**Texas Bond Review Board**

# Debt Affordability Study

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.


## February 2011

# Debt Affordability Study
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Rick Perry, Governor
Chairman

David Dewhurst, Lieutenant Governor

Joe Straus, Speaker of the House of Representatives

Susan Combs, Comptroller of Public Accounts

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Executive Director

## Executive Summary

The 80th Legislature (2007) passed Senate Bill 1332 that amended the Texas Government Code Chapter 1231 to require the Texas Bond Review Board in consultation with the Legislative Budget Board to prepare annually the state's Debt Affordability Study (DAS).

The DAS' Debt Capacity Model (DCM) assesses the impact on general revenue of the state's annual debt-service requirements for current and projected levels of not self-supporting (NSS) debt over the next five years. Credit 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.

**State Debt Outstanding and the Constitutional Debt Limit**
At the end of FY2010, Texas had $37.82 billion in total debt outstanding. Of this amount $3.09 billion (8.2%) was NSS debt, and $34.72 billion (91.8%) was self-supporting. The state's total debt outstanding has increased from $13.18 billion in FY2000 to the current $37.82 billion as of August 31, 2010.

As of August 31, 2010 the Constitutional Debt Limit (CDL) for outstanding debt was 1.36 percent and 4.10 percent for outstanding and authorized but unissued debt.

**Assumptions for the Debt Capacity Model**
The DCM contains assumptions for the fiscal years under review (2011-2015) including:

- Estimates of unrestricted general revenue (UGR)
- Estimates of appropriations for authorized but unissued Cancer Prevention and Research Institute and Texas Department of Transportation debt
- Estimates of appropriations for Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA)
- No new Tuition Revenue Bond (TRB) debt will be authorized in the 2012-13 biennium
- No new not self-supporting debt will be authorized in the 2012-13 biennium.

**Ratios used in the Debt Capacity Model**
The DCM uses five ratio calculations to assess the impact of the state's annual debt-service requirements paid from general revenue for current and projected levels of NSS debt over the next five years. A summary of each ratio is below:

- <u>Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue</u> measures the impact of debt service on UGR. Because not self-supporting debt service as a percentage of UGR has historically been below 2 percent, Ratio 1 is set up with a target of 2 percent, a cap at 3 percent and a maximum of 5 percent. Ratio 1 resembles the CDL but is only a guideline while the CDL is a legal limit. Ratio 1 is calculated two ways: 1) using only NSS debt service and 2) using NSS debt service plus Special Debt Commitments (TRB, IDA, and EFA) to show their impact on the state's debt capacity (see *Chapter 3 and Appendix C*).

- Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue is similar to Ratio 1 and is ordinarily more restrictive because budgeted general revenue is usually less than unrestricted general revenue.
- Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income is a direct indicator of a governmental borrower's ability to repay debt obligations by transforming personal income into revenues through taxation.
- Ratio 4: Not Self-Supporting Debt per Capita measures the dollar amount of debt per person.
- Ratio 5: Rate of Debt Retirement is the rate at which long-term debt is retired and measures the extent to which new debt capacity is created for future debt issuance.

**Major Findings**

- Additional debt-service capacity calculated for the Ratio 1 target of 2 percent (NSS debt as a percentage of UGR) is $53.5 million for fiscal 2011 and is negative for fiscal years 2012-2015 (see *Chapter 3 and Appendix C*)
- Additional debt-service capacity for Ratio 1 including Special Debt Commitments (TRBs, IFA, and EDA) is a negative $905.2 million for the 2 percent target beginning in fiscal 2011 and rises to a negative of more than $1.3 billion by fiscal 2015
- Including Special Debt Commitments, total debt service exceeds the 5 percent maximum of Ratio 1 beginning in fiscal 2012
- Special Debt Commitments are projected to account for more than half of total debt service for fiscal years 2011-2015
- NSS debt service will peak in fiscal 2014 (see *Chapter 3*)
- NSS debt as a percentage of personal income (Ratio 3) and debt per capita (Ratio 4) are below rating agency benchmarks through fiscal 2015. During the same period, the rate of debt retirement (Ratio 5) is more rapid than those benchmarks.

# Table of Contents

## Figures

**Cautionary Statements**

Chapter 1231 of the Texas Government Code directs the Bond Review Board (BRB) to annually prepare a study regarding the state's current debt burden. The report must analyze the amount of additional not self-supporting debt the state can accommodate; include analysis which may serve as a guideline for debt authorizations and debt-service appropriations by including ratios of such debt to personal income, population, budgeted and expended general revenue, as well as the rate of debt retirement and a target and limit ratio for not self-supporting debt service as a percentage of unrestricted general revenues. BRB shall deliver the report to the governor, lieutenant governor, comptroller of public accounts, Senate Committee on Finance and House Appropriations Committee. This report is intended to satisfy these Chapter 1231 duties.

The data in this report and on the BRB's website is compiled from information reported to the BRB from various sources and has not been independently verified. The reported debt data of state agencies may vary from actual debt outstanding, and the variance for a specific issuer could be substantial.

State debt data compiled does not include all installment purchase obligations, but certain lease-purchase obligations are included. In addition, SECO LoanSTAR Revolving Loan Program and certain other revolving loan program debt and privately-placed loans are not included. Outstanding debt excludes debt for which sufficient funds have been escrowed to retire the debt either from proceeds of refunding debt or from other sources.

Future revenues, population and personal income information of the state are derived from third-party estimates. They are inherently subject to various known and unknown risks and uncertainties, including the possible invalidity of underlying assumptions and estimates; possible changes or developments in social, economic, business, industry, market, legal, and regulatory circumstances and conditions; extreme weather events; and actions taken or omitted to be taken by third parties, including consumers, taxpayers, and legislative, judicial, and other governmental authorities and officials, all of which are beyond the control of the BRB. Future debt issuance is based on estimates supplied by each issuing agency. Future debt service on variable rate, commercial paper, and other short-term and demand debt is estimated on the basis of interest rate and refinancing assumptions described in the report. Actual future issuance and debt service could be affected by changes in agency financing decisions, prevailing interest rates, market conditions, and other factors that cannot be predicted. Consequently, actual future data could differ from estimates included in this report, and the difference could be substantial. The BRB assumes no obligation to update any such estimate of future data.

Historical data and trends presented are not intended to predict future events or continuing trends, and no representation is made that past experience will continue in the future.

This report is intended to meet Chapter 1231 requirements and inform the state leadership and the Legislature to provide a guideline for state debt authorizations and debt-service appropriations. This report is not intended to inform investors in making a decision to buy, hold, or sell any securities, nor may it be relied upon as such. Data is provided as of the date indicated and may not reflect debt, debt service, population or other data as of any subsequent date. This data may have changed from the date as of which it is provided. For more detailed or more current information, see the issuers' web sites or their filings at Electronic Municipal Market Access (EMMA®). The BRB does not control or make any representation regarding the accuracy, completeness or currency of any such site, and no referenced site is incorporated herein by that reference or otherwise.

# Chapter 1 – Summary of Results

## Background

The 80th Legislature (2007) passed Senate Bill 1332 that amended the Texas Government Code Chapter 1231 to require the Texas Bond Review Board in consultation with the Legislative Budget Board annually to prepare the state's Debt Affordability Study (DAS).

As defined in this study, debt affordability is the determination of the state's capacity for additional NSS debt, i.e., debt funded from unrestricted general revenues that has a direct impact on state finances. Debt affordability provides an integrated approach that helps manage and prioritize state debt by analyzing data on historical, current and projected uses of not self-supporting (NSS) debt in conjunction with the financial and economic resources of the state and its long-term capital needs.

Debt service for NSS debt depends solely on legislative appropriations from the state's general revenue fund and thus draws upon the same sources otherwise used to finance the operation of state government. The DAS' Debt Capacity Model (DCM) provides financial data policymakers can use to review the impact of various strategies for NSS debt to determine acceptable levels of annual debt service and thus prioritize the state's available revenues to meet the highest priority needs.

The DCM uses five ratio calculations to assess the impact on general revenue of the state's annual debt-service requirements for current and projected levels of NSS debt over the next five years. Credit 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.

## Summary of Results

The following explains the ratios used in the DAS. The table below shows the results of the study.

Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue

Statute requires the DAS to include a target and cap for Ratio 1, both of which can be adjusted as requested or as directed by the board or legislature. Since Texas has historically appropriated less than 2 percent of its unrestricted general revenue for NSS debt service, this study utilizes 2 percent as the target ratio, 3 percent for the cap ratio and a maximum of 5 percent in its analysis of Ratio 1.

*Figure 1.1* compares the results for Ratio 1 calculated for the February 2010 DAS with those calculated for the February 2011 DAS. *Figure 1.2* shows the impact of Special Debt Commitments (SDC) - tuition revenue bonds (TRB), Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) on Ratio 1. (See *Chapter 3* and *Appendix C*.)

**Figure 1.1**
**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue as Calculated in February 2010 and February 2011**

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| February 2010 | | | | | |
| Annual Debt Service | 1.76% | 2.03% | 2.18% | 2.35% | 2.30% |
| Tuition Revenue Bonds (TRBs) | 0.90% | 0.78% | 0.74% | 0.72% | 0.68% |
| Special Debt Commitments (IFA and EDA) | 1.73% | 1.75% | 1.63% | 1.55% | 0.71% |
| **Total** | **4.39%** | **4.55%** | **4.55%** | **4.62%** | **3.69%** |
| February 2011 | | | | | |
| Annual Debt Service | 1.85% | 2.14% | 2.39% | 2.61% | 2.45% |
| Tuition Revenue Bonds (TRBs) | 0.87% | 0.86% | 0.83% | 0.80% | 0.76% |
| Special Debt Commitments (IFA and EDA) | 1.90% | 2.11% | 2.33% | 2.34% | 2.21% |
| **Total** | **4.62%** | **5.10%** | **5.55%** | **5.75%** | **5.43%** |

SOURCE: Texas Bond Review Board.

*Results*

- Additional debt-service capacity for the 2 percent target is $53.5 million for fiscal 2011 and becomes negative for fiscal years 2012-2015 (see *Chapter 3 and Appendix C*).

- Additional debt-service capacity for the 2 percent target including SDC is negative $905.2 million starting in fiscal 2011 and becomes increasingly negative to more than $1.3 billion by fiscal 2015. SDC are projected to account for more than half of total debt service from fiscal years 2011-2015

- Including SDC, total debt-service exceeds the 5 percent maximum beginning in fiscal 2012.

<u>Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue</u>
This ratio is similar to Ratio 1 and is ordinarily more restrictive because budgeted general revenue is usually less than unrestricted general revenue. Historically, Texas' NSS debt-service commitment has been less than 1.5 percent of budgeted general revenue as shown in *Figure 3.3*. Unrestricted General Revenue (UGR) in Ratio 1 is based on a rolling three-year average (FY2009-2011) which has been lower than expected, and as a result, budgeted general revenue is higher than UGR and thus making Ratio 1 higher than Ratio 2.

*Results*
Ratio 2 is 1.43 percent for fiscal 2011 and rises to 2.30 percent by fiscal 2013. The ratios for fiscal years 2012 and 2013 are based on the introduced House bill since budget has not passed the legislature.

<u>Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income</u>
This ratio is NSS debt divided by total personal income and is a direct indicator of a governmental borrower's ability to repay debt obligations by transforming personal income into revenues through taxation. This ratio plays a role in determining the state's credit ratings.

*Results*

Ratio 3 is 0.54 percent for fiscal 2011 and peaks at 0.76 percent in fiscal 2014. These figures are below rating agency benchmark of 3 percent.

Ratio 4: Ratio 4: Not Self-Supporting Debt per Capita

This ratio is the amount of NSS debt divided by the state's population and measures the dollar amount of debt per person. Like Ratio 3, Ratio 4 plays a role in determining the state's credit rating.

*Results*

Ratio 4 is $215.74 for fiscal 2011 and peaks to $334.66 in fiscal 2014. These figures are below rating agency benchmark of $1,000 per Capita.

Ratio 5: Rate of Debt Retirement

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

*Results*

In five years 46.4 percent of NSS debt will be retired; 72.3 percent will be retired in 10 years. These figures are above rating agency benchmarks.

*Figure 1.2* summarizes the ratio analysis for fiscal years 2011 through 2015. The negative numbers in Ratio 1 indicate shortfalls in debt service when compared to the corresponding target, cap or maximum percentage.

**Figure 1.2**
**Summary of Ratios 1-5**

| Fiscal Year | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue** | | | | | | | | | | |
| **NSS Debt Service** | | | | | | | | | | |
| Issued | $ 480,472,119 | 1.39% | $ 447,129,068 | 1.28% | $ 420,137,770 | 1.17% | $ 412,702,361 | 1.11% | $ 353,741,124 | 0.92% |
| Authorized but Unissued | 157,557,543 | 0.46% | 286,054,870 | 0.82% | 381,225,095 | 1.06% | 457,925,769 | 1.24% | 461,903,048 | 1.20% |
| Projected | - | 0.00% | 15,722,487 | 0.04% | 55,960,253 | 0.16% | 95,296,973 | 0.26% | 125,722,537 | 0.33% |
| **Total NSS Debt Service** | $ 638,029,663 | 1.85% | $ 748,906,425 | 2.14% | $ 857,323,117 | 2.39% | $ 965,925,104 | 2.61% | $ 941,366,709 | 2.45% |
| **Additional Debt-Service Capacity*** | | | | | | | | | | |
| Target (2%) | $ 53,501,909 | 0.15% | $ (49,270,529) | -0.14% | $ (138,623,589) | -0.39% | $ (225,309,335) | -0.61% | $ (173,687,047) | -0.45% |
| Cap (3%) | $ 399,267,695 | 1.15% | $ 300,547,419 | 0.86% | $ 220,726,175 | 0.61% | $ 144,998,550 | 0.39% | $ 210,152,785 | 0.55% |
| Max (5%) | $1,090,799,267 | 3.15% | $ 1,000,183,316 | 2.86% | $ 939,425,702 | 2.61% | $ 885,614,319 | 2.39% | $ 977,832,447 | 2.55% |
| **Debt Service including Special Debt Commitments (SDC)** | | | | | | | | | | |
| NSS Debt Service | $ 638,029,663 | 1.85% | $ 748,906,425 | 2.14% | $ 857,323,117 | 2.39% | $ 965,925,104 | 2.61% | $ 941,366,709 | 2.45% |
| Special Debt Commitments | 958,675,798 | 2.78% | 1,036,271,504 | 2.96% | 1,135,334,934 | 3.16% | 1,164,146,753 | 3.14% | 1,141,905,120 | 2.97% |
| **Total** | $1,596,705,461 | 4.63% | $ 1,785,177,929 | 5.10% | $ 1,992,658,050 | 5.55% | $ 2,130,071,857 | 5.75% | $ 2,083,271,829 | 5.43% |
| **Additional Debt-Service Capacity*** (Includes SDC) | | | | | | | | | | |
| Target (2%) | $ (905,173,889) | -2.62% | $ (1,085,542,033) | -3.10% | $(1,273,958,523) | -3.55% | $(1,389,456,088) | -3.75% | $(1,315,592,166) | -3.43% |
| Cap (3%) | $ (559,408,103) | -1.62% | $ (735,724,084) | -2.10% | $ (914,608,759) | -2.55% | $(1,019,148,203) | -2.75% | $ (931,752,335) | -2.43% |
| Max (5%) | $ 132,123,469 | 0.38% | $ (36,088,188) | -0.10% | $ (195,909,231) | -0.55% | $ (278,532,434) | -0.75% | $ (164,072,673) | -0.43% |
| **RATIO 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue** | 1.43% | | 2.08% | | 2.30% | | | | | |
| **RATIO 3: Not Self-Supporting Debt as a Percentage of Personal Income** | 0.54% | | 0.64% | | 0.72% | | 0.76% | | 0.71% | |
| **RATIO 4: Not Self-Supporting Debt Per Capita** | $215.74 | | $262.86 | | $302.42 | | $334.66 | | $327.23 | |
| **Ratio 5: Rate of Debt Retirement in** | 5 Years | 10 Years | | | | | | | | |
| Not Self-Supporting Debt | 46.4% | 72.3% | | | | | | | | |
| Self-Supporting Debt | 14.9% | 32.1% | | | | | | | | |

* Debt-service capacity available to meet target, cap or maximum percentages.

SOURCE: Texas Bond Review Board

## Chapter 2 - Current Debt Position of the State

Texas has a decentralized approach to debt management. Debt issuance occurs at the level of the agency or institution of higher education rather than at the state level. With the exception of Tax Revenue Anticipation Notes and Permanent University Fund issuances, the Bond Review Board provides oversight for all state debt issuances with a maturity of more than 5 years or a principal amount greater than $250,000.

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 that 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.

**Debt Types**
Debt issued by the state of Texas falls into two major categories:

- **General Obligation (GO) debt** is legally secured by a constitutional pledge of the first monies coming into the state treasury that are not constitutionally dedicated for another purpose. GO debt must be passed by a 2/3 vote of both houses of the legislature and a majority of the voters.
- **Non-General Obligation (Revenue) debt** is legally secured by a specific revenue source and does not require voter approval.

State debt is further classified based on its impact on the state's General Revenue Fund:

- **Self-Supporting (SS) debt** is designed to be repaid with revenues other than state general revenue and can be either GO debt or revenue debt.
- **Not Self-Supporting (NSS) debt** is intended to be repaid with state general revenue and can be either GO debt or revenue debt.

*Figure 2.1* illustrates the classifications for state debt and provides program examples for each type.

**Figure 2.1**
**Debt Type and Project Examples**

| Debt Type | General Revenue Impact | Bond Program |
|---|---|---|
| General Obligation | Not self-supporting | Texas Public Finance Authority Bonds<br>Higher Education Constitutional Bonds |
| General Obligation | Self-supporting | Mobility Fund Bonds<br>Veterans' Land and Housing Bonds |
| Revenue | Not self-supporting | Texas Military Facilities Commission Bonds<br>Parks and Wildlife Improvement Bonds |
| Revenue | Self-supporting | University Revenue Financing System (RFS) Bonds<br>Texas State Affordable Housing Corporation Bonds |

Source: Texas Bond Review Board

**State Debt Outstanding**
*Figure 2.2* provides detail for the state's total debt outstanding at August 31, 2010.

**Figure 2.2**
**Current Debt Outstanding**

| Bond Types | Self-supporting | Not Self-Supporting | Total |
|---|---|---|---|
| General Obligation | $ 10,188,067,625 | $ 2,713,845,030 | $ 12,901,912,655 |
| Revenue | $ 24,534,769,480 | $ 380,704,769 | $ 24,915,474,249 |
| Total | $ 34,722,837,105 | $ 3,094,549,800 | $ 37,817,386,904 |

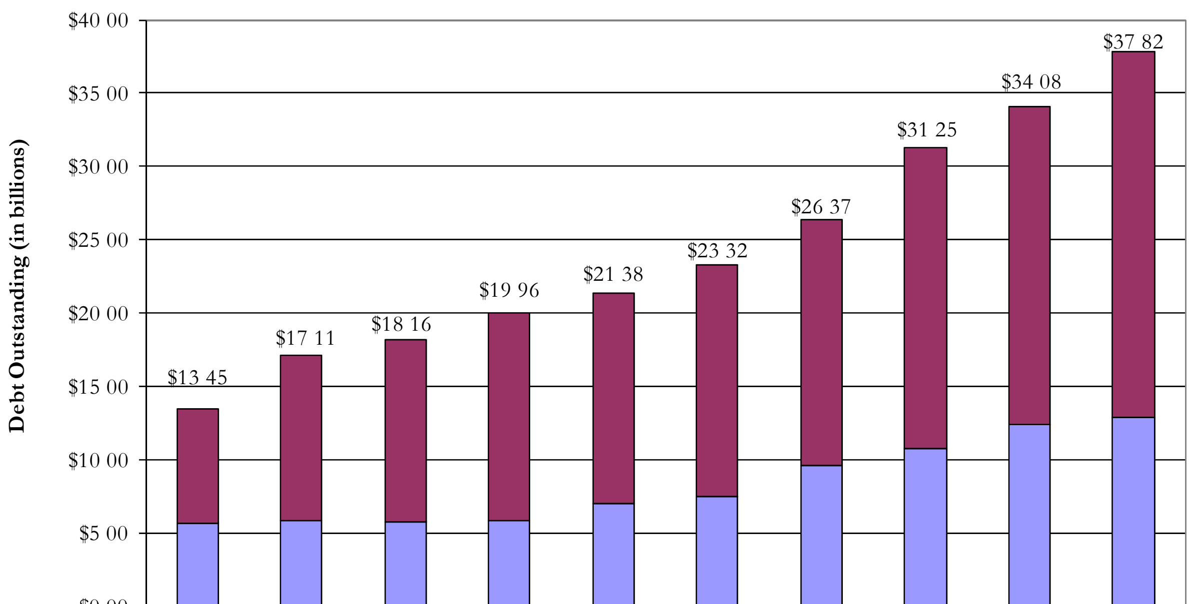
Source: Texas Bond Review Board

**Growth Rates in Unrestricted General Revenue and Total Debt Outstanding**
The state's Unrestricted General Revenue (UGR) increased from $26.80 billion in FY2001 to $34.01 in FY2010, an increase of 27.0 percent over the 10-year period.

From FY2001 to FY2010, GO debt increased from $5.67 billion to $12.90 billion, an increase of 127.5 percent, most of which occurred in the last five fiscal years.

*Figure 2.3* illustrates Texas' debt outstanding during the past 10-year period by debt type.

**Figure 2.3**
**Texas' Debt Outstanding: Revenue and General Obligation Fiscal Years 2001 - 2010**

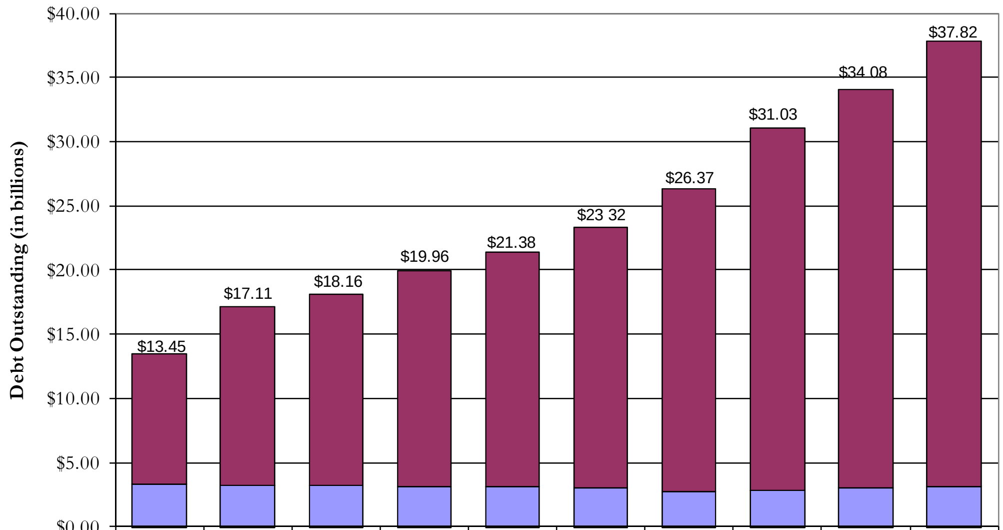



| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|
| REV | $7 77 | $11 29 | $12 34 | $14 08 | $14 38 | $15 78 | $16 78 | $20 48 | $21 63 | $24 92 |
| GO | $5 67 | $5 82 | $5 81 | $5 89 | $7 00 | $7 54 | $9 59 | $10 78 | $12 44 | $12 90 |
| Total | $13 45 | $17 11 | $18 16 | $19 96 | $21 38 | $23 32 | $26 37 | $31 25 | $34 08 | $37 82 |

SOURCE: Texas Bond Review Board.

During the 10-year period, revenue debt increased by 220.7 percent from $7.77 billion to $24.92 billion and the state's total debt outstanding increased by 64.4 percent from $13.45 billion to $37.82 billion.

**Figure 2.4**
**Texas' Debt Outstanding: Self-Supporting and Not Self-Supporting Fiscal Years 2001 to 2010**




| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Self-supporting | $10.18 | $13.87 | $14.96 | $16.81 | $18.23 | $20.34 | $23.62 | $28.18 | $31.01 | $34.72 |
| Not Self-supporting | $3.27 | $3.24 | $3.19 | $3.15 | $3.14 | $2.98 | $2.75 | $2.85 | $3.07 | $3.09 |
| Total | $13.45 | $17.11 | $18.16 | $19.96 | $21.38 | $23.32 | $26.37 | $31.03 | $34.08 | $37.82 |

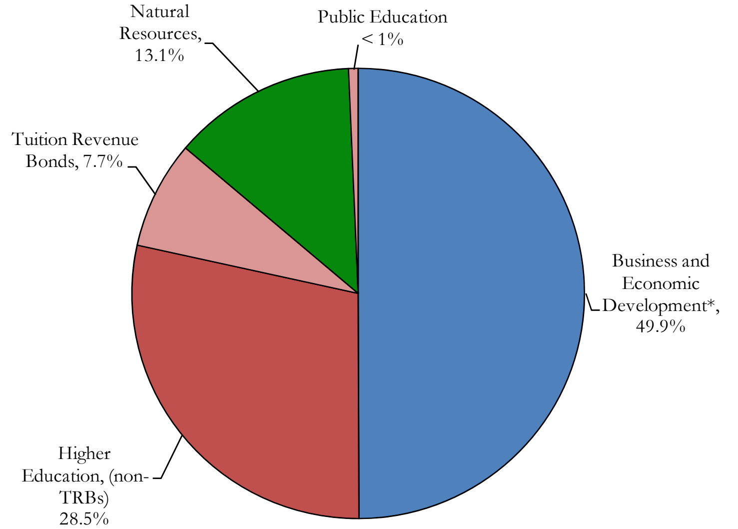
SOURCE: Texas Bond Review Board.

As shown in *Figure 2.4*, SS debt which is repaid with program revenues, increased by 241.1 percent. During the same time period, NSS debt which is typically repaid with general revenue decreased by 5.5 percent. However, given the authorizations approved in the November 2007 general election coupled with projected issuances in FY2011-15, NSS debt outstanding is likely to continue to increase in upcoming fiscal years.

**Self-Supporting Debt**

SS debt includes both GO and revenue debt. At fiscal year-end 2010 SS debt comprised 91.8 percent of the state's total debt outstanding and consisted of 70.7 percent revenue and 29.3 percent GO debt. From fiscal years 2001 to 2010, those figures averaged 73.1 percent and 26.9 percent, respectively. *Figure 2.5* shows a breakdown by category of SS debt outstanding.

**Figure 2.5**
**Self-Supporting Debt Outstanding, Fiscal Year 2010 (34.72 billion)**

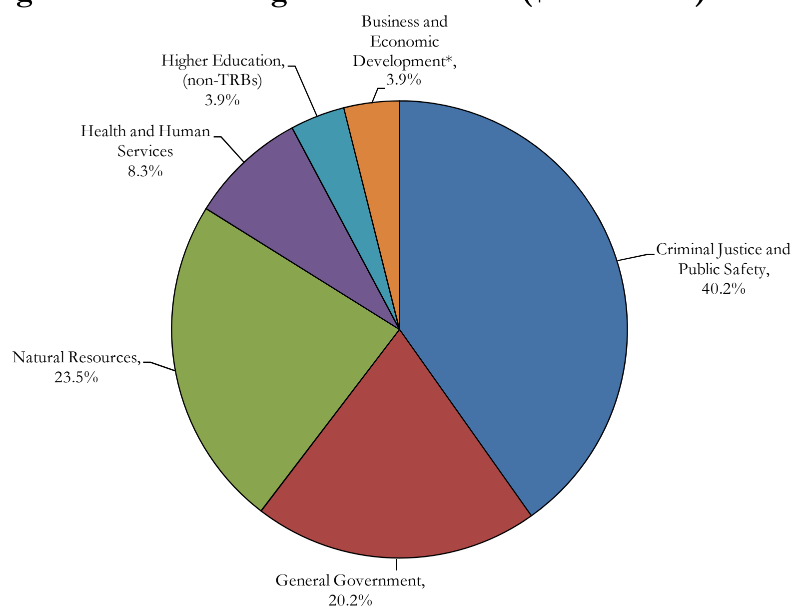



*Business and Economic Development includes Transportation debt.
SOURCE: Texas Bond Review Board.

## Not Self-Supporting Debt

NSS is generally repaid from the state's General Revenue Fund. At fiscal year-end 2010 NSS debt comprised 8.2 percent of the state's total debt outstanding and consisted of 12.3 percent GO and 87.7 percent revenue debt. From fiscal years 2001 to 2010, those figures averaged 81.0 percent and 19.0 percent, respectively. *Figure 2.6* shows NSS debt by government function.

**Figure 2.6**
**Not Self-Supporting Debt Outstanding Fiscal Year 2010 ($3.09 billion)**

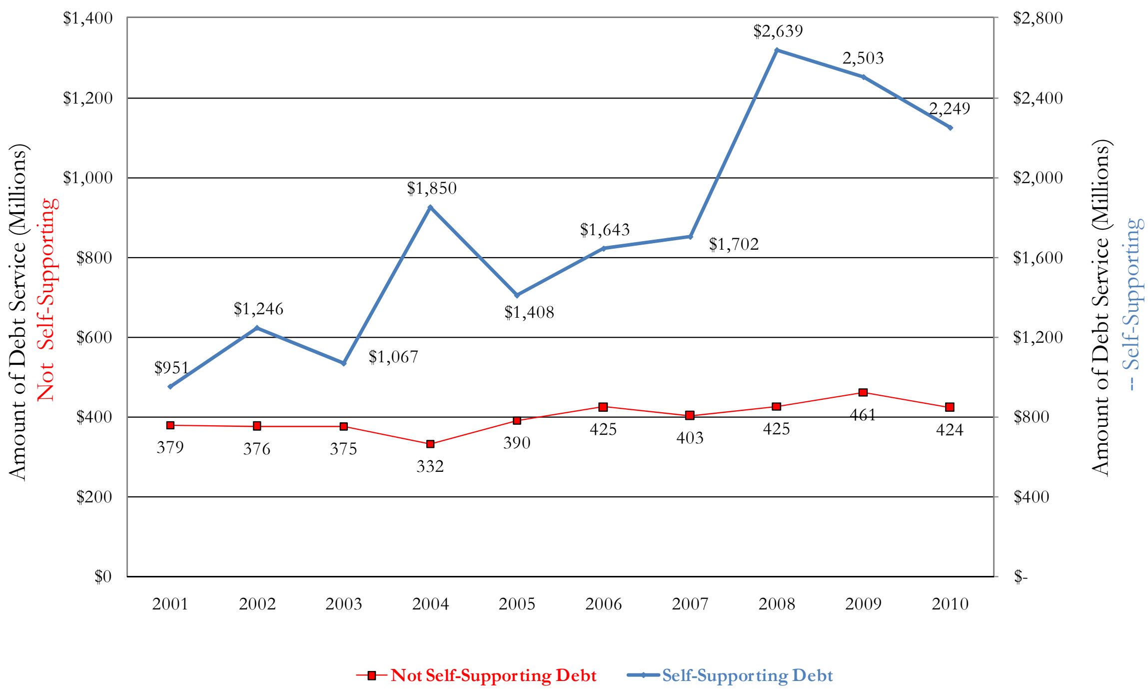



*Business and Economic Development includes Transportation debt.
SOURCE: Texas Bond Review Board.

### Debt-Service Commitments

*Figure 2.7* illustrates the historical annual debt service for NSS and SS debt for fiscal years 2001 through 2010.

**Figure 2.7**
**Historical Annual Debt Service Fiscal Years 2001 - 2010**

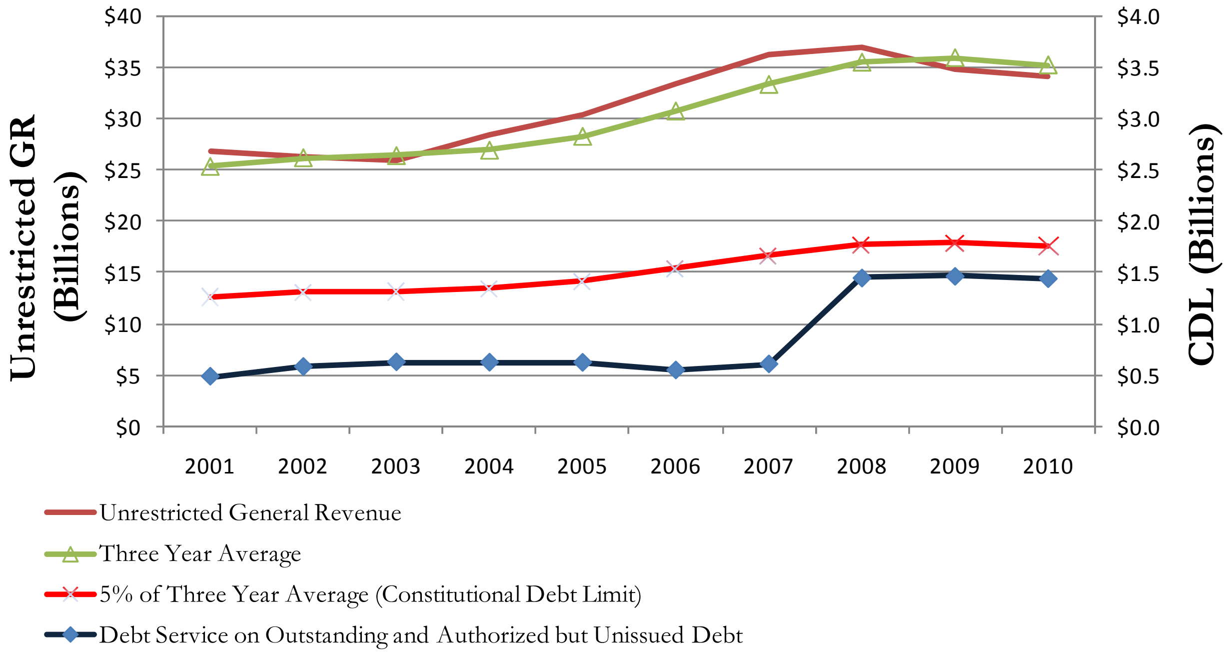



SOURCE: Texas Bond Review Board.

### The Constitutional Debt Limit

As of August 31, 2010 the Constitutional Debt Limit (CDL) for all outstanding debt was 1.36 percent and 4.10 percent for outstanding and authorized but unissued debt. These figures were 1.22 and 4.08, respectively in FY2009 and represent increases of 11.5 percent and 0.5 percent, respectively. (See *Appendix E* for more discussion regarding the CDL.)

**Figure 2.8**
**Unrestricted General Revenue and Constitutional Debt Limit, Fiscal Years 2001 to 2010**




SOURCE: Texas Bond Review Board.

The two curves at the top of *Figure 2.8* plot the state's UGR (brown curve) and the 3-year moving average for UGR (green curve) used to calculate the CDL. (Note the scale for those curves is on the left side of the graph.)

The red curve at the bottom of *Figure 2.8* plots the maximum amount of UGR available for debt service under the CDL, i.e., five percent of the moving average of the UGR. The blue curve plots debt service for outstanding and authorized but unissued NSS debt. (Note the scale for those curves is on the right side of the graph.) The white space between the red and blue curves represents available but unused debt-service capacity under the CDL.

During the 10-year period from FY2001 to FY2010, UGR increased by 27.0 percent from $26.80 billion to $34.01 billion. The maximum amount of UGR available for debt service increased by 198.1 percent from $484.4 million in FY2001 to $1.44 billion in FY2010. The increase in the blue (Debt Service on Outstanding and Authorized but Unissued Debt) curve for 2008 results from the increased debt service required for the authorized but unissued NSS debt approved by the voters in the November 2007 general election.

## Chapter 3 - Debt Ratios in the Debt Capacity Model

An analysis of state debt ratios helps to assess the impact of bond issuances on the state's fiscal position. Credit rating agencies use ratios to evaluate the 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) computes 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.

**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue**
Ratio 1 is calculated by dividing NSS debt service by unrestricted general revenue (UGR). The Comptroller's January 2011 Biennial Revenue Estimate projections were used for DCM calculations. These projections indicate a decline in tax collections for the following five fiscal years when compared to the November 2009 Comptroller's Certification Revenue Estimate projections made in fiscal 2010. In addition, funds available for debt service are expected to increase during fiscal 2011 as a result of a slight projected increase in general revenue over the next five years.

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 legislatively determined by 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.

Target and cap limits for Ratio 1 provide the legislature with 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, a 3 percent cap to provide room for growth and flexibility and a maximum of 5 percent. Two percent is used as the target ratio because NSS debt service as a percent of UGR has historically been less than 2 percent.

*Figure 3.1* shows that the required annual debt-service amounts on issued, authorized and unissued and projected NSS debt will increase from $638.0 million in fiscal year 2011 to a peak in 2014 of $965.9 million. If UGR and debt-service appropriations match projections, debt service as a percentage of UGR will increase from 1.85 percent in fiscal year 2011 to a peak in 2014 of 2.61 percent. (Neither *Figure 3.1* nor Ratio 1 should be confused with the Constitutional Debt Limit (CDL) calculation. See Appendix E for further discussion of the CDL.)

Negative numbers in *Figure 3.1* indicate shortfalls in debt service when compared to the corresponding target, cap or maximum percentage. Beginning in 2012 debt service is expected to exceed the 2 percent target level but remain under the 3 percent cap ratio.

**Figure 3.1**
**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue, Fiscal Years 2011 to 2015**

| Fiscal Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Projected Unrestricted General Revenue | $ 35,004,591,324 | $ 35,926,762,718 | $ 36,873,575,107 | $ 38,292,027,544 | $ 39,986,346,713 |
| Not Self-Supporting | | | | | |
| **Annual Debt Service** | | | | | |
| Authorized and Issued Debt | $ 480,472,119 | $ 447,129,068 | $ 420,137,770 | $ 412,702,361 | $ 353,741,124 |
| Authorized and Unissued Debt | $ 157,557,543 | $ 286,054,870 | $ 381,225,095 | $ 457,925,769 | $ 461,903,048 |
| Projected Debt | $ - | $ 15,722,487 | $ 55,960,253 | $ 95,296,973 | $ 125,722,537 |
| Total Debt Service | $ 638,029,663 | $ 748,906,425 | $ 857,323,117 | $ 965,925,104 | $ 941,366,709 |
| Debt Service as a Percentage of Unrestricted General Revenue | | | | | |
| Authorized and Issued Debt | 1 39% | 1 28% | 1 17% | 1 11% | 0 92% |
| plus Authorized and Unissued Debt | 1 85% | 2 10% | 2 23% | 2 35% | 2 12% |
| plus Projected | 1 85% | 2 14% | 2 39% | 2 61% | 2 45% |
| Additional Debt-Service Capacity | | | | | |
| Target (2 0%) | $ 53,501,909 | $ (49,270,529) | $ (138,623,589) | $ (225,309,335) | $ (173,687,047) |
| Cap (3 0%) | $ 399,267,695 | $ 300,547,419 | $ 220,726,175 | $ 144,998,550 | $ 210,152,785 |
| Max (5 0%) | $ 1,090,799,267 | $ 1,000,183,316 | $ 939,425,702 | $ 885,614,319 | $ 977,832,447 |

SOURCE: Texas Bond Review Board.

It is important to note that *Figure 3.1* only considers the projected debt-service ratios for NSS debt for which the state's general revenue is required for repayment.

Ratio 1 of the DCM can be used to provide various scenarios to assess the impact of increasing or decreasing the debt-service capacity of general revenue special debt commitments. Special debt commitments consist of tuition revenue bonds (TRBs) for higher education and the Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) for public education. They are not state debt under statute but require general revenue for payment. The impacts of these payments on total debt capacity are shown in *Figure 3.2* and indicate that the state's maximum debt capacity of 5 percent under Ratio 1 is exceeded in fiscal 2012.

Ratio 1 resembles the CDL, but the latter includes certain items that are not included in Ratio 1. The major difference is the way in which debt service for the Higher Education Fund (HEF) bonds is calculated. Because HEF bonds are paid out of the annual HEF allocation, a General Revenue appropriation, the CDL calculation requires that the maximum amount of annual debt service needed for these bonds is included, but in practice less than a quarter of that debt service is actually required.

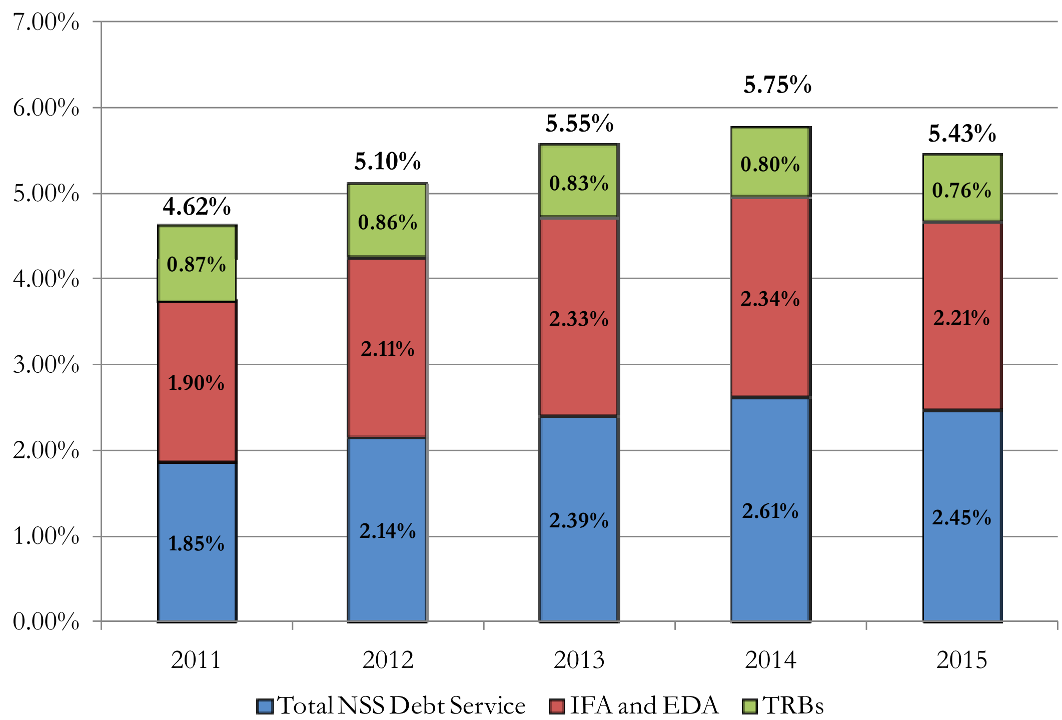
Another difference in the CDL calculation is the omission of certain debt service for Economically Distressed Areas Program (EDAP) bonds issued by the Texas Water Development Board (TWDB). Proceeds from the sale of the EDAP bonds are used to make loans or grants to local governments or other political 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 CDL calculation, the debt service on the 10 percent used for loans is assumed to be repaid from other revenue sources and is thus omitted from the CDL calculation.

Also, the CDL calculation for authorized but unissued debt assumes a single issue date for all debt, level debt service, a conservative interest rate (6 percent in recent fiscal years) and a 20-year maturity.

In comparison, Ratio 1 uses projections by each issuer to more accurately represent debt issuance timing, structure, interest rate and term.

Ratio 1 is 1.85 percent in fiscal year 2011 but increases to 4.63 percent with the addition of all special debt commitments and peaks at 5.75 percent in fiscal 2014. (See *Appendix C* for more information on the impact of special debt commitments.)

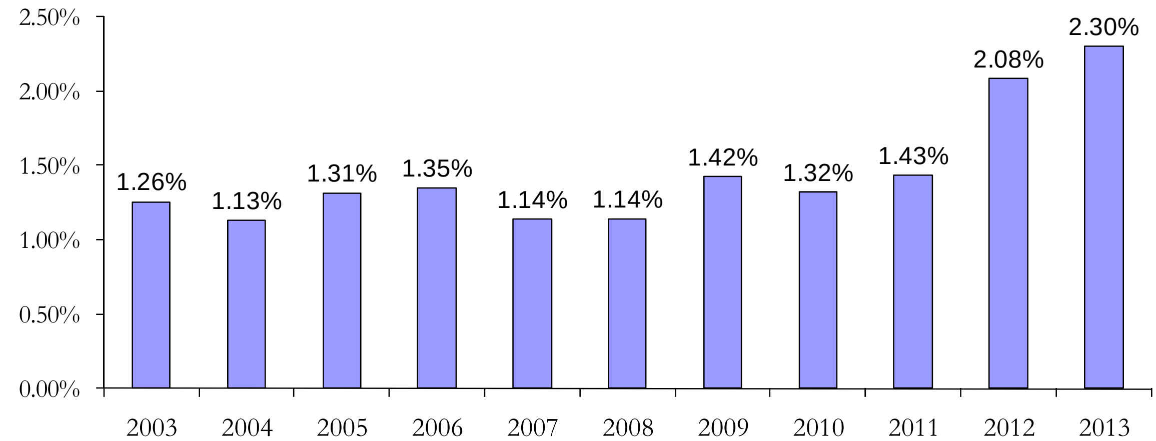
**Figure 3.2**
**Ratio 1: Debt Service Commitments as a Percentage of Unrestricted General Revenue**




**Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue**
This ratio is similar to Ratio 1 but is generally more restrictive because the amount of available general revenue in this ratio is limited to budgeted general revenue, a figure that is ordinarily less than UGR. Historically, Texas' NSS debt-service commitment has been less than 1.5 percent of budgeted general revenue as shown in *Figure 3.3*. UGR in Ratio 1 is based on a rolling three-year average (FY2009-2011) which has been lower than expected resulting in Budgeted General Revenue being higher than UGR and thus making Ratio 2 lower than Ratio 1.

Texas expended an average of 1.28 percent of budgeted general revenue for NSS debt service in fiscal years 2003-2011. Based on the amounts in the 2012-13 Introduced General Appropriations Bill (House Bill 1), NSS debt service as a percentage of budgeted general revenue is projected to be 2.08 percent and 2.30 percent for fiscal years 2012 and 2013, respectively (*Figure 3.3*).

**Figure 3.3**
**Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue, Fiscal Years 2003 to 2013**

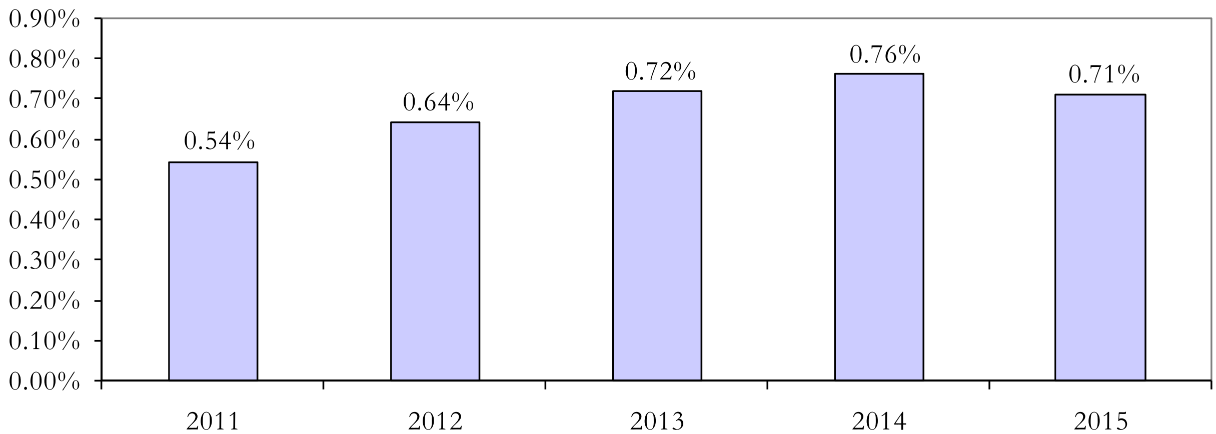



SOURCE: Texas Bond Review Board.

**Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income**
Ratio 3 is NSS debt divided by total personal income and is a direct indicator of a governmental borrower's ability to repay debt obligations by transforming personal income into revenues through taxation. This ratio plays a role in determining the state's credit ratings.

*Figure 3.4* shows that Ratio 3 ranges from 0.54 percent in 2011 to 0.71 percent for fiscal 2015. Standard and Poor's considers a debt burden of less than 3 percent to be low.

**Figure 3.4**
**Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income, Fiscal Years 2011 to 2015**




SOURCE: Texas Bond Review Board.

**Ratio 4: Not Self-Supporting Debt per Capita**
Ratio 4 is the amount of NSS debt divided by the state's population and measures the dollar amount of debt per person. Like Ratio 3, Ratio 4 plays a role in determining the state's credit rating.

Based on Legislative Budget Board population projections, the NSS debt per capita is expected to be $215.74 in fiscal 2011 and is projected to increase to $262.86 and $302.42 in fiscal 2012 and 2013, respectively (*Figure 3.5*). Standard & Poor's considers less than $1,000 of state debt per capita to be low.

Although tax-supported debt per capita and debt as a percent of personal income at the state level are low, it is important to note that Texas' local debt burden is relatively higher than other states. Among the nation's ten most populous states, Texas ranks second in population, ninth in state debt per capita but second in local debt per capita with an overall rank of fifth for total (state and local) debt per capita. Approximately 84.6 percent of total debt in Texas is held at the local level. See *Appendix F* for a comparison of Texas' debt with that of other states.

**Figure 3.5**
**Ratio 4: Not Self-Supporting Debt per Capita, Fiscal Years 2011 to 2015**


SOURCE: Texas Bond Review Board.

**Ratio 5: Rate of Debt Retirement**
The rate of debt retirement is calculated as Ratio 5 in the DCM. This rate measures the extent to which new debt capacity is created for future debt issuance. Annual debt service is higher in the earlier years for debt structured with level principal payments, but the more rapid principal amortization results in lower overall interest costs than those for level debt payments. Credit rating agencies use the rate of principal retirement for NSS debt as a measure of the state's debt capacity and have benchmarked a rate of 25% of the principal amount of 20-year maturities to be retired in five years and 50 percent in 10 years.

Of Texas' NSS debt, 46.4 percent will be retired in five years and 72.3 percent will be retired in 10 years (*See Figure 3.6)*. This rapid rate of debt retirement occurs primarily because the Texas Public Finance Authority, to date the state agency that issues most of the state's NSS debt, structures NSS debt service with level principal payments rather than level debt-service payments. The trend may change as the Texas Department of Transportation and TWDB issue a larger share of NSS debt with level debt-service.

Approximately 14.9 percent of Texas' self-supporting (SS) debt will be retired in five years and 32.1 percent of will be retired in 10 years. The slower rate of retirement for SS 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.

**Figure 3.6**
**Ratio 5: Rate of Debt Retirement in Five and 10 Years for Not Self-Supporting and Self-Supporting Debt**

| Ratio 5: Rate of Debt Retirement in | 5 Years | 10 Years |
|---|---|---|
| Not Self-Supporting Debt | 46.4% | 72.3% |
| Self Supporting Debt | 14.9% | 32.1% |

## Chapter 4 - Conclusion

The 80th Legislature mandated the Texas Bond Review Board, in consultation with the Legislative Budget Board, to prepare annually the state's Debt Affordability Study (DAS). The DAS and its Debt Capacity Model provide the state's policymakers, leadership and credit rating agencies with a comprehensive tool to evaluate current and proposed debt levels.

Statute requires the DAS to include a target and cap for Ratio 1, both of which can be adjusted as requested or as directed by the Legislature. Since Texas has historically appropriated less than 2 percent of its unrestricted general revenue (UGR) for not self-supporting (NSS) debt service, this study utilizes 2 percent as the target, 3 percent as the cap, and 5 percent as the max ratio in its analysis of the key ratio, NSS Debt Service as a Percentage of UGR (Ratio 1).

### Major Findings – Figure 4.1

- Additional debt-service capacity calculated for the Ratio 1 target of 2 percent (NSS debt as percentage of UGR) is \$53.5 million for fiscal 2011 and is negative for fiscal years 2012-2015. (see *Chapter 3 and Appendix C*)
- Additional debt-service capacity for Ratio 1 including Special Debt Commitments (TRBs, IFA, and EDA) is a negative \$905.2 million for the 2 percent target beginning in fiscal 2011 and rises to a negative of more than \$1.3 billion by fiscal 2015.
- Including Special Debt Commitments, total debt-service exceeds the 5 percent maximum of Ratio 1 beginning in fiscal 2012.
- Special Debt Commitments are projected to account for more than half of total debt service for fiscal years 2011-2015.
- NSS debt service will peak in fiscal 2014. (see *Chapter 3*)
- NSS debt as a percentage of personal income and debt per capita are below rating agency benchmarks through fiscal 2015, and the rate of debt retirement will remain above those benchmarks during the same period.

### Figure 4.1 - Summary of Ratios 1 – 5

| Fiscal Year | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue** | | | | | | | | | | |
| **NSS Debt Service** | | | | | | | | | | |
| Issued | \$ 480,472,119 | 1.39% | \$ 447,129,068 | 1.28% | \$ 420,137,770 | 1.17% | \$ 412,702,361 | 1.11% | \$ 353,741,124 | 0.92% |
| Authorized but Unissued | 157,557,543 | 0.46% | 286,054,870 | 0.82% | 381,225,095 | 1.06% | 457,925,769 | 1.24% | 461,903,048 | 1.20% |
| Projected | - | 0.00% | 15,722,487 | 0.04% | 55,960,253 | 0.16% | 95,296,973 | 0.26% | 125,722,537 | 0.33% |
| **Total NSS Debt Service** | \$ 638,029,663 | 1.85% | \$ 748,906,425 | 2.14% | \$ 857,323,117 | 2.39% | \$ 965,925,104 | 2.61% | \$ 941,366,709 | 2.45% |
| **Additional Debt-Service Capacity*** | | | | | | | | | | |
| Target (2%) | \$ 53,501,909 | 0.15% | \$ (49,270,529) | -0.14% | \$ (138,623,589) | -0.39% | \$ (225,309,335) | -0.61% | \$ (173,687,047) | -0.45% |
| Cap (3%) | \$ 399,267,695 | 1.15% | \$ 300,547,419 | 0.86% | \$ 220,726,175 | 0.61% | \$ 144,998,550 | 0.39% | \$ 210,152,785 | 0.55% |
| Max (5%) | \$1,090,799,267 | 3.15% | \$ 1,000,183,316 | 2.86% | \$ 939,425,702 | 2.61% | \$ 885,614,319 | 2.39% | \$ 977,832,447 | 2.55% |
| **Debt Service including Special Debt Commitments (SDC)** | | | | | | | | | | |
| NSS Debt Service | \$ 638,029,663 | 1.85% | \$ 748,906,425 | 2.14% | \$ 857,323,117 | 2.39% | \$ 965,925,104 | 2.61% | \$ 941,366,709 | 2.45% |
| Special Debt Commitments | 958,675,798 | 2.78% | 1,036,271,504 | 2.96% | 1,135,334,934 | 3.16% | 1,164,146,753 | 3.14% | 1,141,905,120 | 2.97% |
| **Total** | \$1,596,705,461 | 4.63% | \$ 1,785,177,929 | 5.10% | \$ 1,992,658,050 | 5.55% | \$ 2,130,071,857 | 5.75% | \$ 2,083,271,829 | 5.43% |
| **Additional Debt-Service Capacity*** (Includes SDC) | | | | | | | | | | |
| Target (2%) | \$ (905,173,889) | -2.62% | \$ (1,085,542,033) | -3.10% | \$(1,273,958,523) | -3.55% | \$(1,389,456,088) | -3.75% | \$(1,315,592,166) | -3.43% |
| Cap (3%) | \$ (559,408,103) | -1.62% | \$ (735,724,084) | -2.10% | \$ (914,608,759) | -2.55% | \$(1,019,148,203) | -2.75% | \$ (931,752,335) | -2.43% |
| Max (5%) | \$ 132,123,469 | 0.38% | \$ (36,088,188) | -0.10% | \$ (195,909,231) | -0.55% | \$ (278,532,434) | -0.75% | \$ (164,072,673) | -0.43% |
| **RATIO 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue** | 1.43% | | 2.08% | | 2.30% | | | | | |
| **RATIO 3: Not Self-Supporting Debt as a Percentage of Personal Income** | 0.54% | | 0.64% | | 0.72% | | 0.76% | | 0.71% | |
| **RATIO 4: Not Self-Supporting Debt Per Capita** | \$215.74 | | \$262.86 | | \$302.42 | | \$334.66 | | \$327.23 | |
| **Ratio 5: Rate of Debt Retirement in** | 5 Years | 10 Years | | | | | | | | |
| Not Self-Supporting Debt | 46.4% | 72.3% | | | | | | | | |
| Self-Supporting Debt | 14.9% | 32.1% | | | | | | | | |

* Debt-service capacity is the available capacity to meet target, cap or maximum percentages.
SOURCE: Texas Bond Review Board

## Appendix A - Methodology and the Debt Capacity Model

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 general revenue available for not self-supporting (NSS) debt service to show the effect of economic factors on additional debt capacity. The model uses information and projections for FY2011 through 2020 for general revenues, personal income and population changes. Scenario A (base scenario) uses a 10-year average for general revenues available for NSS debt service (i.e., 3.77 percent growth from FY2011-2020), a 10-year annual average for personal income (i.e., 5.60 percent growth from FY2011-2020) and a 10-year annual average for population change (i.e., 1.69 percent growth from FY2011-2020). 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 general revenues over the base scenario. Total personal income and population change are based on the highest annual growth in the 10-year period (FY2011-2020). Scenario C (negative scenario) assumes a 0.5 percent decrease relative to the base scenario in general revenues available for NSS debt service. Total personal income and population changes are based on the lowest rates in the 10-year period (FY2011-2020).

**Figure A1**
**Growth Rates of Economic Factors Used in the Debt Capacity Model**

| Economic Factor | Base Scenario (A) | Positive Scenario (B) | Negative Scenario (C) |
|---|---|---|---|
| Revenues Available for Debt Service, percent | 3.77 | 4.27 | 3.27 |
| Total Personal Income, percent | 5.60 | 6.53 | 4.23 |
| Population Change, percent | 1.69 | 1.80 | 1.60 |

SOURCE: Texas Bond Review Board.

**Revenues Available for Not Self-Supporting Debt Service**

Because a revenue forecast was required to determine the ratios calculated in the DCM, Table 11 from the *Texas Comptroller of Public Accounts 2010 Cash Report* was recreated and matched at the revenue object code level. The Comptroller's January 2011 Biennial Revenue Estimate was used for FY2011 through FY2013. Estimates for many revenue sources for FY2014 and later were based on the estimated average annual growth rate for each revenue object from FY2005 through FY2013 using actual FY2005 collections and the Comptroller's estimates for FY2013.

Some exceptions to this method must be noted. Sales tax growth was set at 5 percent annually after FY2013. Motor sales taxes were projected to grow at the combined rate of inflation and population. Cigarette tax revenues were adjusted to reflect the irregular collections cycle. Revenues from the natural gas tax and oil production tax were estimated using the Comptroller's winter 2010-11 forecast for natural gas and oil price and production. The estimate assumes no state inheritance tax after FY2010. Some of the minor revenue sources that were estimated by the Comptroller to have no growth between FY2011 through FY2013 were maintained at the FY2013 level throughout the forecast period. The revenue forecast does not include tax revenue deposited to the Property Tax Relief Fund because those revenues are statutorily dedicated.

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 - Debt Capacity – Ratio Analysis

The information presented in this appendix focuses on existing and projected debt issuances for NSS debt. Existing debt consists of both issued as well as authorized and unissued debt with a line item for each in the Ratio analyses.

*Figure B1* illustrates Ratio 1 (Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue) assuming current and projected debt levels for FY2011-2015. As discussed in Chapter 3, if no new debt is added to the existing or projected issuances, not self-supporting (NSS) debt service as a percentage of unrestricted general revenue will be less than 3 percent - ranging from 1.85 percent in FY2011 to a high of 2.45 percent in FY2015.

The report uses 2 percent as the target and 3 percent as the cap for Ratio 1. If all debt issuances projected to occur between FY 2011 and 2015 are issued, the 2 percent target for Ratio 1 would be exceeded in FY2012 (See *Appendix D* for a list of projected debt issuances). Under the 3 percent cap, an additional debt-service capacity of $399.3 million and $210.2 million would be available in FY2011 and FY2015, respectively.

The negative numbers shown below indicate the amount of the shortfalls in debt service capacity at the target, cap, and maximum levels. Beginning in 2012 debt service is expected to exceed the 2 percent target level but remain under the 3 percent cap ratio in Ratio 1. Debt service will peak in 2014.

**Figure B1**
**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue, Fiscal Years 2011 to 2015**

| Fiscal Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Projected Unrestricted General Revenue | $ 35,004,591,324 | $ 35,926,762,718 | $ 36,873,575,107 | $ 38,292,027,544 | $ 39,986,346,713 |
| Not Self-Supporting | | | | | |
| **Annual Debt Service** | | | | | |
| Authorized and Issued Debt | $ 480,472,119 | $ 447,129,068 | $ 420,137,770 | $ 412,702,361 | $ 353,741,124 |
| Authorized and Unissued Debt | 157,557,543 | 286,054,870 | 381,225,095 | 457,925,769 | 461,903,048 |
| Projected Debt | 0 | 15,722,487 | 55,960,253 | 95,296,973 | 125,722,537 |
| Total Debt Service | $ 638,029,663 | $ 748,906,425 | $ 857,323,117 | $ 965,925,104 | $ 941,366,709 |
| Debt Service as a Percentage of Unrestricted General Revenue | | | | | |
| Authorized and Issued Debt | 1.39% | 1.28% | 1.17% | 1.11% | 0.92% |
| plus Authorized and Unissued Debt | 1.85% | 2.10% | 2.23% | 2.35% | 2.12% |
| plus Projected | 1.85% | 2.14% | 2.39% | 2.61% | 2.45% |
| Additional Debt-service Capacity | | | | | |
| Target (2.0%) | $ 53,501,909 | $ (49,270,529) | $ (138,623,589) | $ (225,309,335) | $ (173,687,047) |
| Cap (3.0%) | $ 399,267,695 | $ 300,547,419 | $ 220,726,175 | $ 144,998,550 | $ 210,152,785 |
| Max (5.0%) | $ 1,090,799,267 | $ 1,000,183,316 | $ 939,425,702 | $ 885,614,319 | $ 977,832,447 |

SOURCE: Texas Bond Review Board.

The Debt Capacity Model (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 B2* shows the impact of new, NSS 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 2011 with first debt-service payments in February 2012. The examples also assume a 20-year repayment term with 6 percent interest and level principal payments.

**Figure B2**
**Impact of Additional Debt on Ratio 1**

| Fiscal Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| **Debt Service as a Percent of Unrestricted General Revenue** | | | | | |
| Actual | 1.85% | 2.14% | 2.39% | 2.61% | 2.45% |
| With $20M Project | 1.85% | 2.15% | 2.39% | 2.61% | 2.46% |
| With $250M Project | 1.85% | 2.22% | 2.46% | 2.68% | 2.52% |
| **Additional Debt-Service Capacity** | | | | | |
| **Target (2.0%)** | | | | | |
| Actual | $ 53,501,909 | $ (49,270,529) | $ (138,623,589) | $ (225,309,335) | $ (173,687,047) |
| With $20M Project | $ 53,501,909 | $ (51,370,529) | $ (140,763,589) | $ (227,389,335) | $ (175,707,047) |
| With $250M Project | $ 53,501,909 | $ (75,520,529) | $ (165,373,589) | $ (251,309,335) | $ (198,937,047) |
| **Cap (3.0%)** | | | | | |
| Actual | $ 399,267,695 | $ 300,547,419 | $ 220,726,175 | $ 144,998,550 | $ 210,152,785 |
| With $20M Project | $ 399,267,695 | $ 298,447,419 | $ 218,586,175 | $ 142,918,550 | $ 208,132,785 |
| With $250M Project | $ 399,267,695 | $ 274,297,419 | $ 193,976,175 | $ 118,998,550 | $ 184,902,785 |

SOURCE: Texas Bond Review Board.

The $20 million project has a small impact on the annual debt-service capacity – approximately 0.01 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 project would decrease annual debt-service capacity by $26.3 million in each fiscal year beginning in 2012, and Ratio 1 would rise from 1.85 percent in FY2011 to 2.52 percent in FY2015. Ratio 2 (Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue) would increase from 1.44 percent to 1.74 percent in FY2011.

*Figure B3* illustrates Ratio 3 (Not Self-Supporting Debt as a Percentage of Personal Income) for FY2011-2015. For this time period Texas will maintain a percentage of NSS debt to personal income from 0.54 percent in FY2011 to 0.71 percent in FY2015. This percentage increases by 31.5 percent over the five-year period due to projected debt issuances during the period for existing authority and additional debt authorized by the 80th Legislature and approved by the voters in November 2007. Even at 0.71 percent, the rating agencies consider the percentage to be low.

**Figure B3**
**Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income, Fiscal Years 2011 to 2015**

| Fiscal Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| **Not Self-Supporting Debt** | | | | | |
| Beginning Outstanding | $ 3,094,549,800 | $ 5,533,777,854 | $ 6,857,441,646 | $ 8,018,546,672 | $ 9,015,293,992 |
| Planned Issuances | 2,804,515,311 | 1,693,448,852 | 1,567,548,853 | 1,389,500,000 | 350,000,000 |
| Retirements - Existing Debt | 329,032,257 | 306,415,060 | 293,581,327 | 237,405,181 | 231,936,941 |
| Retirements - New Debt | 36,255,000 | 63,370,000 | 112,862,500 | 155,347,500 | 172,967,500 |
| **Ending Outstanding** | $ 5,533,777,854 | $ 6,857,441,646 | $ 8,018,546,672 | $ 9,015,293,992 | $ 8,960,389,550 |
| **Total Personal Income** | $ 1,023,731,599,000 | $ 1,067,007,160,000 | $ 1,114,386,262,000 | $ 1,182,872,903,000 | $ 1,257,942,145,000 |
| **Not Self-Supporting Debt as a Percentage of Personal Income** | 0 54% | 0 64% | 0 72% | 0 76% | 0 71% |
| with $20 million project | 0 54% | 0 64% | 0 72% | 0 76% | 0 71% |
| with $250 million project | 0 54% | 0 67% | 0 74% | 0 78% | 0 73% |

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 project is authorized and issued in September 2011, the NSS debt as a percentage of personal income would increase from 0.64 percent to 0.67 percent in FY2012 and from 0.71 percent to 0.73 percent in FY2015.

*Figure B4* illustrates the impact of the $20 million and $250 million projects on Ratio 4 (Not Self-Supporting Debt per Capita).

**Figure B4**
**Ratio 4: Not Self-Supporting Debt per Capita, Fiscal Years 2011 to 2015**

| Fiscal Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Not Self-Supporting Debt Outstanding | $ 5,533,777,854 | $ 6,857,441,646 | $ 8,018,546,672 | $ 9,015,293,992 | $ 8,960,389,550 |
| Projected Population | 25,650,312 | 26,088,226 | 26,514,267 | 26,938,777 | 27,382,153 |
| Not Self-Supporting Debt Per Capita | $ 215.74 | $ 262.86 | $ 302.42 | $ 334.66 | $ 327.23 |
| with $20 million project | $ 215.74 | $ 263.62 | $ 303.18 | $ 335.40 | $ 327.97 |
| with $250 million project | $ 215.74 | $ 272.44 | $ 311.85 | $ 343.94 | $ 336.36 |

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

The $250 million project was structured with level principal over the 20-year term and does not impact Ratio 5 (rate of debt retirement). For FY2011-2020, the NSS debt issued for the $250 million project is retired at a rate of 50 percent.

## Appendix C - Special Debt Commitments – TRBs, EDA and IFA

Two distinct versions of Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted Revenue have been computed. The first considers only debt service for not self-supporting (NSS) debt for which the state is legally obligated. The second shows the impact of special debt commitments on the DCM ratios for which the state appropriates debt service. They include tuition revenue bonds (TRBs) for higher education and the Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) for public schools. The following tables provide policymakers with metrics to review not only the impact of NSS debt but also the impact of these special debt commitments 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:

Tuition Revenue Bonds (TRBs)

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 used general revenue to reimburse the universities for debt service for these bonds. House Bill 153 passed during the 79th Legislature's Third Called Session (2005) authorized $1.8 billion for TRBs.

Instructional Facilities Allotment (IFA)

The IFA program was authorized in House Bill 1 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 became effective on September 1, 1997 and 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).

Existing Debt Allotment (EDA)

In 1999, the 76th Legislature added Subchapter B to Chapter 46 of the Texas Education Code to create the EDA. The EDA is similar to the 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." Legislative action each session updated the years defining qualifying debt to include debt through the last year of the biennium. 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 a level of $0.29 per $100 of valuation. Currently, the guaranteed yield for EDA provides $35 per student in average daily attendance (ADA) per penny of tax effort.

The eligibility date for the EDA program was amended by the passage of House Bill 3646, 81st Legislature. Section 76 of the bill changed the Texas Education Code §46.033 to provide a permanent roll-forward provision to establish bond eligibility for the EDA program. The amendments to the section deleted the eligibility dates in the statute and replaced those dates with references to the last year of the preceding biennium. As a result, bonds that have been issued during a biennium, with the first payment made during that biennium, will become automatically eligible for the EDA in the following biennium without the need for legislative action.

EDA funding is shared between state and local resources. The amount of state aid on eligible bonds during the coming biennium (2011–12 and 2012–13) will be determined by the 2010–11 Interest and Sinking tax collections. If a district's 2010–11 tax rate did not include tax effort for newly eligible bonds, it is possible the district may not receive EDA funding for those bonds until the 2013–14 school year, depending on local circumstances.

The EDA program operates without applications and has no award cycles. Instead, the program is based on a statutory definition of eligible debt, presently determined by the first payment of debt service in accordance with Texas Education Code §46.033. Refunding bonds as defined by Texas Education Code §46.007 are also eligible for EDA assistance. 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.

By statute, both EDA and IFA have a higher priority for appropriations than any other program funded under the Foundation School Program. The Foundation School Program, of which state support for school district bond indebtedness are a part, contains additional revenue source not included in the definition of unrestricted General Revenue that are available to fund the state's obligations for EDA and IFA. These sources include lottery proceeds (GR), the Property Tax Relief Fund, and school district recapture payments. *Figure C1* 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 C1**
**Annual Debt-Service Payments for Special Debt Commitments, Fiscal Years 2011 to 2015**

| Commitment | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| **Special Debt** | | | | | |
| Outstanding Tuition Revenue Bonds* | $ 281,007,875 | $ 280,116,561 | $ 280,069,156 | $ 276,772,805 | $ 272,983,134 |
| Authorized but Unissued Tuition Revenue Bonds* | $ 19,424,394 | $ 19,426,125 | $ 19,424,750 | $ 19,427,200 | $ 19,427,100 |
| Instructional Facilities Allotment | $ 361,681,861 | $ 374,915,812 | $ 391,167,784 | $ 391,458,281 | $ 380,745,076 |
| Existing Debt Allotment | $ 296,561,668 | $ 361,813,006 | $ 444,673,244 | $ 476,488,467 | $ 468,749,810 |
| **Total Debt Service** | **$ 958,675,798** | **$ 1,036,271,504** | **$ 1,135,334,934** | **$ 1,164,146,753** | **$ 1,141,905,120** |

* Amount for fiscal years 2012 and 2013 are based on the introduced House Bill 1, 2011 Regular Session.
SOURCE: Texas Bond Review Board and Legislative Budget Board.

*Figure C2* summarizes Ratio 1 for fiscal years 2011 through 2015. The negative numbers indicate shortfalls in debt service when compared to the corresponding target, cap or maximum percentage. Excluding special debt commitments for Ratio 1, NSS Annual Debt Service exceeds the target capacity of 2 percent in 2012. With the addition of special debt commitments, debt service exceeds the maximum 5 percent in 2012.

# Figure C2
# Impact of Special Debt Commitments on Ratio 1, Fiscal Years 2011 to 2015

| Fiscal Year | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue** | | | | | | | | | | |
| **NSS Debt Service** | | | | | | | | | | |
| Issued | $ 480,472,119 | 1.39% | $ 447,129,068 | 1.28% | $ 420,137,770 | 1.17% | $ 412,702,361 | 1.11% | $ 353,741,124 | 0.92% |
| Authorized but Unissued | 157,557,543 | 0.46% | 286,054,870 | 0.82% | 381,225,095 | 1.06% | 457,925,769 | 1.24% | 461,903,048 | 1.20% |
| Projected | - | 0.00% | 15,722,487 | 0.04% | 55,960,253 | 0.16% | 95,296,973 | 0.26% | 125,722,537 | 0.33% |
| **Total NSS Debt Service** | $ 638,029,663 | 1.85% | $ 748,906,425 | 2.14% | $ 857,323,117 | 2.39% | $ 965,925,104 | 2.61% | $ 941,366,709 | 2.45% |
| **Additional Debt-Service Capacity*** | | | | | | | | | | |
| Target (2%) | $ 53,501,909 | 0.15% | $ (49,270,529) | -0.14% | $ (138,623,589) | -0.39% | $ (225,309,335) | -0.61% | $ (173,687,047) | -0.45% |
| Cap (3%) | $ 399,267,695 | 1.15% | $ 300,547,419 | 0.86% | $ 220,726,175 | 0.61% | $ 144,998,550 | 0.39% | $ 210,152,785 | 0.55% |
| Max (5%) | $ 1,090,799,267 | 3.15% | $ 1,000,183,316 | 2.86% | $ 939,425,702 | 2.61% | $ 885,614,319 | 2.39% | $ 977,832,447 | 2.55% |
| **Debt Service including Special Debt Commitments** | | | | | | | | | | |
| NSS Debt Service | $ 638,029,663 | 1.85% | $ 748,906,425 | 2.14% | $ 857,323,117 | 2.39% | $ 965,925,104 | 2.61% | $ 941,366,709 | 2.45% |
| Special Debt Commitments | 958,675,798 | 2.78% | 1,036,271,504 | 2.96% | 1,135,334,934 | 3.16% | 1,164,146,753 | 3.14% | 1,141,905,120 | 2.97% |
| **Total** | $ 1,596,705,461 | 4.63% | $ 1,785,177,929 | 5.10% | $ 1,992,658,050 | 5.55% | $ 2,130,071,857 | 5.75% | $ 2,083,271,829 | 5.43% |
| **Additional Debt-Service Capacity*** (Includes SDC) | | | | | | | | | | |
| Target (2%) | $ (905,173,889) | -2.62% | $ (1,085,542,033) | -3.10% | $(1,273,958,523) | -3.55% | $(1,389,456,088) | -3.75% | $(1,315,592,166) | -3.43% |
| Cap (3%) | $ (559,408,103) | -1.62% | $ (735,724,084) | -2.10% | $ (914,608,759) | -2.55% | $(1,019,148,203) | -2.75% | $ (931,752,335) | -2.43% |
| Max (5%) | $ 132 123 469 | 0.38% | $ (36 088 188) | -0.10% | $ (195 909 231) | -0.55% | $ (278 532 434) | -0.75% | $ (164 072 673) | -0.43% |

# Appendix D - Constitutional Debt Limit

## 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, 2010 the Constitutional Debt Limit (CDL) percentage for not self-supporting (NSS) debt outstanding was 1.36 percent and 4.10 percent including both outstanding and authorized but unissued debt.

Based on the authorizations for which the approximate issuance date is known, an estimated $7.81 billion in new, NSS debt is expected to be issued between fiscal years 2011 to 2015 and are included in each of the ratio analyses. This debt is comprised of the following items:

- $5.00 billion in General Obligation (GO) debt, related to Proposition 12 for transportation projects (TTC);
- $1.41 billion in GO debt, related to Proposition 15 for cancer research (TPFA);
- $679.0 million in GO debt for capital projects for certain state agencies (TPFA), including Proposition 4 authorization;
- $250.0 million in GO bonds for the Texas Water Development Board EDAP Series;
- $204.6 million in GO bonds for the Texas Water Development Board WIF Series;
- $179.5 million in GO bonds for the Texas Water Development Board State Participation Series; and
- $78.8 million in GO bonds for the Higher Education Assistance Fund.

## Factors Affecting the Constitutional Debt Limit

Four main factors impact the CDL percentage. The first and most apparent is the level of outstanding NSS debt service. Assuming all other variables are held constant, the CDL varies directly with the amount of NSS debt service to be paid.

The second factor is the inverse relationship between Unrestricted General Revenue (UGR) and the CDL, i.e., as UGR increases, the CDL percentage decreases and vice-versa. Because the calculation uses the average of UGR over the previous three years, the impact of a substantial change in UGR for one year is reduced.

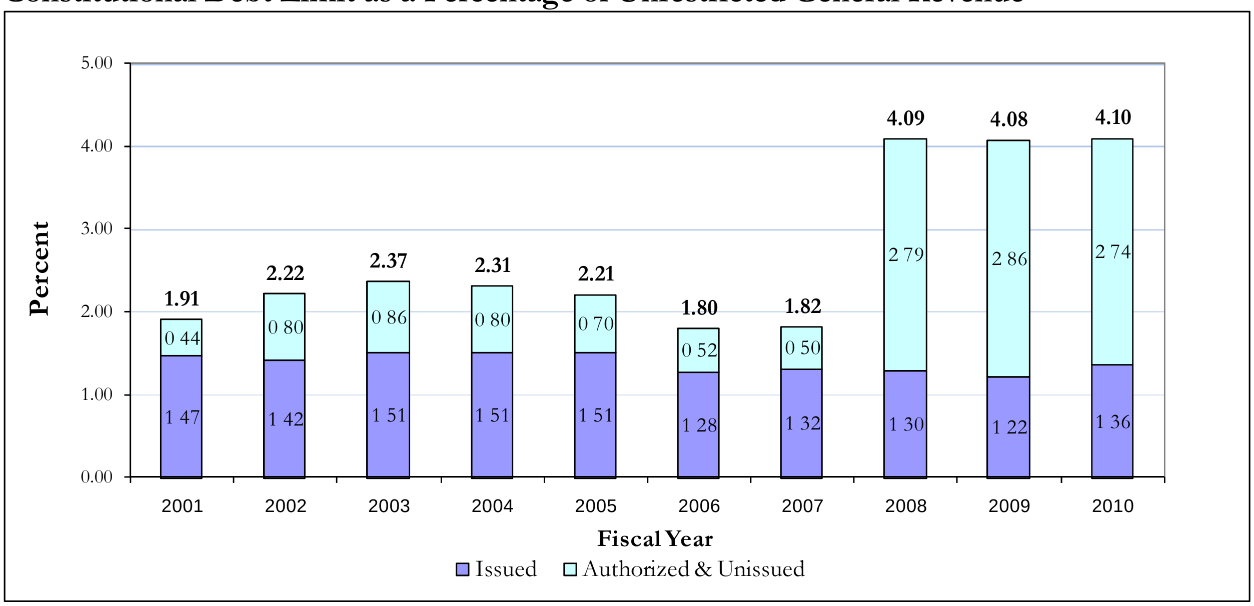
The third factor is the estimate of debt service for the authorized but unissued NSS debt. Debt-service amounts vary directly with interest rates, and a conservative rate of 4.5 percent was used for the Master Lease Purchase Program and 6 percent for all other authorized and unissued debt. In addition, debt service varies inversely with the debt-amortization period, and a conservative maturity of 20 years is used.

The impact of the fourth factor is determined by legislative action. The Constitution provides that debt service for NSS debt reasonably expected to be paid from other revenue sources and not expected to create a general revenue draw is excluded from the CDL calculation. Thus NSS debt is excluded from the CDL percentage if it becomes self-supporting (SS) through legislative action that provides debt-service support from an adequate revenue stream. For example, without a stated revenue stream for debt service, the $5 billion transportation authorization approved by the 80th Legislature and later approved by voters in the November 2007 general election is defined as NSS debt but would be reclassified to SS if legislative action provided it with a dedicated revenue stream for debt service.

Another less important factor that impacts the CDL is the effect of debt reclassifications from NSS to SS debt. Reclassifications occurred for the first time in fiscal 2010 when seven series consisting of Texas Water Development Board State Participation Program and Water Infrastructure Fund debt was reclassified from NSS to SS. The impact of these reclassifications on the CDL was approximately 6 basis points.

*Figure D1* shows the CDL percentages from FY2001-2010. For FY2010 the CDL percentage was 1.36 for issued debt and 4.10 for issued and authorized but unissued debt.

**Figure D1**
**Constitutional Debt Limit as a Percentage of Unrestricted General Revenue**




SOURCE: Texas Bond Review Board.

## Calculation of the Constitutional Debt Limit

The CDL is calculated by dividing: 1) the total annual debt service for the fiscal year with the highest debt service for issued not self-supporting (NSS) debt, plus 2) an estimate of the projected annual debt service for one fiscal year for authorized but unissued NSS debt under the assumptions of an interest rate of 6 percent and 20-year maturity with level debt-service payments, by the average of UGR from the preceding three fiscal years. The Constitution prohibits the legislature from authorizing additional state debt if this calculation yields a percentage greater than five percent.

Calculation of the CDL requires the use of three components of state debt (see *Figures D2* through *D4*):

- *Unrestricted General Revenue*
- *Debt Service on Outstanding Debt*
- *Debt Service for Authorized But Unissued Debt*

*Unrestricted General Revenue*

UGR is the net amount of general revenue remaining after deducting all constitutional allocations and other restricted revenue from total general revenue. The UGR figure can be found in Table 11 in the *Comptroller's Annual Cash Report*. The average UGR was $35.20 billion for fiscal years 2008, 2009 and 2010. Thus the maximum amount available for debt service is five percent of $35.20 billion, or $1.76 billion (*Figure D2*).

**Figure D2**
**Unrestricted General Revenue**

| **Unrestricted General Revenue (amounts in thousands)** | |
|---|---|
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/08) | $ 36,866,229 |
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/09) | 34,711,114 |
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/10) | 34,014,030 |
| Average Amount of Unrestricted General Revenue Available for the three preceding Fiscal Years | **$ 35,197,124** |

*Debt Service on Outstanding Debt*

The Debt Service on the outstanding debt portion of the CDL calculation uses debt service for the peak year for GO and non-general obligation NSS debt. Due to debt service amortizations and staggered issuances, the peak year usually occurs within five years of the current year. For the August 31, 2010 CDL the peak debt service year is 2011 (*Figure D3*).

**Figure D3**
**Not Self-Supporting Debt-Service Requirements of Texas State Debt by Fiscal Year**

**NOT SELF-SUPPORTING DEBT-SERVICE REQUIREMENTS OF TEXAS STATE DEBT BY FISCAL YEAR**
**(amounts in thousands)**

| | **2011** | **2012** | **2013** | **2014** | **2015** | **2016 & beyond** |
|---|---|---|---|---|---|---|
| **Not Self-Supporting**[1] | | | | | | |
| **General Obligation Debt** | | | | | | |
| Higher Education Constitutional Bonds [2] (HEF) | $10,332 | $10,336 | $10,328 | $10,314 | $7,459 | $7,726 |
| Texas Public Finance Authority Bonds | 306,950 | 276,708 | 258,287 | 257,418 | 224,459 | 1,199,719 |
| Park Development Bonds | 1,968 | 1,919 | 1,878 | 1,830 | 1,781 | 6,000 |
| Agriculture Water Conservation Bonds | 0 | 0 | 0 | 0 | 0 | 0 |
| Texas Public Finance Authority - CPRIT | 21,563 | 21,938 | 21,375 | 20,813 | 20,250 | 236,250 |
| Water Development Bonds - EDAP [3] | 18,198 | 18,226 | 18,145 | 18,122 | 18,073 | 156,102 |
| Water Development Bonds - State Participation | 4,644 | 2,139 | 2,119 | 2,104 | 2,089 | 46,673 |
| Water Development Bonds - WIF | 35,445 | 34,959 | 34,413 | 33,865 | 33,324 | 413,322 |
| **Total General Obligation Debt** | **$399,098** | **$366,224** | **$346,544** | **$344,465** | **$307,435** | **$2,065,793** |
| **Non-General Obligation Debt** | | | | | | |
| Texas Public Finance Authority Bonds | $55,181 | $57,069 | $51,101 | $50,239 | $30,076 | $79,942 |
| TPFA Master Lease Purchase Program | 16,704 | 14,458 | 13,228 | 12,518 | 11,112 | 56,338 |
| Texas Military Facilities Commission Bonds | 1,985 | 1,988 | 1,980 | 1,974 | 1,674 | 11,353 |
| Parks and Wildlife Improvement Bonds | 7,504 | 7,390 | 7,284 | 3,507 | 3,445 | 13,209 |
| **Total Non-General Obligation Debt** | **$81,374** | **$80,905** | **$73,594** | **$68,238** | **$46,306** | **$160,843** |
| **Total Not Self-Supporting** | **$480,472** | **$447,129** | **$420,138** | **$412,702** | **$353,741** | **$2,226,635** |

[1] Bonds that are not self-supporting (general obligation and non-general obligation) depend solely on the state's general revenue for debt service.

[2] While not explicitly a general obligation or full faith and credit bond, the revenue pledge contained in Constitutional Bonds has the same effect. Debt service is paid from annual constitutional appropriation to qualified institutions of higher education from first monies coming into the state treasury not otherwise dedicated by the Constitution.

[3] Economically Distressed Areas Program (EDAP) bonds do not depend totally on the state's general revenue fund for debt service.

**Source:** Texas Bond Review Board - Bond Finance Office.

As of August 31, 2010, debt service for issued debt will require 1.36 percent of the average of UGR for the prior three fiscal years.

*Debt Service for Authorized but Unissued Debt*

The CDL calculation for authorized but unissued debt is based on the debt-service requirement for one fiscal year for all authorized but unissued debt assuming that the debt is issued at the same time, matures in 20 years and amortizes with level debt-service payments. *Figure D4* illustrates the principal amounts used for the CDL calculation for authorized and unissued debt as of August 31, 2010.

**Figure D4**
**Authorized but Unissued Not Self-Supporting Debt**

| Not Self-Supporting Program Name | General Obligation Authorization | | |
|---|---|---|---|
| | Constitutional Authorization | Statutory Authorization | Total Authorized but Unissued (amounts in thousands) |
| Agricultural Water Conservation Bonds | Article III Section 50-d | Texas Water Code, Chapter 15, Subchapters G, H, I & J | $164,840 |
| Higher Education Constitutional Bonds (HEF) | Article VII Section 17 | No bond issuance limit, but debt service may not exceed $131.25 | ** |
| Texas Public Finance Authority | Article III 49-h, 49-h(a), 49-h-(c)(1), 49-h-(d)(1), 49-h(e)(1), 50-f, 49-l, 50-g, 67 | | 3,536,743 |
| Transportation Commission GO Transportation Bonds | Article III Section 49-p | Transportation Code, Section 222.04 | 5,000,000 |
| Water Development Bonds - EDAP [1] | Article III Sections 49-d-7 & 40-d-10 | Texas Water Code, Chapter 17, Subchapter K | 236,854 |
| Water Development Bonds - State Participation [2] | Article III Sections 49-c, 49-d, 49-d-2, 49-d-6 thru 49-d-9 | Texas Water Code, Chapter 16, Subchapters E & F, Chapter 17 | 179,466 |
| Water Development Bonds - WIF [2] | Article III Sections 49-d-8 & 49-d-9 | Texas Water Code, Chapter 15, Subchapter Q | 204,599 |
| **Total General Obligation Authorized But Unissued** | | | **$9,322,503** |
| | **Revenue Authorization** | | |
| Texas Public Finance Authority Bonds | | Texas Government Code, Sections 1232.104, 1232.110; Senate Bill 1, 81st Leg. RS, p. II-93, Rider 33 | $158,857 |
| TPFA Master Lease Purchase Program | | Texas Government Code, Section 1232.103 | 52,410 |
| Texas Military Facilities Commission Bonds | No issuance limit has been set by the Texas Constitution. | Bonds may be issued by the agency without further authorization by the Legislature. However, bonds may not be issued without the approval of the Bond Review Board and the Attorney General. | ** |
| Parks and Wildlife Improvement Bonds | | | 0 |
| **Total Revenue Authorized But Unissued** | | | **211,267** |
| **Total Not Self-Supporting** | | | **$9,533,769** |

[1] Economically Distressed Areas Program (EDAP) bonds do not depend totally on the state's general revenue fund for debt service.
[2] State Participation and WIF bonds authorized with appropriations under the 81st Legislature will expire August 31, 2011.

As of August 31, 2010, debt service for authorized but unissued debt will require 2.74 percent of UGR for the prior three fiscal years.

*Completing the CDL Calculation*

For fiscal 2010 the CDL for both debt classifications was computed by adding the 1.36 percent computed for debt service on outstanding debt plus the 2.74 percent computed for debt service on authorized but unissued debt to obtain the total of 4.10 percent.

*Calculation detail for the CDL for the fiscal 2010*

*Figure D5* illustrates the calculations made for fiscal 2010.

*Additional debt capacity under the CDL*

At the end of fiscal 2010, BRB staff estimates that slightly more than $3.6 billion in additional debt capacity was available before reaching the Constitutional Limit. However, since the actual issuance of debt classified as authorized but unissued lowers the CDL, the issuance of $1.0 billion of Proposition 12 debt for the Texas Department of Transportation during fiscal 2011, coupled with a decrease in projected debt service as a result of debt service-payments in fiscal year 2011, staff expects the legal capacity to increase at fiscal year-end 2011.

## Figure D5
## Constitutional Debt Limit Calculation

**Constitutional Debt Limit - Article III Section 49-j**
**Based on estimated Debt Outstanding as of 8/31/10**
**(All figures are thousands, except percentages)**

| **Maximum Annual Debt Service on Outstanding Debt *** | **Authorized Debt** | **Debt Service** | **Percentage of UGR** |
|---|---|---|---|
| Debt Service on Bonds Payable from the General Revenue Fund | | | |
| General Obligation Bonds (Not Self-Supporting) | | 399,098 | |
| (10 % of EDAP Considered Self-Supporting) | | (1,820) | |
| Non-General Obligation Bonds (Not Self-Supporting) | | 64 676 | |
| | | 461,954 | |
| Debt Service on Commercial Paper Payable from the General Revenue Fund | | | |
| TPFA MLPP Commercial Paper ($96 6 million MLPP outstanding)*** | | 16,704 | |
| Lease-Purchase Payments Greater Than $250,000 Payable from the General Revenue Fund | | - | |
| Total Debt Service on Outstanding Debt Payable from the General Revenue Fund | | 478,658 | **1.36%** |
| **Authorized but Unissued Debt** | | | |
| General Obligation Bonds (Not Self-Supporting) | 9,322,503 | | |
| (10 % of EDAP Considered Self-Supporting) | (23,685) | | |
| Non-General Obligation Bonds (Not Self-Supporting) excluding MLPP | 158,857 | | |
| Total Authorized but Unissued Bonds Payable from the General Revenue Fund | 9,457,674 | | |
| Estimated Debt Service on Authorized but Unissued Bonds Payable from the General Revenue Fund ** | | $824,563 13 | |
| Estimated Debt Service on HEF Bonds Payable from the General Revenue Fund | | 120,918 | |
| Amount of Authorized but Unissued MLPP Commercial Paper | 52,410 | | |
| Estimated Debt Service on MLPP Commercial Paper**** | | 19,828 | |
| Total Debt Service on Authorized but Unissued Debt Payable from the General Revenue Fund | | 965,310 | **2.74%** |
| **Debt Service on Outstanding and Authorized but Unissued Debt** | | 1,443,968 | **4.10%** |
| **Unrestricted General Revenue** | | | |
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/08) | 36,866,229 | | |
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/09) | 34,711,114 | | |
| General Revenue Available After Constitutional Dedications (Year Ending 8/31/10) | 34,014,030 | | |
| Average Amount of Unrestricted General Revenue Available for the three preceding Fiscal Years | 35,197,124 | | |
| **Debt Limit Percentages** | | | |
| Debt Service on Outstanding Debt as a Percentage of Unrestricted General Revenue | | **1.36** | |
| Debt Service on Authorized but Unissued Debt as a Percentage of Unrestricted General Revenue | | **2.74** | |
| Debt Service on Outstanding and Authorized but Unissued Debt as a Percentage of General Revenue After Constional Dedications (**The Constitutional Debt Limit**) | | **4.10** | |

Notes:
* Debt service is based on maximum annual debt service payable from general revenue
The maximum amount occurs in FY 2011
** Estimated debt service assumes 20 year, level debt service financing @ 6 0%
*** Amortization provided by TPFA
**** Interest rate provided by TPFA

## Appendix E - State Debt Overview and Debt Outstanding

As the state's debt oversight agency, the Texas Bond Review Board (BRB) approves state debt issues and lease purchases that have an initial principal amount greater than $250,000 or a term longer than five years excluding the approval of Permanent University Fund debt and Tax and Revenue Anticipation Notes.

Texas has nineteen state agencies and institutions of higher education, as well as 3 non-profit corporations authorized to issue debt (*Figure E1*). For detail on state debt outstanding, see *Figure E2*.

**Figure E1**
**State Debt Issuers**

| | |
|---|---|
| Midwestern State University | Texas State Affordable Housing Corporation |
| Office of Economic Development and Tourism | Texas State Technical College System |
| Stephen F. Austin State University | Texas State University System |
| Texas Department of Agriculture | Texas Tech University System |
| Texas Department of Housing and Community Affairs | Texas Veterans Land Board (General Land Office) |
| Texas Department of Transportation | Texas Water Development Board |
| Texas Higher Education Coordinating Board | Texas Woman's University |
| Texas Private Activity Bond Surface Transportation Corp | The Texas A&M University System |
| Texas Public Finance Authority | The University of North Texas System |
| Texas Public Finance Authority Charter School Finance Corp | The University of Texas System |
| Texas Southern University | University of Houston System |

SOURCE: Texas Bond Review Board.

The Texas Public Finance Authority (TPFA) is authorized to issue debt on behalf of twenty state agencies and three universities as well as for specific projects as authorized by the legislature. TPFA issues a significant portion of the state's not self-supporting (NSS) payable from general revenue and administers the state's Master Lease Purchase Program. Although TPFA has issued most of the state's NSS debt, the Texas Transportation Commission is projected to become the largest issuer of such debt.

**Types of Debt Used by the State of Texas**

General Obligation (GO) debt is legally secured by a constitutional pledge of the first monies coming into the State Treasury not constitutionally dedicated for another purpose and must be approved by a 2/3 vote of both houses of the legislature and a majority of the voters. GO debt may be issued in installments as determined by the legislatively appropriated debt service or by the issuing agency or institution and often has a 20-year maturity with level principal payments. The final maturity may depend on the useful life of the project to be financed. Examples include GO bonds issued by the TPFA to finance correctional and mental health facilities and GO bonds issued by the Veterans Land Board to finance land and housing loans to qualified veterans.

Revenue debt is legally secured by a specific revenue source(s), does not require voter approval and usually has a 20-year final maturity depending on the project to be financed. Examples include State Highway Fund bonds issued by the Texas Department of Transportation secured by the motor fuels tax and other revenues for construction and maintenance of the state's highway system, and bonds issued by institutions of higher education secured by tuition and fees used to finance projects such as classroom facilities, dormitories and other university buildings.

Commercial Paper (CP) is a short-term debt obligation with a maturity between 1 and 270 days. A CP program can be secured by the state's general obligation pledge or by a specified revenue source(s). A CP program secured by the state's general obligation pledge must be initially approved by 2/3 vote of both houses and a majority of the voters. When CP matures it can either be rolled-over (reissued) or refinanced (repaid) with long-term debt. Examples include CP issued by TPFA to finance its Master Lease Purchase Program and CP issued to finance the early stages of construction projects.

Tax and Revenue Anticipation Notes (TRAN) are issued by the Comptroller of Public Accounts - Treasury Operations to address cash flow shortfalls caused by the timing mismatch of revenues and expenditures in the general revenue fund. TRANs must be repaid by the end of the biennium in which they are issued but are usually repaid by the end of each fiscal year with tax receipts and other revenues of 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.

Lease purchases finance the purchase of an asset over time through lease payments that include principal and interest. They can be financed through a private vendor or through one of the state's pool programs such as TPFA's Master Lease Purchase Program. Lease purchase financings include purchases such as automobiles, computers, data/telecommunications equipment and equipment purchased for energy savings performance contracts.

Self-Supporting (SS) debt is repaid from revenues other than state general revenues. SS debt can be either GO or revenue debt. Examples of SS GO debt include Veterans Land Board bonds that are repaid from loan payments made by qualified veterans and related interest earnings, and GO bonds issued by the Texas Water Development Board that are repaid with loan payments made by political subdivisions for water projects and related interest earnings. Examples of SS revenue debt include bonds issued by institutions of higher education that are repaid from tuition, fees and other revenues generated by colleges and universities.

NSS debt is intended to be repaid with state general revenues. NSS debt can be either GO debt or revenue debt. NSS GO debt is included in the Constitutional Debt Limit. Examples of NSS GO debt include TPFA bonds to finance correctional and mental health facilities. Examples of NSS revenue debt include TPFA bonds to finance parks and wildlife improvements.

The legislature periodically authorizes Tuition Revenue Bonds (TRB) 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 TRBs. As a result TRBs are considered to be SS for the purposes of the DAS.

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

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). For taxexempt bonds issued after 1986, federal tax law allows only one advance refunding but places no limit on the number of current refundings for an issue.

**Figure E2**
**Total Debt Outstanding, Fiscal Year 2010**

| Debt Type | Amount |
|---|---|
| **General Obligation Debt** | |
| Veterans' Land and Housing Bonds | $1,970,203 |
| Water Development Bonds | 900,855 |
| Water Development Bonds - State Participation | 139,585 |
| Water Development Bonds - WIF | 230,125 |
| Economic Development Bank Bonds | 45,000 |
| College Student Loan Bonds | 746,380 |
| Texas Agricultural Finance Authority | 9,000 |
| Texas Mobility Fund Bonds | 6,097,325 |
| Texas Public Finance Authority - TMVRLF | 49,595 |
| **Total - Self-Supporting** | **$10,188,068** |
| Higher Education Constitutional Bonds (HEF) | $49,255 |
| Texas Public Finance Authority Bonds | 1,830,410 |
| Cancer Prevention and Research Institute of Texas | 225,000 |
| Park Development Bonds | 12,745 |
| Agriculture Water Conservation Bonds | 0 |
| Water Development Bonds - EDAP | 174,375 |
| Water Development Bonds - State Participation | 38,480 |
| Water Development Bonds - WIF | 383,580 |
| **Total - Not Self-Supporting** | **$2,713,845** |
| **Total - General Obligation Debt** | **$12,901,913** |
| **Non-General Obligation Debt** | |
| PUF - The Texas A&M University System | $611,895 |
| PUF - The University of Texas System | 1,736,380 |
| College and University Revenue Bonds | 9,487,043 |
| Texas Dept of Housing and Community Affairs Bonds | 2,663,799 |
| Texas State Affordable Housing Corporation | 600,796 |
| Texas PAB Surface Transportation Corporation | 1,015,000 |
| Texas Small Business I D C Bonds | 60,000 |
| Economic Development Program | 11,500 |
| Texas Water Resources Finance Authority Bonds | 0 |
| College Student Loan Bonds | 0 |
| Texas Department of Transportation Bonds - CTTS | 2,538,949 |
| Texas Workers' Compensation Fund Bonds | 0 |
| Veterans' Financial Assistance Bonds | 23,210 |
| TPFA Charter School Finance Corporation* | 236,955 |
| Texas Workforce Commission Unemp Comp Bonds | 0 |
| State Highway Fund | 4,252,655 |
| Water Development Board Bonds - State Revolving Fund | 1,296,588 |
| **Total - Self-Supporting** | **$24,534,770** |
| Texas Public Finance Authority Bonds | $232,350 |
| TPFA Master Lease Purchase Program | 96,635 |
| Texas Military Facilities Commission Bonds | 16,105 |
| Parks and Wildlife Improvement Bonds | 35,615 |
| **Total - Not Self-Supporting** | **$380,705** |
| **Total - Non-General Obligation Debt** | **$24,915,475** |
| **Total - Debt Outstanding** | **$37,817,388** |

*Includes only debt authorized by the Bond Review Board
Source: Texas Bond Review Board.

## Debt Guidelines

The state's Debt Guidelines for State Issuers and Policies for Interest Rate Management Agreements can be found online at www.brb.state.tx.us/bfo/bfo.aspx.

## Appendix F – Other States Using Debt Affordability Studies

The use of debt affordability studies and debt capacity models is becoming more common, particularly by states with "highest" or "high" credit ratings. Of the seven states that receive triple-A ratings from all three rating agencies, four of them – Georgia, Maryland, North Carolina, and Virginia – use a debt affordability tool. In addition, California, Kentucky, New York, Oregon, Washington and West Virginia use a debt affordability tool. *Figure F1* provides a comparison of highly-rated states that use debt affordability tools vs. highly-rated states that do not.

**Figure F1**
**Comparison of Highly-Rated States and Debt Affordability Usage as of August 2010**

| 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 | AA+ | AAA |
| Florida | Yes | Aa1 | AAA | AAA |
| Vermont | No | Aaa | AA+ | AAA |
| New Mexico | No | Aaa | AA+ | Not Rated |
| Tennessee | No | Aaa | AA+ | AAA |
| Texas | Yes | Aaa | AA+ | AAA |

SOURCE: Moody's, Standard & Poor's and Fitch 2010 reports.

### Factors Affecting State Debt Ratings

Moody's *2010 State Debt Medians* report provides a helpful framework to compare Texas' debt burden with other states. This report annually tracks four key debt measures: 1) net tax-supported debt, 2) gross tax-supported debt, 3) net tax-supported debt per capita and 4) 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 its resources, providing a more complete view of debt while net debt is only that debt issued for not self-supporting (NSS) 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.)

### Texas' Debt Compared to Other States

Based on U. S. Census Bureau data for the nation's 10 most populous states, Texas carries a slightly higher debt than the median on Net Tax-Supported Debt but has a lower debt burden than the median for the other three measures of debt burden (*Figure F2)*. For net tax-supported debt, Texas ranks fifth with $12.89 billion, compared to the group median of $12.36 billion. For gross tax-supported debt, Texas ranks sixth with $19.06 billion, compared to the group median of $20.63 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 $520, compared to the group median of $1,029. For net tax-supported debt as a percentage of 2008 personal income, Texas ranks tenth with 1.4 percent, compared to the group median of 2.8 percent (Please note that in *Figure F2*, *Figure F3*, and *Figure F4* the higher the ranking, the higher the debt burden).

**Figure F2**
**State Debt: Texas Compared to Ten Most Populous States, 2010**

| 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 2008 personal income | |
|---|---|---|---|---|---|---|---|---|---|---|
| California | 37,253,956 | A1 | $87.32 | 1 | $96.06 | 1 | $2,362.00 | 2 | 5.6% | 2 |
| **Texas** | **25,145,561** | **Aaa** | **12.89** | **5** | **19.06** | **6** | **520.00** | **10** | **1.4%** | **10** |
| New York | 19,378,102 | Aa2 | 61.26 | 2 | 61.30 | 2 | 3,135.00 | 1 | 6.5% | 1 |
| Florida | 18,801,310 | Aa1 | 20.82 | 4 | 28.98 | 3 | 1,123.00 | 4 | 2.9% | 5 |
| Illinois | 12,830,632 | Aa3 | 23.96 | 3 | 24.39 | 4 | 1,856.00 | 3 | 4.4% | 3 |
| Pennsylvania | 12,702,379 | Aa1 | 11.83 | 6 | 17.23 | 7 | 938.00 | 6 | 2.4% | 7 |
| Ohio | 11,536,504 | Aa1 | 10.77 | 8 | 16.22 | 8 | 933.00 | 7 | 2.6% | 6 |
| Michigan | 9,883,640 | Aa2 | 7.46 | 9 | 22.20 | 5 | 748.00 | 9 | 2.1% | 9 |
| Georgia | 9,687,653 | Aaa | 11.01 | 7 | 11.01 | 9 | 1,120.00 | 5 | 3.3% | 4 |
| North Carolina | 9,535,483 | Aaa | 7.17 | 10 | 7.17 | 10 | 765.00 | 8 | 2.3% | 8 |
| **Ten Most Populous Mean** | | | **$25.45** | | **$30.36** | | **$1,350.00** | | **3.4%** | |
| **Ten Most Populous Median** | | | **$12.36** | | **$20.63** | | **$1,029.00** | | **2.8%** | |
| **National Mean** | | | | | | | **$1,297** | | **3.2%** | |
| **National Median** | | | | | | | **$936** | | **2.5%** | |

SOURCE: Texas Bond Review Board; Moody's Investors Service 2010; U.S. Census Bureau – 2010 Census.

For comparison purposes, *Figure F3* provides selected tax-supported debt measures for all fifty states. Texas' net tax-supported debt as a percent of 2008 personal income (the latest year for which data are available) is 1.4 percent, forty first among the states and below the national mean and median of 3.2 percent and 2.5 percent, respectively. With net tax-supported debt per capita at $520, Texas ranked fortieth and below the national mean of $1,297 and median of $936.

**Figure F3**
**Selected Debt Measures by State**

| State | Moody's Rating | Net Tax-Supported Debt as a % of 2008 Personal Income | Rank | Net Tax-Supported Debt Per Capita | Rank |
|---|---|---|---|---|---|
| Hawaii | Aa1 | 9.9% | 1 | $3,996 | 3 |
| Massachusetts | Aa1 | 9.2% | 2 | 4,606 | 2 |
| Connecticut | Aa2 | 8.7% | 3 | 4,859 | 1 |
| New Jersey | Aa2 | 7.2% | 4 | 3,669 | 4 |
| New York | Aa2 | 6.5% | 5 | 3,135 | 5 |
| Delaware | Aaa | 6.2% | 6 | 2,489 | 6 |
| California | A1 | 5.6% | 7 | 2,362 | 7 |
| Kentucky | Aa1* | 5.4% | 8 | 1,685 | 13 |
| Washington | Aa1 | 5.3% | 9 | 2,226 | 8 |
| Oregon | Aa1 | 5.2% | 10 | 1,859 | 10 |
| Rhode Island | Aa2 | 5.2% | 11 | 2,127 | 9 |
| Mississippi | Aa2 | 5.0% | 12 | 1,478 | 15 |
| Wisconsin | Aa2 | 4.6% | 13 | 1,720 | 12 |
| Illinois | Aa3 | 4.4% | 14 | 1,856 | 11 |
| New Mexico | Aaa | 4.4% | 15 | 1,398 | 16 |
| Louisiana | Aa2 | 3.6% | 16 | 1,271 | 18 |
| West Virginia | Aa2 | 3.5% | 17 | 1,079 | 22 |
| Maryland | Aaa | 3.4% | 18 | 1,608 | 14 |
| Georgia | Aaa | 3.2% | 19 | 1,120 | 21 |
| Alaska | Aa1 | 3.2% | 20 | 1,345 | 17 |
| Utah | Aaa | 3.2% | 21 | 957 | 24 |
| Kansas | Aa1* | 3.0% | 22 | 1,140 | 19 |
| Florida | Aa1 | 2.9% | 23 | 1,123 | 20 |
| South Carolina | Aaa | 2.9% | 24 | 917 | 28 |
| Ohio | Aa1 | 2.6% | 25 | 933 | 26 |
| Alabama | Aa1 | 2.4% | 26 | 796 | 30 |
| Minnesota | Aa1 | 2.4% | 27 | 1,037 | 23 |
| Pennsylvania | Aa1 | 2.4% | 28 | 938 | 25 |
| Arizona | Aa2 | 2.3% | 29 | 736 | 35 |
| Nevada | Aa1 | 2.3% | 30 | 925 | 27 |
| North Carolina | Aaa | 2.3% | 31 | 765 | 32 |
| Maine | Aa2 | 2.2% | 32 | 760 | 33 |
| Missouri | Aaa | 2.2% | 33 | 780 | 31 |
| Michigan | Aa2 | 2.1% | 34 | 748 | 34 |
| Virginia | Aaa | 2.1% | 35 | 895 | 29 |
| Vermont | Aaa | 1.8% | 36 | 709 | 36 |
| Idaho | Aa1* | 1.7% | 37 | 538 | 39 |
| New Hampshire | Aa1 | 1.6% | 38 | 665 | 37 |
| Oklahoma | Aa2 | 1.6% | 39 | 570 | 38 |
| Indiana | Aaa* | 1.5% | 40 | 492 | 41 |
| **Texas** | **Aaa** | **1.4%** | **41** | **520** | **40** |
| Montana | Aa1 | 1.1% | 42 | 358 | 43 |
| Arkansas | Aa1 | 1.0% | 43 | 312 | 46 |
| Colorado | Aa1* | 1.0% | 44 | 400 | 42 |
| Tennessee | Aaa | 0.9% | 45 | 318 | 45 |
| North Dakota | Aa1* | 0.8% | 46 | 327 | 44 |
| South Dakota | NGO** | 0.4% | 47 | 135 | 47 |
| Iowa | Aaa* | 0.2% | 48 | 73 | 49 |
| Wyoming | NGO** | 0.2% | 49 | 77 | 48 |
| Nebraska | NGO** | 0.0% | 50 | 15 | 50 |
| Mean | | 3.2% | | $1,297 | |
| Median | | 2.5% | | $936 | |
| Puerto Rico*** | A3*** | 75.7% | | $10,167 | |

Source: Moody's *2010 State Debt Medians.*

* Issuer Rating (No G.O. Debt).
** No general obligation debt.
*** For comparison purposes only. Not included in any totals, averages or median calculations.

It is important to note that states with higher state debt levels may have lower local debt levels and vice-versa. During calendar year 2008 (most recent data available compared to other states) local debt accounted for approximately 84.6 percent of Texas' total debt burden. (Local debt includes debt issued by cities, counties, school districts, hospital and special districts.) Among the nation's ten most populous states, Texas ranks 2nd in population, 9th in state debt per capita but 2nd in local debt per capita with an overall rank of 5th for total state and local debt per capita (*Figure F4*).

**Figure F4**
**Total State and Local Debt Outstanding**

| | Total State and Local Debt | | | | State Debt | | | | Local Debt | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| State | Population (thousands) | Capita Rank | Amount (millions) | Per Capita Amount | Capita Rank | Amount (millions) | Total Debt | Capita Amount | Capita Rank | Amount (millions) | Total Debt | Capita Amount |
| New York | 19,490 | 1 | $269,742 | $13,840 | 1 | $114,240 | 42.4% | $5,861 | 1 | $155,502 | 57.6% | $7,979 |
| Illinois | 12,902 | 2 | 124,163 | 9,624 | 2 | 58,437 | 47.1% | 4,529 | 6 | 65,726 | 52.9% | 5,094 |
| Pennsylvania | 12,448 | 3 | 118,611 | 9,529 | 4 | 40,100 | 33.8% | 3,221 | 3 | 78,511 | 66.2% | 6,307 |
| California | 36,757 | 4 | 341,094 | 9,280 | 3 | 121,930 | 35.7% | 3,317 | 4 | 219,164 | 64.3% | 5,963 |
| **Texas** | **24,327** | **5** | **215,877** | **8,874** | **9** | **33,299** | **15.4%** | **1,369** | **2** | **182,578** | **84.6%** | **7,505** |
| Florida | 18,328 | 6 | 142,129 | 7,755 | 7 | 42,321 | 29.8% | 2,309 | 5 | 99,808 | 70.2% | 5,446 |
| Michigan | 10,003 | 7 | 75,247 | 7,522 | 5 | 29,065 | 38.6% | 2,906 | 7 | 46,182 | 61.4% | 4,617 |
| Ohio | 11,486 | 8 | 68,658 | 5,978 | 6 | 26,885 | 39.2% | 2,341 | 9 | 41,773 | 60.8% | 3,637 |
| North Carolir | 9,222 | 9 | 51,202 | 5,552 | 8 | 19,605 | 38.3% | 2,126 | 10 | 31,597 | 61.7% | 3,426 |
| Georgia | 9,686 | 10 | 50,561 | 5,220 | 10 | 13,072 | 25.9% | 1,350 | 8 | 37,489 | 74.1% | 3,870 |
| **MEAN** | | | **$145,728** | **$8,317** | | **$49,895** | **34.6%** | **$2,933** | | **$95,833** | **65.4%** | **$5,384** |

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: 2007-2008,* the most recent data available.

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: 2007-2008*, the most recent data available.

## Appendix G – Investment Grade Credit Ratings

### Rating Agencies

The three major credit rating agencies for state debt are Moody's Investors Service (Moody's), Standard & Poor's (S&P) and Fitch Ratings (Fitch). Their ratings have a significant impact on interest rates for a given issue and thus the cost of the financing. *Figure G1* provides a summary of the investment grade ratings scale by each agency.

**Figure G1**
**Investment Grade Bond Ratings by Rating Agency**

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

SOURCE: Moody's; S&P and Fitch.

Ratings from these agencies provide investors with a measure of an issuer's overall financial soundness and ability to repay its debt. They have a direct impact on the interest rate state issuers will pay on debt issuances; higher credit ratings result in lower financing costs. Ratings for the state's general obligation (GO) debt are the most important because the state's full faith and credit is pledged to its repayment. GO rating provide a benchmark rate for the state's revenue debt.

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 G2*.

**Figure G2**
**Factors Affecting State General Obligation Bond Ratings**

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

Source: Texas Bond Review Board.

**Ratings for Texas General Obligation Debt**

In August 2009 Standard & Poor's raised the state's GO credit rating to AA+ from AA based on the state's strong and diverse economy coupled with the projected surplus in the state's Economic Stabilization (Rainy Day) Fund of $9 billion. Beginning in April 2010 Moody's and Fitch recalibrated their municipal rating scales to align with their global rating scales. Moody's rating for the state's GO was recalibrated from Aa1 to Aaa, and Fitch's rating was recalibrated from AA+ to AAA. S&P did not recalibrate their municipal bond rating scale because they have been using a global rating scale across the structural finance, corporate and government sectors.

Texas GO debt thus receives the highest available credit rating from Moody's and Fitch and the second highest available from S&P. Texas is thus perceived as a strong credit in the municipal bond market.

The state's current GO bond ratings are shown in *Figure G3*.

**Figure G3**
**State of Texas General Obligation Bond Ratings**

| Credit Agency | Credit Rating | Outlook |
|---|---|---|
| Moody's | Aaa | Stable |
| Standard and Poor's | AA+ | Stable |
| Fitch | AAA | Stable |

Source: Texas Bond Review Board.

## Appendix H - Glossary

**Budgeted General Revenue** – The amount of revenue that is budgeted by the legislature to be expended during each fiscal year for state operations. This figure is generally less than unrestricted general revenue available for debt service.

**Commercial Paper (CP)** – Short-term, unsecured promissory notes that mature within 270 days and are backed by a liquidity provider (usually a bank) that stands by to provide liquidity in the event the notes are not remarketed or redeemed at maturity.

**Constitutional Debt Limit (CDL)** – Article III, Section 49-j of the Texas Constitution which 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.

**Debt Capacity Model (DCM)** – Financial Model that assesses the impact on general revenue of the state's annual debt-service requirements for current and projected levels of not self-supporting debt over the next five years.

**General Obligation (GO) Debt** – Debt that is legally secured by a constitutional pledge of the first monies coming into the state treasury that are not constitutionally dedicated for another purpose. GO debt must be passed by a 2/3 vote of both houses of the legislature and a majority of the voters.

**General Revenue (GR)** – The amount of total state tax collections and federal monies distributed to the state for its operations.

**Higher Education Fund (HEF)** – Appropriations that became available in 1985 through Constitutional Amendment to fund permanent capital improvements for most public universities. This term may refer either to HEAF (Higher Education Assistance Fund) Treasury Funds (funds reimbursed from the State HEAF appropriation for university expenditures) or HEAF Bond Funds (monies received through the issuance of bonds and secured by HEAF Treasury Funds).

**Instructional Facilities Allotment (IFA)** – A program authorized in House Bill 1 by the 75$^{th}$ Legislature (1997). The provisions that authorize the IFA program are incorporated into the Texas Education Code as Chapter 46. The IFA program became effective on September 1, 1997 and 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).

**Existing Debt Allotment (EDA)** – A program created in 1999 by the 76th Legislature that added Subchapter B to Chapter 46 of the Texas Education Code. The EDA is similar to the 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." Legislative action each session updated the years defining qualifying debt to include debt through the last year of the biennium. 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 a level of $0.29 per $100 of valuation. Currently, the guaranteed yield for EDA provides $35 per student in average daily attendance (ADA) per penny of tax effort.

**Not Self-Supporting (NSS) Debt** – Debt that is intended to be repaid with state general revenue and can be either GO debt or revenue debt.

**Permanent University Fund (PUF)** – The PUF is a State endowment contributing to the support of 18 institutions and 6 agencies of The University of Texas System and The Texas A&M University System. The PUF was established by the Texas Constitution in 1876 with land grants ultimately totaling 2.1 million acres, primarily in West Texas (PUF Lands).

**Revenue (Non-General Obligation) Debt** – Debt legally secured by a specific revenue source and does not require voter approval.

**Self-Supporting (SS) Debt** – Debt that is designed to be repaid with revenues other than state general revenue and can be either GO debt or revenue debt.

**Special Debt Commitments** – Revenue debt commitments supported by state general revenues: Tuition Revenue Bonds, Existing Debt Allotment and Instructional Facilities Allotment.

**Tax and Revenue Anticipation Notes (TRAN)** – Short-term loans that the state uses to address a cash flow problem created when expenditures must be incurred before tax revenues are received.

**Tuition Revenue Bonds (TRB)** – 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 used general revenue to reimburse the universities for debt service for these bonds

**Unrestricted General Revenue (UGR)** – The net amount of general revenue remaining after deducting all constitutional allocations and other restricted revenue from total general revenue.