and cap debt capacity guidelines.

Figure F3
Tuition Revenue Bond Payments with Debt-Service Capacity Guidelines, Fiscal Years 2008 to 2012

	2008	2009	2010	2011	2012
Debt Service Commitments					
Existing Tuition Revenue Bonds	$ 145,738,111	$ 161,527,858	$ 155,489,992	$ 153,515,245	$ 152,987,313
New Tuition Revenue Bonds	$ 193,053,370	$ 185,038,835	$ 156,193,600	$ 156,191,100	$ 156,192,900
Total Debt Service Payments	**$ 338,791,481**	**$ 346,566,693**	**$ 311,685,602**	**$ 309,708,356**	**$ 309,182,225**
TRB Annual Debt Service as a % of Unrestricted Revenues					
	0.99%	0.98%	0.87%	0.83%	0.80%
Additional Annual Debt Service Capacity					
Target (0.5%)	(167,573,844)	(169,942,728)	(133,040,742)	(122,663,795)	(114,810,259)
Cap (1.0%)	3,643,792	6,681,236	45,602,109	64,378,755	79,559,695

SOURCE: Texas Bond Review Board.

Ratio 1 of the DCM can be used to provide various scenarios to assess the impact of increasing or decreasing the debt-service capacity for one or a group of special debt commitment items for which the annual debt service is paid from unrestricted general revenue.

Appendix G - Texas' Debt Issuance Policies

Introduction

The 77th Legislature Regular Session, 2001, passed House Bill 2190 requiring the Texas Bond Review Board to develop and adopt debt issuance guidelines and policies for state issuers to ensure that state debt is prudently managed.

The following policies were created by the Bond Review Board pursuant to the requirements of HB 2190 to standardize the issuance and management of debt issued by the state. The primary objective of the guidelines is to establish conditions for the use of debt and to create procedures and policies that minimize the state's debt-service and issuance costs, retain the highest possible credit rating and maintain full and complete financial disclosure and reporting. The policies apply to all debt issued by the state, including leases and any other forms of indebtedness. However, all state issuers, regardless of the type of debt issued are strongly encouraged to develop, maintain and annually review their own debt policies based on their unique goals and programs.

Regular, updated debt policies are an important tool to ensure the best use of the state's limited resources to provide services to the citizens of Texas and to maintain sound financial management practices. These policies are guidelines for general use and allow flexibility for issuers to be able to respond to changing economic conditions.

Senate Bill 1332 of the 80th Legislature, Regular Session, 2007, added a definition of interest rate management agreements and requires the Board to develop a related policy.

Creditworthiness Objectives

Policy 1: Credit Ratings

The state seeks to maintain the highest possible credit ratings for all categories of short- and long-term General Obligation debt that can be achieved without compromising delivery of basic services and programs and achievement of adopted policy objectives.

The state recognizes that external economic, natural or other events may affect the creditworthiness of its debt from time to time. Nevertheless, the executive and legislative branches of state government are committed to ensuring that actions within their control are prudent and necessary to maintain the creditworthiness objectives of the state.

Policy 2: Financial Disclosure

The state is committed to full and complete financial disclosure and to cooperating fully with rating agencies, institutional and individual investors, state departments and agencies, other levels of government and the general public to share clear, comprehensible and accurate financial information. The state is committed to meeting secondary disclosure requirements on a timely and comprehensive basis.

Official statements accompanying debt issues, Comprehensive Annual Financial Reports and continuing disclosure statements will strive to meet the minimum standards (to the extent applicable to each debt issue) promulgated by regulatory bodies and professional organizations such as the Securities and Exchange Commission (SEC), Municipal Securities Rulemaking Board (MSRB), the

Governmental Accounting Standards Board (GASB) and follow Generally Accepted Accounting Principles (GAAP).

The state Comptroller of Public Accounts, in conjunction with individual issuers shall be responsible for ongoing disclosure to established state and national information repositories and for maintaining compliance with disclosure standards promulgated by national regulatory bodies.

Policy 3: Capital Planning
To enhance creditworthiness and prudent financial management, the state will prepare a systematic capital plan and conduct long-term financial planning. This planning process will involve the co-operation and coordination of data and information among all state agencies and oversight bodies including the Bond Review Board and the Legislative Budget Board. The result of the planning process will be a Comprehensive Capital Expenditures Plan prepared by the Bond Review Board and submitted to the state leadership, pursuant to Senate Bill 1, Article 9, Section 6.38, 77th Regular Session, 2001. This plan will be updated and adjusted periodically as necessary. The plan will be implemented via the adoption of biennial capital budget items through the Legislative Appropriations Request process.

Policy 4: Debt Limits
The state will keep outstanding debt within the limits prescribed by the state's constitution, specifically Article 3, Section 49-j and at levels consistent with its creditworthiness objectives.

Purposes and Uses of Debt

Policy 5: Capital Financing
Debt will be issued for a capital project when it is an appropriate means to achieve a fair allocation of costs between current and future beneficiaries or in the case of emergency. Debt should not be issued to finance operating costs except in the case of short-term borrowing to meet cash flow needs.

Policy 6: Asset Life
The state should consider long-term financing for the acquisition, maintenance, replacement or expansion of physical assets (including land) only if they have a useful life of at least five years. Debt should be used only to finance capital projects except in case of emergency. State debt should not be issued for periods exceeding the useful life or average useful lives of the project or projects to be financed except in the case of an emergency or when it is appropriate to achieve a fair allocation of costs between current and future beneficiaries.

Debt Standards and Structure

Policy 7: Length of Debt
Debt will be structured for the shortest period consistent with a fair allocation of costs to current and future beneficiaries or users and within applicable federal tax law.

Policy 8: Debt Structure
Debt should be structured to achieve the lowest possible net cost to the state or state issuer, given market conditions, the nature of the capital project and the nature and type of security provided. Moreover, to the extent possible, the state issuer will design the repayment of its overall debt so as to recapture rapidly its credit capacity or the state's credit capacity for future use.

Policy 9: Level Principal Debt-Service

A level principal repayment structure should be considered for use for bonds repaid from general revenues of the state. This structure results in 50 percent of the debt being repaid in 10 years (if financed for a 20-year term) and creates future capacity for debt-service on additional bond issues. A level debt-service structure should be reserved for bonds repaid from a dedicated revenue stream if necessary or appropriate.

Policy 10: Backloading: "Backloading" of debt-service costs will be considered only: (1) when natural disasters or extraordinary or unanticipated external factors make the short-term cost of the debt prohibitive; (2) when the benefits derived from the debt issuance can clearly be demonstrated to be greater in the future than in the present; (3) when such structuring is beneficial to the issuer's overall amortization schedule; or (4) when such structuring will allow debt-service to more closely match project revenues during the early years of the project's operation.

Policy 11: Variable Rate Debt

A state issuer may choose to issue securities that pay a rate of interest that varies according to a pre-determined formula or results from a periodic remarketing of the securities, consistent with state law and covenants of pre-existing bonds.

Variable-rate debt should be converted to fixed-rate debt as necessary to maintain the creditworthiness objectives of the state, to meet particular needs of a financing program or to lock in low fixed-interest rates when advantageous. An issuer should take into account the amount of time that variable-rate debt has been outstanding when determining the final maturity of the fixed-rate debt.

Policy 12: Subordinate Debt

A state issuer should issue subordinate debt only if it is financially beneficial as defined by the issuer or consistent with creditworthiness objectives.

Policy 13: Derivatives

State issuers should consider the use of derivative products when products meet the specific needs of a financing program or provide a demonstrated economic benefit to the state that outweighs the costs and risks of the transaction. Appropriate public finance professionals, including financial advisors and legal counsel should be retained to ensure that the state receives fair market value for the transaction.

Policy 14: Refundings

State issuers should perform periodic reviews of all outstanding debt to determine refunding opportunities. Refunding should be considered (within federal tax law constraints) when there is a net economic benefit of the refunding or the refunding is necessary to eliminate restrictive covenants essential to operations and management.

Advance refundings for economic savings should be undertaken when a net present value savings of at least 3 percent of the refunded debt can be achieved. Current refundings that produce a positive net present value savings may also be considered. Refundings with no savings or negative savings should not be considered unless there is a compelling public policy objective such as restructuring to eliminate restrictive bond covenants or to provide additional financial flexibility.

Policy 15: BANs
Use of bond anticipation notes (BANs) will be undertaken only if the transaction costs plus interest on the debt are less than the cost of internal financing or available cash is insufficient to meet working capital requirements.

Policy 16: COPs
Lease Transactions Involving Certificates of Participation (COPs) or Participation Interests (PIs) – The Bond Review Board discourages the use of COPs or PIs in lease with option to purchase (LWOP) transactions. LWOP transactions utilizing COPs and PIs often require higher interest rates and are considerably more complex to structure and document with commensurately higher legal costs than lease-revenue bond issues. In addition, to protect the state's credit ratings should it later become desirable to exit the LWOP, such transactions require expensive credit enhancement. Consequently, unless a unique situation justifies the issuance of COPs or PIs in an LWOP transaction, the Bond Review Board does not consider such transactions to be the most cost-effective means of financing and recommends issuers utilize lease-revenue bond financings as an alternative.

Policy 17: Credit Enhancements
Credit enhancement (letters of credit, bond insurance, etc.) may be used but only when net debt-service on the bonds is reduced by more than the costs of the enhancement.

Debt Administration and Process

Policy 18: Investment of Bond Proceeds
Bond proceeds should be invested as part of an investment schedule that reflects the anticipated need to draw down funds for project purposes. Through careful matching of investment maturity dates, a state issuer can maximize its return while ensuring the necessary cash flow. Investments will be consistent with those authorized by existing state law, federal tax law and by the issuer's investment policies.

Policy 19: Competitive Sale
Bids should be awarded on a true interest cost basis (TIC), provided other bidding requirements are satisfied. For instance, a position in which the issuer deems all bids received to be unsatisfactory, the issuer may elect to sell subsequently through a negotiated sale in accordance with its standard procedures.

Policy 20: Negotiated Sale
Negotiated sales of debt should be considered in the following circumstances: (1) when the complexity of the issue requires specialized expertise; (2), when the negotiated sale would result in substantial savings in time or money; or (3) when market conditions are unusually volatile or uncertain.

Policy 21: Underwriters
For all negotiated sales, underwriters should be required to demonstrate sufficient capitalization and experience related to the debt issuance and should be able to show minority and women participation within their firms.

Policy 22: HUB Participation
Issuers are required to make a good faith effort to achieve 33 percent participation by HUB firms in the underwriting and issuance of debt. Issuers should also encourage underwriters to make similar good faith efforts in include HUB participation in syndicates for competitive sales.

Policy 23: Bond Counsel
State issuers should retain outside bond counsel for all bond transactions where necessary to market the bonds. Bonds issued by the state issuers should include a written opinion by bond counsel affirming that the state issuer is authorized to issue the debt, that the state issuer has met all state constitutional and statutory requirements necessary for issuance and that the issue is tax-exempt, if applicable.

Policy 24: Financial Advisor
State issuers should consider retaining an external financial advisor if the issuer does not possess the expertise for the transaction being considered. The use of a financial advisor for a particular bond sale should be at the discretion of the issuer on a case-by-case basis.

Policy 25: Compensation for Services
Compensation for bond counsel, underwriters' counsel, financial advisors and other services should be reasonable based on the level of services rendered, desired qualifications, expertise, industry standards and complexity of the issue.

Policy 26: RFP/RFQ Process
State Issuers shall make all final determinations of selection for legal and other services in accordance with Chapter 1201, Texas Government Code. The determination will be made following an independent review of responses to requests for proposals (RFPs) or requests for qualifications (RFQs). The RFPs and RFQs should be reviewed by at least the issuer's financial professional charged with debt oversight and/or the agency's financial advisor.

Policy 27: Arbitrage Compliance
State issuers shall maintain a system of record keeping and reporting to meet the arbitrage rebate compliance requirements of federal tax code.

Policy 28: Intergenerational Housing
Housing developments that commingle age-restricted units and family units must meet the definition of intergenerational housing and abide by the Board's policy.

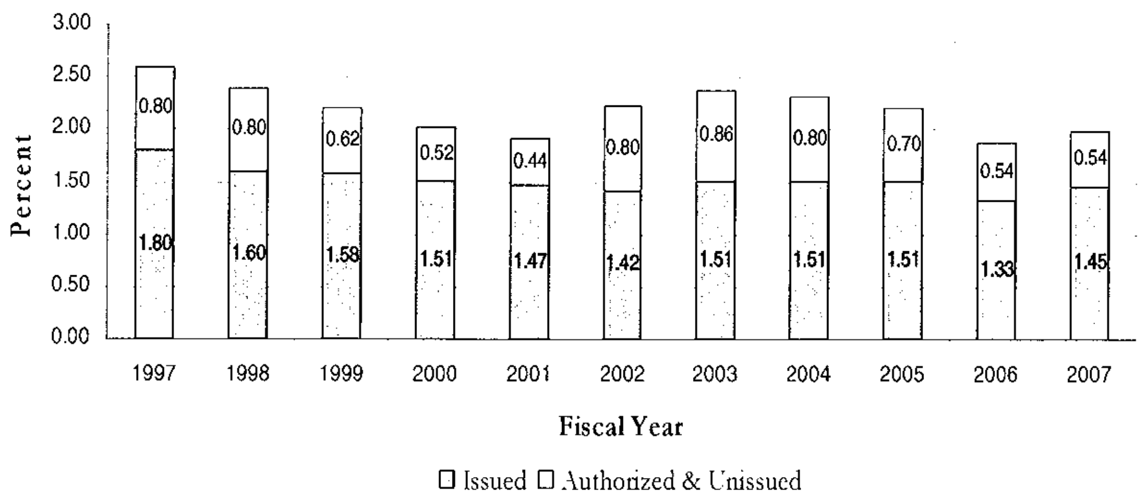
Policy 29: Property Tax Exemption
The Bond Review Board will approve applications for the issuance of bonds to finance multifamily housing revenue developments for which the organization is designated a Community Housing Development (CHDO) and qualifies for 100 percent property exemption under Section 11.182 of the Texas Tax Code only if the application includes a payment in lieu of taxes (PILOT payment) in an amount equal to 50 percent of the property taxes that would have been imposed by the applicable school district for the tax year for which the exemption applies, payable to the Texas Comptroller of Public Accounts and submitted to the Comptroller by February 1 of the year following approval of the project.

Appendix H - Constitutional Debt Limit

Article III, Section 49-j of the Texas Constitution prohibits the legislature from authorizing additional state debt if the annual debt-service in any fiscal year on state debt payable from the General Revenue Fund exceeds 5 percent of the average of unrestricted general revenue from the preceding three fiscal years. The Constitution also stipulates that state debt payable from the General Revenue Fund does not include debt that, although backed by the full faith and credit of the state, is reasonably expected to be paid from other revenue sources and is not expected to create a general revenue draw.

Figure H1 shows the Constitutional Debt Limit from fiscal years 1997 to 2007. The debt-limit ratio for fiscal 2007 was 1.45 for issued debt. For authorized but unissued debt, the ratio for 2007 was 1.99. The total Constitutional Debt Limit ratio for authorized and issued as well as authorized and unissued debt-service has ranged from a high of 2.60 percent in fiscal year 1997 to a low of 1.87 percent in fiscal year 2006.

Figure H1
Constitutional Debt Limit as a Percentage of Unrestricted General Revenue



SOURCE: Texas Bond Review Board.

Constitutional Debt Limit and Ratio 1

Ratio 1 in the Debt Capacity Model resembles the constitutional debt-limit calculation, but the latter includes certain items that are not included in Ratio 1. The major difference between Ratio 1 and the constitutional debt-limit ratio is the way in which debt-service used for the Higher Education Fund (HEF) bonds is calculated. The constitutional debt-limit calculation requires that the maximum amount of debt-service available for these bonds is included, but in practice less than a quarter of that debt-service is actually used.

Another difference in the constitutional debt-limit calculation is the omission of debt-service for 10 percent of the Water Development Board, Economically Distressed Areas Program (EDAP) bonds. Proceeds from the sale of the EDAP bonds are used to makes loans or grants to local governments or other political subdivisions of the state for projects involving water conservation, transportation, storage and treatment. Up to 90 percent of the bonds can be used for grants, and at least 10 percent must be used to make loans. For purposes of the Constitutional Debt Limit, the debt-service on the 10 percent used for loans is assumed to be repaid to the state and is thus omitted from the calculation.