

**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 2013**



# Debt Affordability Study

## February 2013

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Chairman

David Dewhurst, Lieutenant Governor

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## Executive Summary

The 80<sup>th</sup> 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 FY2012, Texas had \$40.99 billion in total debt outstanding. Of this amount \$4.09 billion (10.0%) was NSS debt, and \$36.90 billion (90.0%) was self-supporting. The state's total debt outstanding has increased from \$18.16 billion in FY2003 to the current \$40.99 billion as of August 31, 2012, an increase of 125.7 percent.

As of August 31, 2012 the Constitutional Debt Limit (CDL) for outstanding debt was 1.34 percent and 3.48 percent for outstanding and authorized but unissued debt.

### Assumptions for the Debt Capacity Model

The DCM contains assumptions for the fiscal years under review (2013-2017) including:

- Estimates of unrestricted general revenue (UGR)
- Estimates of NSS debt issuance
- Estimates of appropriations for Special Debt Commitments (Tuition Revenue Bonds, Instruction Facilities Allotment and Existing Debt Allotment)
- Estimates of Texas' future population and total personal income

### 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:

- Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue measures the impact of debt service on the rolling three year average of UGR. Because NSS 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 set by the state's constitution. Ratio 1 is calculated two ways: 1) using only NSS debt service and 2) using NSS debt service plus Special Debt Commitments to show their impact on the state's debt capacity (see *Chapters 1, 3 and Appendix C*).
- Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue does not use a rolling three year average and is generally more restrictive because the amount of available general revenue in this ratio is limited to budgeted general revenue based on the General Appropriations Act and the introduced 2014-15 General Appropriations Bill (Senate Bill 1).

- 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 revenue 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 for the Ratio 1 target of 2 percent is \$296.0 million for fiscal 2013 and decreases to as low as \$77.5 million by fiscal year 2016 before beginning to increase to \$155.4 million in fiscal year 2017. (see *Figure 1.2, Chapter 3 and Appendix C*)
- Additional debt-service capacity for the Ratio 1 target of 2 percent including Special Debt Commitments is a negative \$647.9 million beginning in fiscal 2013 and decreases to a negative \$907.0 million by fiscal 2016.
- Including Special Debt Commitments, total debt service exceeds Ratio 1's target of 2 percent and cap of 3 percent beginning in fiscal 2013 but remains below the 5 percent max through 2017. All tuition revenue bonds previously authorized have been issued.
- Special Debt Commitments are projected to account for more than half of total debt service for fiscal years 2013-2017.
- For the 2013-2017 period NSS debt service including Special Debt Commitments will peak in fiscal 2016 (see *Figure 1.2*).
- NSS debt as a percentage of personal income and debt per capita are better than rating agency benchmarks through fiscal 2017.
- The rate of debt retirement for NSS debt for the five and ten year periods are better than rating agency benchmarks. However, the rate of debt retirement is expected to decline as the remaining \$3 billion of Texas Transportation Commission (Proposition 12) debt is issued with level debt service instead of level principal payments and maturities longer than 20 years.
- With a continuation of the recent growth in the state's economy, the General Revenue Fund is expected to increase for FY 2013-2017 more per year than estimated in the February 2012 DAS. Additionally, the February 2013 DAS estimates that \$5.62 billion of NSS debt is expected to be issued during FY 2013-2017 compared to the \$6.25 billion estimated for FY 2012-2016 in the February 2012 DAS. As a result, Ratio 1 declined indicating additional debt service capacity is available to support future debt issuance.

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## 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 80<sup>th</sup> Legislature (2007) passed Senate Bill 1332 that amended the Texas Government Code Chapter 1231 to require the Texas Bond Review Board (BRB) 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 not self-supporting (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 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

This study is based on the \$4.09 billion of NSS debt outstanding as of August 31, 2012 and an estimated \$5.62 billion in new, NSS debt which is expected to be issued between fiscal years 2013 through 2017 for the following transactions:

- \$3.82 billion in General Obligation (GO) debt, related to Proposition 12 for transportation projects (TTC);
- \$1.20 billion in GO debt, related to Proposition 15 for cancer research (TPFA);
- \$443.9 million in GO debt for capital projects for certain state agencies (TPFA), including Proposition 4 authorization;
- \$29.4 million in GO bonds for the Texas Water Development Board's (TWDB) Economically Distressed Areas Program;
- \$50.0 million in GO bonds for the TWDB's Water Infrastructure Fund; and
- \$78.8 million in GO bonds for the Higher Education Assistance Fund.

See *Figure E2* for detail on the state's debt outstanding as of August 31, 2012.

With a continuation of the recent growth in the state's economy, the General Revenue Fund is expected to increase for FY 2013-2017 more per year than estimated in the February 2012 DAS. Additionally, the February 2013 DAS estimates that only \$5.62 billion of NSS debt is expected to be issued during FY 2013-2017 compared to the \$6.25 billion estimated for FY 2012-2016 in the



February 2012 DAS. As a result, Ratio 1 declined indicating additional debt service capacity to support future debt issuance.

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**

Ratio 1 is calculated by dividing future debt service by the rolling three year average of unrestricted general revenue (UGR). 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 BRB or Legislative Budget Board. Since Texas has historically appropriated less than 2 percent of its UGR for NSS debt service, the analysis of Ratio 1 utilizes 2 percent as the target ratio, 3 percent for the cap ratio and a maximum of 5 percent.

Ratio 1 of the DCM can be used to assess the impact of special debt commitments (SDC) on the general revenue fund. SDC consist of tuition revenue bonds (TRBs) for higher education and the Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) for public education.

Figure 1.1 illustrates Ratio 1 for NSS annual debt service and SDC. Figure 1.2 provides additional detail showing the impact of SDC on Ratio 1. (See Chapter 3 and Appendix C.)

**Figure 1.1  
Debt Service Commitments as a Percentage of Unrestricted General Revenue**

	2013	2014	2015	2016	2017
February 2013					
Annual NSS Debt Service	1.29%	1.56%	1.75%	1.83%	1.68%
Tuition Revenue Bonds (TRBs)	0.69%	0.67%	0.64%	0.62%	0.59%
IFA and EDA	1.56%	1.52%	1.46%	1.50%	1.44%
<b>Total</b>	<b>3.54%</b>	<b>3.75%</b>	<b>3.85%</b>	<b>3.95%</b>	<b>3.70%</b>

SOURCE: Texas Bond Review Board.

*Results*

- Excluding SDC, additional NSS annual debt-service capacity declines from \$296.0 million for the 2 percent target for fiscal 2013 to as low as \$77.5 million in fiscal year 2016 (see Figure 1.2, Chapter 3 and Appendix C).
- Including SDC, additional debt-service capacity for the 2 percent target is negative \$647.9 million starting in fiscal 2013 and becomes increasingly negative to more than \$907.0 million by fiscal 2016. SDC are projected to account for more than half of total debt service for fiscal years 2013-2017

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

Unlike Ratio 1 this ratio does not use a rolling 3-year average of UGR but uses instead the budgeted general revenue figures and projections for fiscal years 2013, 2014 and 2015 based on the General Appropriations Act and the introduced 2014-15 General Appropriations Bill (Senate Bill 1).

### *Results*

Ratio 2 is 1.46 percent for fiscal 2013 and rises to 1.55 percent and 1.77 percent in fiscal 2014 and 2015, respectively. Historically, Texas' NSS debt-service commitment has been less than 1.5 percent of budgeted general revenue as shown in *Figure 3.3*. However, in fiscal year 2014 and 2015 the ratio increases because of an increase in annual debt service based on planned future debt issuances even though budgeted general revenue is also expected to increase in 2014.

### Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income

This ratio is obtained by dividing NSS debt 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 is a component of the state's credit ratings.

### *Results*

Ratio 3 is 0.55 percent for fiscal 2013 and peaks at 0.66 percent in fiscal 2015. These figures are below the 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 is a component of the state's credit rating.

### *Results*

Ratio 4 is \$232 for fiscal 2013 and peaks to \$300 in fiscal 2015. These figures are below the 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. 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 33.4 percent of NSS debt will be retired; 58.5 percent will be retired in 10 years. These figures are better than rating agency benchmarks but are expected to decrease with the issuance of additional Texas Transportation Highway Improvement (Proposition 12) Bonds.

*Figure 1.2* summarizes the ratio analysis for fiscal years 2013 through 2017. 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	2013		2014		2015		2016		2017						
<b>RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue</b>															
<b>NSS Debt Service</b>															
Issued	\$	512,765,914	1.22%	\$	495,582,284	1.13%	\$	481,444,985	1.06%	\$	433,042,787	0.93%	\$	371,308,008	0.76%
Authorized but Unissued		29,963,336	0.07%		176,163,389	0.40%		277,306,987	0.61%		371,165,203	0.80%		381,362,698	0.78%
Projected		0	0.00%		12,293,922	0.03%		33,368,464	0.07%		47,088,573	0.10%		66,426,512	0.14%
<b>Total NSS Debt Service (excluding SDC)</b>	\$	542,729,250	1.29%	\$	684,039,595	1.56%	\$	792,120,436	1.75%	\$	851,296,563	1.83%	\$	819,097,218	1.68%
Special Debt Commitments	\$	943,816,965	2.25%	\$	960,254,950	2.19%	\$	954,342,362	2.11%	\$	984,456,034	2.12%	\$	984,909,415	2.02%
<b>Total Debt Service (including SDC)</b>	\$	1,486,546,216	3.55%	\$	1,644,294,545	3.75%	\$	1,746,462,798	3.85%	\$	1,835,752,597	3.95%	\$	1,804,006,633	3.70%
SDC as a % of Total		63.5%		58.4%		54.6%		53.6%			54.6%			54.6%	
<b>Additional Debt-Service Capacity excluding SDC*</b>															
Target (2%)	\$	295,959,408	0.71%	\$	192,496,385	0.44%	\$	114,220,438	0.25%	\$	77,474,272	0.17%	\$	155,406,408	0.32%
Cap (3%)	\$	715,303,738	1.71%	\$	630,764,375	1.44%	\$	567,390,875	1.25%	\$	541,859,689	1.17%	\$	642,658,222	1.32%
Max (5%)	\$	1,553,992,396	3.71%	\$	1,507,300,356	3.44%	\$	1,473,731,748	3.25%	\$	1,470,630,523	3.17%	\$	1,617,161,848	3.32%
<b>Additional Debt-Service Capacity including SDC*</b>															
Target (2%)	\$	(647,857,557)	-1.55%	\$	(767,758,565)	-1.75%	\$	(840,121,924)	-1.85%	\$	(906,981,763)	-1.95%	\$	(829,503,007)	-1.70%
Cap (3%)	\$	(228,513,228)	-0.55%	\$	(329,490,575)	-0.75%	\$	(386,951,487)	-0.85%	\$	(442,596,345)	-0.95%	\$	(342,251,194)	-0.70%
Max (5%)	\$	610,175,431	1.46%	\$	547,045,405	1.25%	\$	519,389,386	1.15%	\$	486,174,489	1.05%	\$	632,252,432	1.30%
<b>RATIO 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue</b>		1.46%			1.55%			1.77%							
<b>RATIO 3: Not Self-Supporting Debt as a Percentage of Personal Income</b>		0.55%			0.62%			0.66%			0.62%			0.58%	
<b>RATIO 4: Not Self-Supporting Debt Per Capita</b>		\$232			\$274			\$300			\$291			\$283	
<b>Ratio 5: Rate of Debt Retirement in</b>		5 Years	10 Years												
Not Self-Supporting Debt		33.4%	58.5%												
Self-Supporting Debt		18.3%	36.4%												

\* 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, Permanent University Fund issuances and non-general obligation issuances by university systems that have an unenhanced long-term debt rating of at least AA- or its equivalent, 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 entities of 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. For purposes of this report, revenue SS debt also includes conduit debt that is not an obligation of the state and is repaid from funds generated by a third party borrower. For more information regarding conduit debt see the Bond Review Board’s Fiscal Year 2012 Annual Report.
- **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	Debt Program
General Obligation	Not self-supporting	Highway Improvement (Prop 12) Bonds Cancer Prevention and Research Bonds
General Obligation	Self-supporting	Certain Texas Water Development Bonds Veterans' Land and Housing Bonds
Revenue	Not self-supporting	Texas Military Facilities Commission Bonds Parks and Wildlife Improvement Bonds
Revenue	Self-supporting	College and University Revenue Financing System Bonds Texas Department of Housing Single Family Mort. Bonds

Source: Texas Bond Review Board.

## State Debt Outstanding

Figure 2.2 provides detail for the state's total debt outstanding at August 31, 2012.

**Figure 2.2**  
**Current Debt Outstanding (thousands)**

Bond Types	Self-Supporting	Not Self-Supporting	Total
General Obligation	\$ 10,434,532	\$ 3,814,802	\$ 14,249,334
Revenue*	\$ 26,466,737	\$ 276,198	\$ 26,742,935
<b>Total</b>	<b>\$ 36,901,269</b>	<b>\$ 4,091,000</b>	<b>\$ 40,992,269</b>

\* Revenue SS debt contains \$3.30 billion of conduit debt.

Source: Texas Bond Review Board.

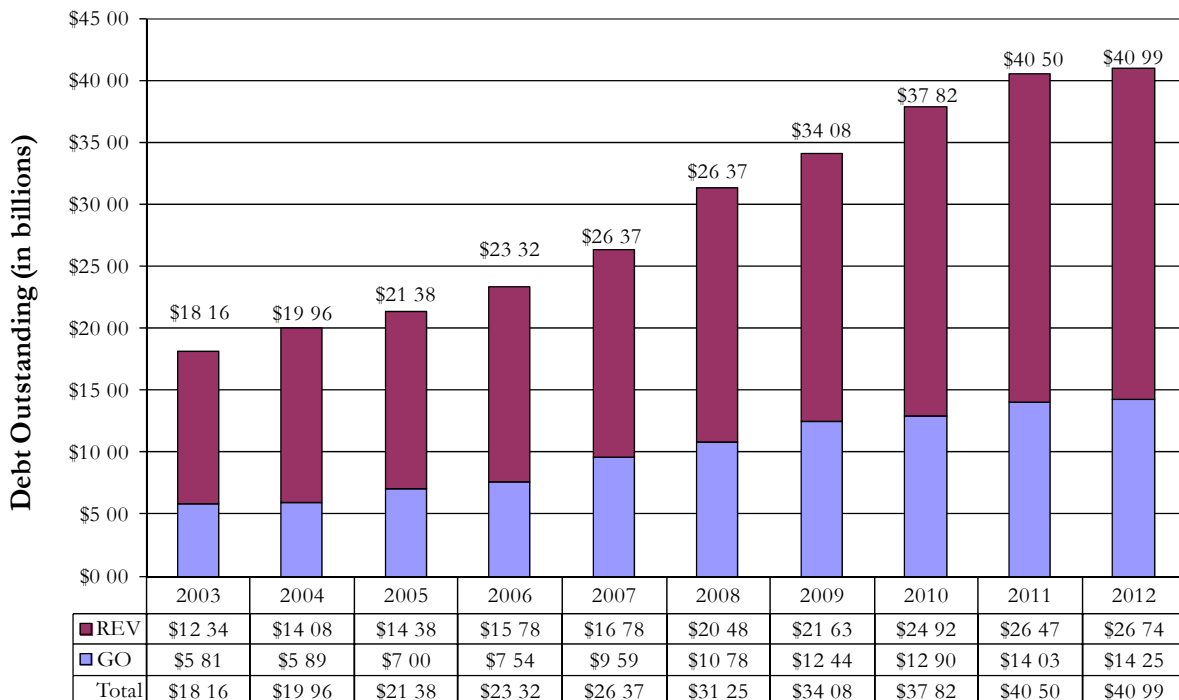
## Growth Rates in Unrestricted General Revenue and Total Debt Outstanding

The state's Unrestricted General Revenue (UGR) increased from \$25.99 billion in FY2003 to \$42.29 billion in FY2012, an increase of 62.7 percent over the 10-year period.

From FY2003 to FY2012, GO debt increased from \$5.81 billion to \$14.25 billion, an increase of 145.3 percent, most of which occurred in the last five fiscal years. Of the GO debt outstanding at FYE 2012, 26.8 percent was NSS.

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

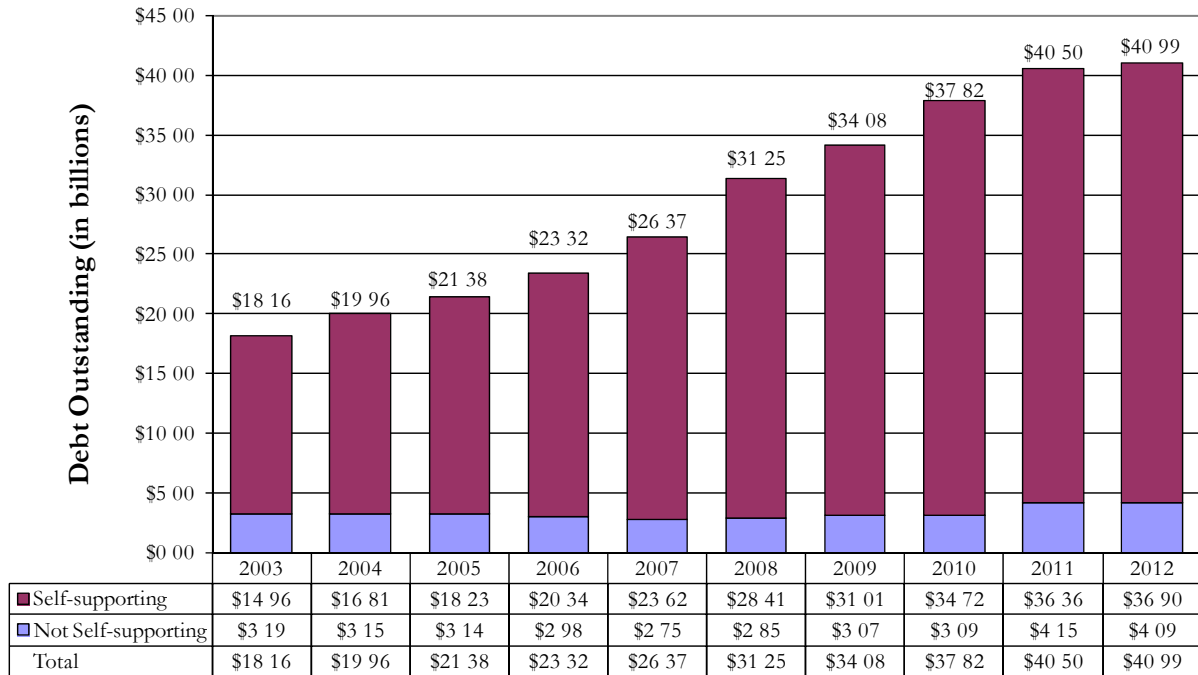
**Figure 2.3**  
**Texas' Debt Outstanding: General Obligation and Revenue for Fiscal Years 2003-2012**



SOURCE: Texas Bond Review Board

During the 10-year period, revenue debt increased by 116.7 percent from \$12.34 billion to \$26.74 billion, and the state’s total debt outstanding increased by 125.7 percent from \$18.16 billion to \$40.99 billion.

**Figure 2.4**  
**Texas’ Debt Outstanding: Self-Supporting and Not Self-Supporting for Fiscal Years 2003-2012**



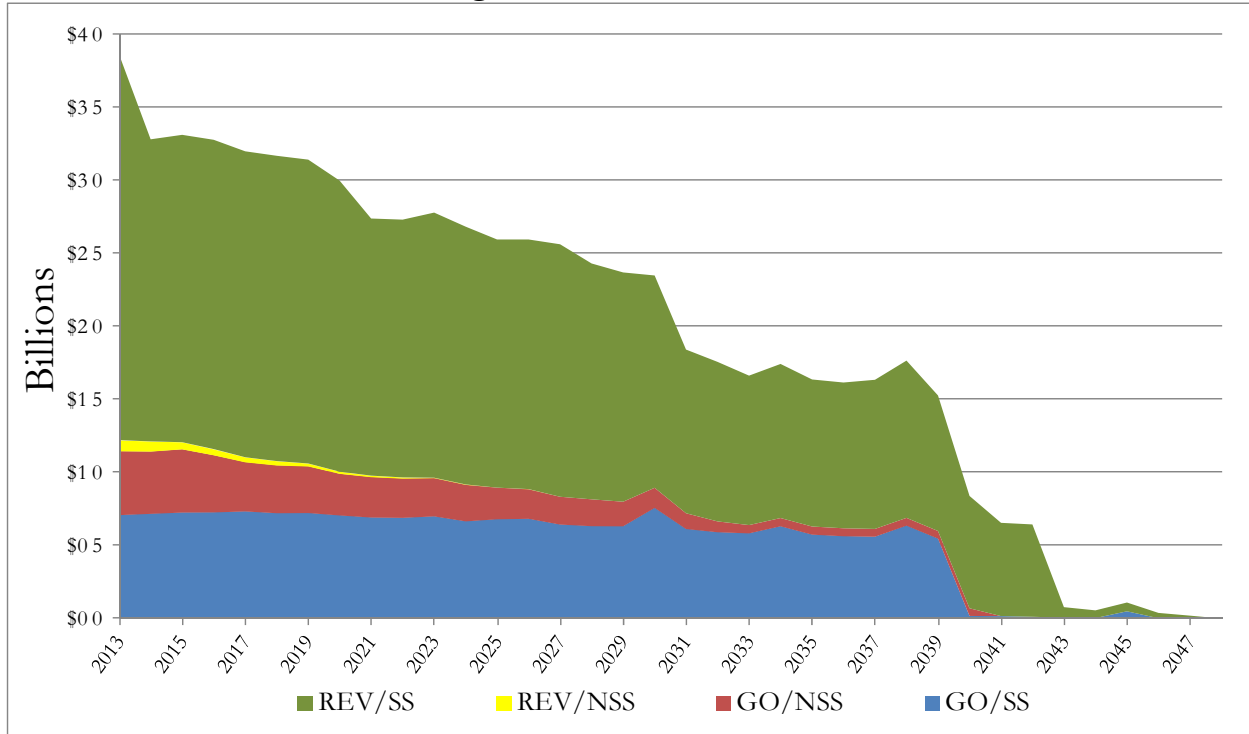
SOURCE: Texas Bond Review Board

As shown in *Figure 2.4*, SS debt which is repaid with program revenues increased by 146.7 percent. During the same time period, NSS debt which is typically repaid with general revenue increased by 28.2 percent. However, given the authorizations approved in the November 2007 general election coupled with projected issuances of approximately \$5.62 billion in FY2013-17, NSS debt outstanding is likely to continue to increase in upcoming fiscal years.

### Debt-Service Commitments

Figure 2.5 illustrates the projected annual debt service for NSS and SS debt outstanding as of August 31, 2012.

**Figure 2.5**  
**Texas Debt Service on Outstanding Debt as of 8/31/2012**



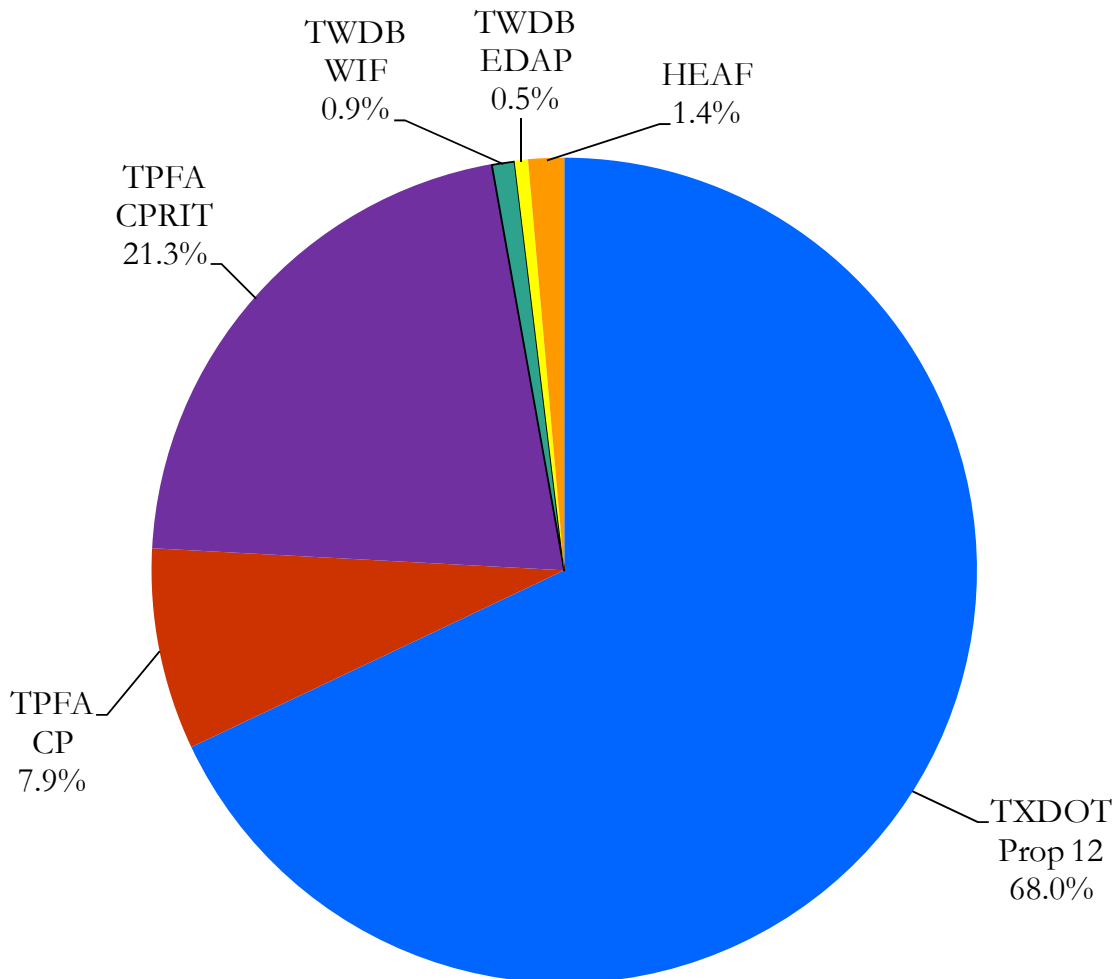
SOURCE: Texas Bond Review Board.

### Not Self-Supporting Debt

NSS debt is generally repaid from the state's General Revenue Fund. At FYE 2012 NSS debt outstanding comprised 10.0 percent of the state's total debt outstanding and consisted of 93.2 percent of GO and 6.8 percent revenue debt.

Based on the authorizations for which the approximate issuance date is known, an estimated \$5.62 billion in new, NSS debt is expected to be issued between fiscal years 2013 to 2017. These issuances are included in each of the five ratios discussed throughout this report. *Figure 2.6* shows NSS debt projections by debt program for fiscal years 2013-17.

**Figure 2.6**  
**NSS Debt Projections for Fiscal Years 2013-17 (\$5.62 billion)**

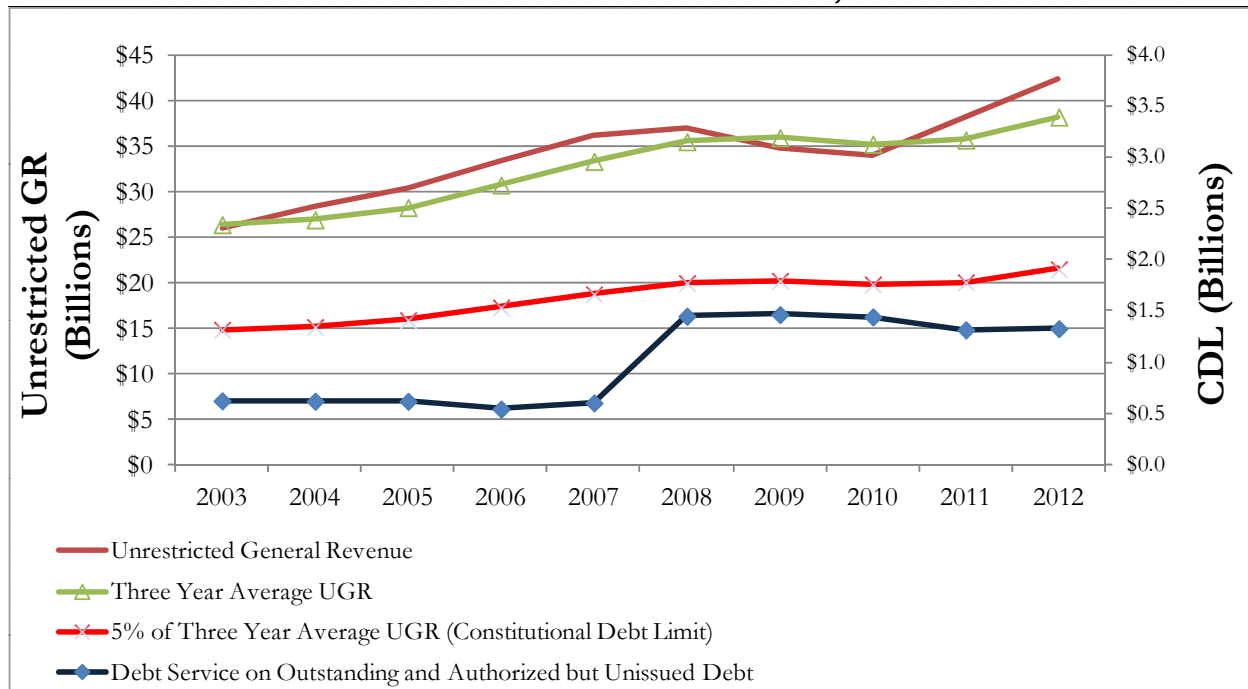




## The Constitutional Debt Limit

As of August 31, 2012 the Constitutional Debt Limit (CDL) percentage for not self-supporting (NSS) debt outstanding was 1.34 percent and 3.48 percent including both outstanding and authorized but unissued debt. These figures were 1.35 and 3.70, respectively for FY2011 and represent decreases of 0.7 percent and 5.9 percent, respectively. (See *Appendix D* for more discussion regarding the CDL.)

**Figure 2.7**  
**Unrestricted General Revenue and Constitutional Debt Limit, Fiscal Years 2003 to 2012**



SOURCE: Texas Bond Review Board.

The two curves at the top of *Figure 2.7* show 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 2.7* shows 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 shows 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 debt-service capacity under the CDL.

During the 10-year period from FY2003 to FY2012, UGR increased by 62.7 percent from \$25.99 billion to \$42.29 billion. The projected debt service on outstanding and authorized but unissued debt increased by 112.4 percent from \$626.2 million in FY2003 to \$1.33 billion in FY2012. The increase in the blue curve (Debt Service on Outstanding and Authorized but Unissued Debt) for 2008 results from the increased debt service required for the \$9.75 billion in 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 a rolling three year average of unrestricted general revenue (UGR). The Comptroller's January 2013 Biennial Revenue Estimate for FY2014-15 was used for DCM calculations. Funds available for debt service are expected to increase during fiscal 2013 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 \$542.7 million in fiscal year 2013 to a peak in FY2016 of \$851.3 million. Debt service as a percentage of UGR will increase from 1.29 percent in fiscal year 2013 to a peak in FY2016 of 1.83 percent. *Figure 3.1* only considers the projected debt-service ratios for NSS debt for which the state's general revenue is required for repayment. (Neither *Figure 3.1* nor Ratio 1 should be confused with the Constitutional Debt Limit (CDL) calculation. See Appendix D for further discussion of the CDL.)

**Figure 3.1**

**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue, Fiscal Years 2013 to 2017**

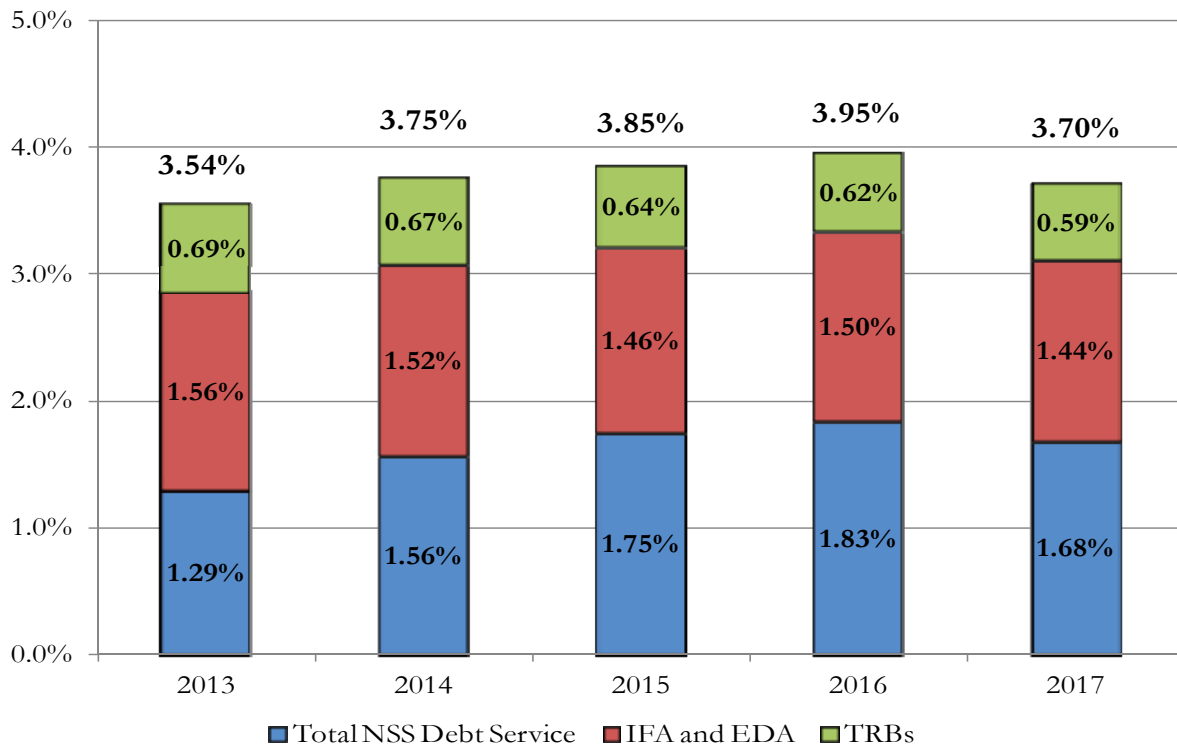
Fiscal Year	2013	2014	2015	2016	2017
Projected Unrestricted General Revenue	\$45,303,028,371	\$43,890,255,977	\$46,757,846,697	\$48,667,522,482	\$50,750,174,749
<b>Not Self-Supporting Annual Debt Service</b>					
Issued Debt	\$512,765,914	\$495,582,284	\$481,444,985	\$433,042,787	\$371,308,008
Authorized but Unissued Debt	\$29,963,336	\$176,163,389	\$277,306,987	\$371,165,203	\$381,362,698
Projected Debt	\$0	\$12,293,922	\$33,368,464	\$47,088,573	\$66,426,512
<b>Total Debt Service</b>	<b>\$ 542,729,250</b>	<b>\$ 684,039,595</b>	<b>\$ 792,120,436</b>	<b>\$ 851,296,563</b>	<b>\$ 819,097,218</b>
<b>Debt Service as a Percentage of Unrestricted General Revenue</b>					
Issued Debt	1.22%	1.13%	1.06%	0.93%	0.76%
plus Authorized but Unissued Debt	1.29%	1.53%	1.67%	1.73%	1.54%
plus Projected	1.29%	1.56%	1.75%	1.83%	1.68%
<b>Additional Debt-Service Capacity</b>					
Target (2.0%)	\$295,959,408	\$192,496,385	\$114,220,438	\$77,474,272	\$155,406,408
Cap (3.0%)	\$715,303,738	\$630,764,375	\$567,390,875	\$541,859,689	\$642,658,222
Max (5.0%)	\$1,553,992,396	\$1,507,300,356	\$1,473,731,748	\$1,470,630,523	\$1,617,161,848

SOURCE: Texas Bond Review Board.

Ratio 1 of the DCM can be used to provide various scenarios to assess the impact of increasing or decreasing the debt-service capacity of general revenue special debt commitments. Special Debt Commitments (SDC) consist of tuition revenue bonds (TRBs) for higher education and the Existing Debt Allotment (EDA) and Instructional Facilities Allotment (IFA) for public education. The impacts of these payments on total debt capacity are shown in *Figure 3.2*.

**Figure 3.2**

**Debt Service Commitments as a Percentage of Unrestricted General Revenue**



SOURCE: Texas Bond Review Board.

Ratio 1 resembles the CDL, but the latter includes certain items that are not included in Ratio 1. Because debt service for Higher Education Fund (HEF) bonds is paid from a general revenue appropriation, the CDL calculation requires that the maximum amount of annual debt-service needed for these bonds is included while Ratio 1 uses projections for yearly debt service.

In addition, the CDL calculation omits certain debt service for Economically Distressed Areas Program (EDAP) bonds issued by the Texas Water Development Board (TWDB). Proceeds from the sale of 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.

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 provided by each issuer to more accurately represent debt issuance timing, structure, interest rate and term.

Ratio 1 is 1.29 percent in fiscal year 2013 but increases to 3.54 percent with the addition of SDC and peaks at 3.95 percent in fiscal 2016. (See *Appendix C* for more information on the impact of special debt commitments.)

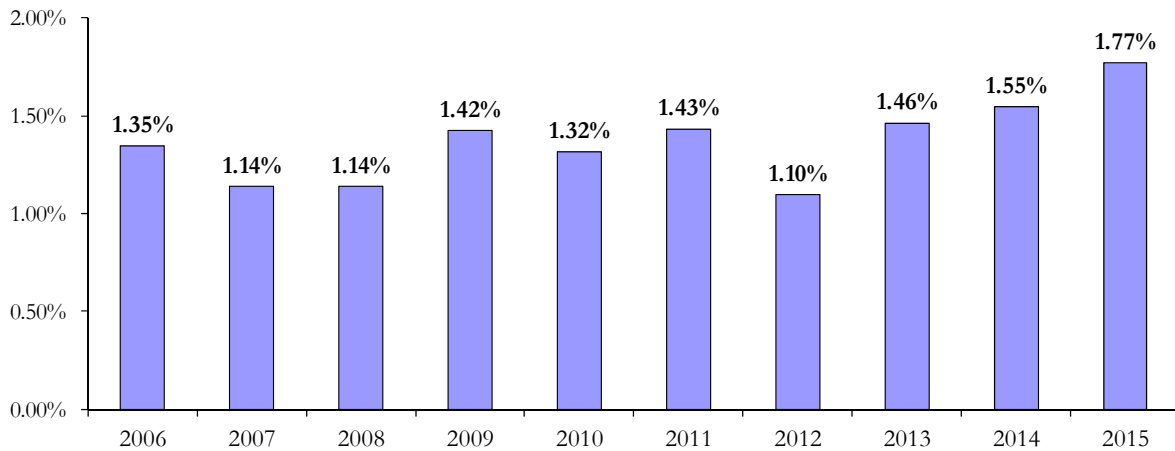
### **Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue**

This ratio 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. Unlike Ratio 2, UGR in Ratio 1 is based on a rolling three-year average (FY2011-2013).

Texas expended an average of 1.37 percent of budgeted general revenue for NSS debt service in fiscal years 2006-2015. Based on the amounts in the 2012-13 General Appropriations Act and the introduced 2014-15 General Appropriations Bill (Senate Bill 1), NSS debt service as a percentage of budgeted general revenue is projected to be 1.46 percent for fiscal year 2013 and 1.55 percent and 1.77 percent for fiscal years 2014 and 2015, respectively (*Figure 3.3*). Historically, Texas' NSS debt-service commitment has been less than 1.5 percent of budgeted general revenue as shown in *Figure 3.3*. However, in fiscal year 2014 and 2015, the ratio increases because of a projected increase in annual debt service even though budgeted general revenue is also expected to increase in 2014.

**Figure 3.3**

**Ratio 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue, Fiscal Years 2006 to 2015**



SOURCE: Texas Bond Review Board.

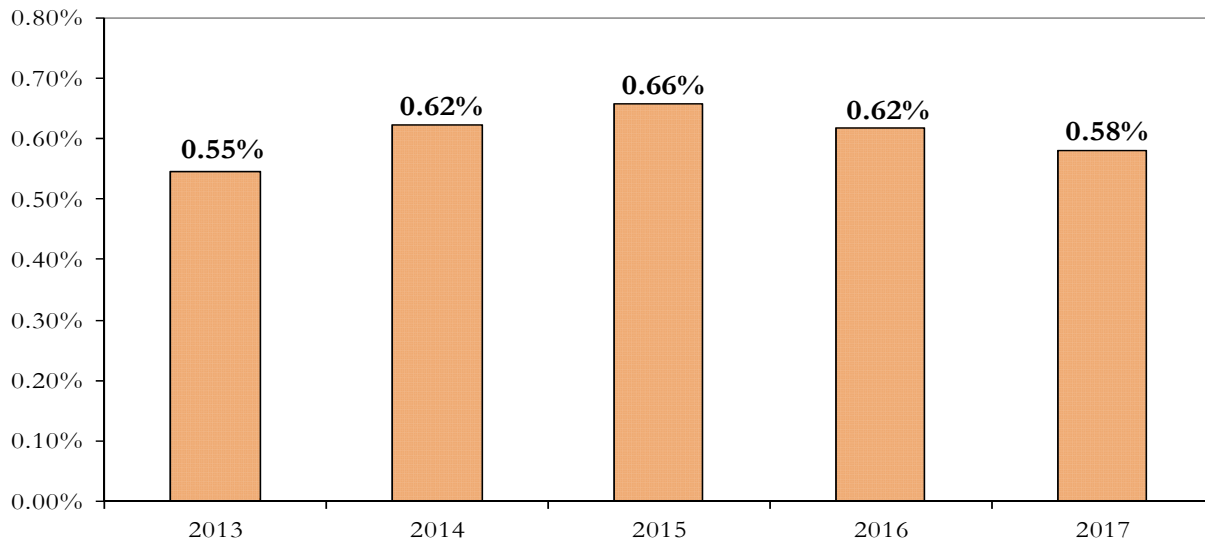
**Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income**

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 is a component of the state's credit ratings.

Based on personal income projections from the Comptroller of Public Accounts, Ratio 3 ranges from 0.55 percent in 2013 to 0.66 percent for fiscal 2015 (*Figure 3.4*). 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 2013 to 2017**



SOURCE: Texas Bond Review Board.

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

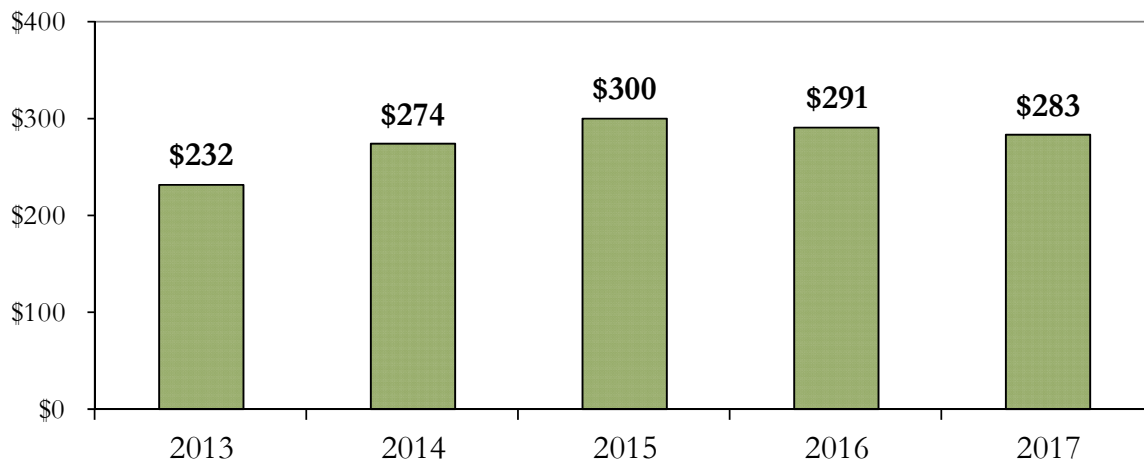
Ratio 4 is the amount of NSS debt divided by the state's population and measures the dollar amount of debt per person. Like Ratio 3, this ratio is a component of the state's credit ratings.

Based on population projections by the Comptroller of Public Accounts, the NSS debt per capita is expected to be \$232 in fiscal 2013 and is projected to increase to \$300 in fiscal 2015 (*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 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 fourth for total (state and local) debt per capita. Approximately 83.2 percent of state's total debt is local debt. 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 2013 to 2017**



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. Level principal payments result in more rapid payment of principal than other structures such as level debt-service payments. 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 and more rapid replacement of debt capacity than 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 percent of the principal amount of 20-year maturities to be retired in five years and 50 percent in 10 years.

Of Texas' NSS debt outstanding as of August 31, 2012, 33.4 percent will be retired in five years and 58.5 percent will be retired in 10 years (*See Figure 3.6*). The rate of debt retirement decreased from fiscal year 2010's rates of 46.4 percent and 72.3 percent for the five year and ten year periods, respectively primarily due to the Texas Transportation Commission's (TTC) issuance of \$1 billion of

Proposition 12 Bonds in September 2010 with level debt service instead of level principal payments and a maturity of 30 years. TTC issued an additional \$918.2 million in December 2012, and the rate is expected to decline further as TTC continues to issue the remaining \$3 billion of Proposition 12 debt with a similar structure.

Approximately 18.3 percent of Texas' self-supporting (SS) debt will be retired in five years and 36.4 percent of debt 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 (i.e. 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**

	5 Years	10 Years
Not Self-Supporting Debt	33.4%	58.5%
Self Supporting Debt	18.3%	36.4%

## Chapter 4 - Conclusion

The 80<sup>th</sup> 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 maximum for the key ratio, NSS Debt Service as a Percentage of UGR (Ratio 1).

### Major Findings – Figure 4.1

- Additional debt-service capacity for the Ratio 1 target of 2 percent is \$296.0 million for fiscal 2013 and decreases to as low as \$77.5 million by fiscal year 2016 before beginning to increase to \$155.4 million in fiscal year 2017. (See *Figure 1.2, Chapter 3 and Appendix C*)
- Additional debt-service capacity for the Ratio 1 target of 2 percent including Special Debt Commitments is a negative \$647.9 million beginning in fiscal 2013 and decreases to a negative \$907.0 million by fiscal 2016.
- Including Special Debt Commitments, total debt service exceeds Ratio 1's target of 2 percent and cap of 3 percent beginning in fiscal 2013 but remains below the 5 percent max through 2017.
- Special Debt Commitments are projected to account for more than half of the total debt service for fiscal years 2013-2017.
- For the 2013-2017 period NSS debt service including Special Debt Commitments will peak in fiscal 2016 (see *Figure 4.1*).
- NSS debt as a percentage of personal income and debt per capita exceed agency benchmarks through fiscal 2017.
- The rate of debt retirement for NSS debt for the five and ten year periods are better than rating agency benchmarks. However, the rate of debt retirement is expected to decline as the remaining \$3 billion of Texas Transportation Commission (Proposition 12) debt is issued with level debt service instead of level principal payments and maturities longer than 20 years.
- With a continuation of the recent growth in the state's economy, the General Revenue Fund is expected to increase for FY 2013-2017 more per year than estimated in the February 2012 DAS. Additionally, the February 2013 DAS estimates that \$5.62 billion of NSS debt is expected to be issued during FY 2013-2017 compared to the \$6.25 billion estimated for FY 2012-2016 in the February 2012 DAS. As a result, Ratio 1 declined indicating additional debt service capacity is available to support future debt issuance.



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

Fiscal Year	2013		2014		2015		2016		2017	
<b>RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue</b>										
<b>NSS Debt Service</b>										
Issued	\$ 512,765,914	1 22%	\$ 495,582,284	1 13%	\$ 481,444,985	1 06%	\$ 433,042,787	0 93%	\$ 371,308,008	0 76%
Authorized but Unissued	29,963,336	0 07%	176,163,389	0 40%	277,306,987	0 61%	371,165,203	0 80%	381,362,698	0 78%
Projected	0	0 00%	12,293,922	0 03%	33,368,464	0 07%	47,088,573	0 10%	66,426,512	0 14%
<b>Total NSS Debt Service (excluding SDC)</b>	<b>\$ 542,729,250</b>	<b>1 29%</b>	<b>\$ 684,039,595</b>	<b>1 56%</b>	<b>\$ 792,120,436</b>	<b>1 75%</b>	<b>\$ 851,296,563</b>	<b>1 83%</b>	<b>\$ 819,097,218</b>	<b>1 68%</b>
Special Debt Commitments	\$ 943,816,965	2 25%	\$ 960,254,950	2 19%	\$ 954,342,362	2 11%	\$ 984,456,034	2 12%	\$ 984,909,415	2 02%
<b>Total Debt Service (including SDC)</b>	<b>\$ 1,486,546,216</b>	<b>3 55%</b>	<b>\$ 1,644,294,545</b>	<b>3 75%</b>	<b>\$ 1,746,462,798</b>	<b>3 85%</b>	<b>\$ 1,835,752,597</b>	<b>3 95%</b>	<b>\$ 1,804,006,633</b>	<b>3 70%</b>
SDC as a % of Total	63 5%		58 4%		54 6%		53 6%		54 6%	
<b>Additional Debt-Service Capacity excluding SDC*</b>										
Target (2%)	\$ 295,959,408	0 71%	\$ 192,496,385	0 44%	\$ 114,220,438	0 25%	\$ 77,474,272	0 17%	\$ 155,406,408	0 32%
Cap (3%)	\$ 715,303,738	1 71%	\$ 630,764,375	1 44%	\$ 567,390,875	1 25%	\$ 541,859,689	1 17%	\$ 642,658,222	1 32%
Max (5%)	\$ 1,553,992,396	3 71%	\$ 1,507,300,356	3 44%	\$ 1,473,731,748	3 25%	\$ 1,470,630,523	3 17%	\$ 1,617,161,848	3 32%
<b>Additional Debt-Service Capacity including SDC*</b>										
Target (2%)	\$ (647,857,557)	-1 55%	\$ (767,758,565)	-1 75%	\$ (840,121,924)	-1 85%	\$ (906,981,763)	-1 95%	\$ (829,503,007)	-1 70%
Cap (3%)	\$ (228,513,228)	-0 55%	\$ (329,490,575)	-0 75%	\$ (386,951,487)	-0 85%	\$ (442,596,345)	-0 95%	\$ (342,251,194)	-0 70%
Max (5%)	\$ 610,175,431	1 46%	\$ 547,045,405	1 25%	\$ 519,389,386	1 15%	\$ 486,174,489	1 05%	\$ 632,252,432	1 30%
<b>RATIO 2: Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue</b>	1 46%		1 55%		1 77%					
<b>RATIO 3: Not Self-Supporting Debt as a Percentage of Personal Income</b>	0 55%		0 62%		0 66%		0 62%		0 58%	
<b>RATIO 4: Not Self-Supporting Debt Per Capita</b>	\$232		\$274		\$300		\$291		\$283	
<b>Ratio 5: Rate of Debt Retirement in</b>	5 Years	10 Years								
Not Self-Supporting Debt	33 4%	58 5%								
Self-Supporting Debt	18 3%	36 4%								

\* 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 FY2013 through 2022 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., 3.90 percent growth from FY2013-2022), a 10-year annual average for personal income (i.e., 5.17 percent growth from FY2013-2022) and a 10-year annual average for population change (i.e., 1.59 percent growth from FY2013-2022). 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 (FY2013-2022). 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 (FY2013-2022).

**Figure A1**

### Percentage Growth Rates of Economic Factors Used in the Debt Capacity Model

Economic Factor	Base Scenario (A)	Positive Scenario (B)	Negative Scenario (C)
General Revenue Available for Debt Service	3.90	4.40	3.40
Total Personal Income	5.17	5.35	4.86
Population Change	1.59	1.69	1.36

SOURCE: Texas Bond Review Board.

### General Revenue 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 2012 Cash Report* was recreated. The Comptroller’s January 2013 Biennial Revenue Estimate was used for FY2013 through FY2015.

Except as noted below, estimates for many revenue sources for FY2016 and later were based on the estimated average annual growth rate for each revenue object from FY2005 through FY2015 using actual 2005 collections and the CPA estimates for 2015. Sales tax was projected to grow at 5 percent annually after FY2015. Motor sales taxes were projected to grow at the combined rate of inflation and population. Cigarette tax revenues were adjusted to reflect their irregular collections cycle. Revenues from the natural gas tax and oil production tax were estimated using the Comptroller’s Winter 2012-13 forecast for natural gas and oil price and production. The estimates assume no state

inheritance tax. Certain revenue sources that were estimated by the CPA to have no growth between FY2014 through FY2015 were maintained at the FY2015 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. The delay of motor fuel transfers from FY2013 to FY2014 affects the amount of unrestricted revenue in FY2013 and FY2014 and the rate of growth of unrestricted revenue in FY2015.

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 FY2013-2017. 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 the 2 percent target - ranging from 1.29 percent in FY2013 to a high of 1.83 percent in FY2016.

The report uses 2 percent as the target and 3 percent as the cap for Ratio 1. Based on projections from FY2013 through FY2017 for unrestricted general revenue and debt issuances, the 2 percent target for Ratio 1 would not be exceeded (See *Chapter 1* and *Appendix D* for a list of projected debt issuances). Under the 2 percent target, an additional debt-service capacity of \$296.0 million and \$155.4 million would be available in FY2013 and FY2017, respectively. Debt service will peak in FY2016.

**Figure B1**  
**Ratio 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue, Fiscal Years 2013 to 2017**

Fiscal Year	2013	2014	2015	2016	2017
Projected Unrestricted General Revenue	\$45,303,028,371	\$43,890,255,977	\$46,757,846,697	\$48,667,522,482	\$50,750,174,749
<b>Not Self-Supporting Annual Debt Service</b>					
Issued Debt	\$512,765,914	\$495,582,284	\$481,444,985	\$433,042,787	\$371,308,008
Authorized but Unissued Debt	\$29,963,336	\$176,163,389	\$277,306,987	\$371,165,203	\$381,362,698
Projected Debt	\$0	\$12,293,922	\$33,368,464	\$47,088,573	\$66,426,512
<b>Total Debt Service</b>	<b>\$ 542,729,250</b>	<b>\$ 684,039,595</b>	<b>\$ 792,120,436</b>	<b>\$ 851,296,563</b>	<b>\$ 819,097,218</b>
<b>Debt Service as a Percentage of Unrestricted General Revenue</b>					
Issued Debt	1.22%	1.13%	1.06%	0.93%	0.76%
plus Authorized but Unissued Debt	1.29%	1.53%	1.67%	1.73%	1.54%
plus Projected	1.29%	1.56%	1.75%	1.83%	1.68%
<b>Additional Debt-Service Capacity</b>					
Target (2.0%)	\$295,959,408	\$192,496,385	\$114,220,438	\$77,474,272	\$155,406,408
Cap (3.0%)	\$715,303,738	\$630,764,375	\$567,390,875	\$541,859,689	\$642,658,222
Max (5.0%)	\$1,553,992,396	\$1,507,300,356	\$1,473,731,748	\$1,470,630,523	\$1,617,161,848

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 \$250 million project, and the second scenario assumes a \$1 billion project. For purposes of this analysis, the debt was assumed to be issued in September 2013 with first debt-service payments in February 2014. 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	2013	2014	2015	2016	2017
<b>Debt Service as a Percent of Unrestricted General Revenue</b>					
Actual	1.29%	1.56%	1.75%	1.83%	1.68%
With \$250M Project	1.29%	1.62%	1.81%	1.89%	1.73%
With \$1B Project	1.29%	1.80%	1.98%	2.06%	1.89%
<b>Additional Debt-Service Capacity</b>					
<b>Target (2.0%)</b>					
Actual	\$ 295,959,408	\$ 192,496,385	\$ 114,220,438	\$ 77,474,272	\$ 155,406,408
With \$250M Project	\$ 295,959,408	\$ 166,217,219	\$ 87,441,271	\$ 51,445,105	\$ 130,127,242
With \$1B Project	\$ 295,959,408	\$ 87,379,719	\$ 7,103,771	\$ (26,642,395)	\$ 54,289,742
<b>Cap (3.0%)</b>					
Actual	\$ 715,303,738	\$ 630,764,375	\$ 567,390,875	\$ 541,859,689	\$ 642,658,222
With \$250M Project	\$ 715,303,738	\$ 604,485,209	\$ 540,611,708	\$ 515,830,522	\$ 617,379,055
With \$1B Project	\$ 715,303,738	\$ 525,647,709	\$ 460,274,208	\$ 437,743,022	\$ 541,541,555

SOURCE: Texas Bond Review Board.

The \$250 million project would decrease annual debt-service capacity by approximately \$26.0 million in each fiscal year beginning in 2014, and Ratio 1 would rise from 1.29 percent in FY2013 to 1.89 percent in FY2016. Debt service for this project reduces annual debt-service capacity by the amount of debt service for the \$250 million project each year.

The \$1 billion project would decrease annual debt-service capacity by approximately \$107.0 million in each fiscal year beginning in 2014, and Ratio 1 would rise from 1.29 percent in FY2013 to 2.06 percent in FY2016. Ratio 2 (Not Self-Supporting Debt Service as a Percentage of Budgeted General Revenue) would increase from 1.55 percent to 1.78 percent in FY2014.

*Figure B3* illustrates Ratio 3 (Not Self-Supporting Debt as a Percentage of Personal Income) for FY2013-2017. For this time period Texas will maintain a percentage of NSS debt to personal income from 0.55 percent in FY2013 to a peak of 0.66 percent in FY2015. This increase in percentage over the five-year period is due to \$5.62 billion in projected debt issuances during the period for existing authority and additional debt authorized by the 80<sup>th</sup> Legislature and approved by the voters in November 2007.

**Figure B3****Ratio 3: Not Self-Supporting Debt as a Percentage of Personal Income, Fiscal Years 2013 to 2017**

Fiscal Year	2013	2014	2015	2016	2017
<b>Not Self-Supporting Debt</b>					
Beginning Outstanding	\$ 4,090,999,838	\$ 6,126,655,814	\$ 7,350,357,419	\$ 8,185,347,624	\$ 8,067,510,030
Planned Issuances	\$ 2,349,340,000	\$ 1,517,267,710	\$ 1,210,450,000	\$ 281,250,000	\$ 260,700,000
Retirements - Existing Debt	\$ 307,569,024	\$ 249,171,105	\$ 289,508,909	\$ 284,876,709	\$ 235,344,848
Retirements - New Debt	\$ 6,115,000	\$ 44,395,000	\$ 85,950,886	\$ 114,210,886	\$ 131,070,886
<b>Ending Outstanding</b>	\$ 6,126,655,814	\$ 7,350,357,419	\$ 8,185,347,624	\$ 8,067,510,030	\$ 7,961,794,296
<b>Total Personal Income</b>	\$ 1,122,601,115,000	\$ 1,179,917,188,000	\$ 1,242,977,307,000	\$ 1,307,367,706,000	\$ 1,370,857,709,000
<b>Not Self-Supporting Debt as a Percentage of Personal Income</b>	0 55%	0 62%	0 66%	0 62%	0 58%
with \$250 million project	0 55%	0 64%	0 68%	0 64%	0 60%
with \$1 billion project	0 55%	0 71%	0 74%	0 69%	0 65%

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

The \$1 billion example mentioned in Ratio 1 also impacts Ratio 3. If the \$1 billion project is authorized and issued in September 2013, the NSS debt as a percentage of personal income would increase from 0.62 percent to 0.71 percent in FY2014 and from 0.66 percent to 0.74 percent in FY2015.

Figure B4 illustrates the impact of the \$250 million and \$1 billion projects on Ratio 4 (Not Self-Supporting Debt per Capita).

**Figure B4****Ratio 4: Not Self-Supporting Debt per Capita, Fiscal Years 2013 to 2017**

Fiscal Year	2013	2014	2015	2016	2017
Not Self-Supporting Debt Outstanding	\$ 6,126,655,814	\$ 7,350,357,419	\$ 8,185,347,624	\$ 8,067,510,030	\$ 7,961,794,296
Projected Population	26,380,210	26,825,894	27,269,342	27,699,888	28,132,044
Not Self-Supporting Debt Per Capita	\$ 232	\$ 274	\$ 300	\$ 291	\$ 283
with \$250 million project	\$ 232	\$ 283	\$ 309	\$ 300	\$ 292
with \$1 billion project	\$ 232	\$ 311	\$ 337	\$ 327	\$ 319

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

The \$250 million and \$1 billion project scenarios were structured with level principal over the 20-year term and do not impact Ratio 5 (rate of debt retirement) as Ratio 5 is calculated using authorized and issued debt and does not consider projected debt. For FY2013-2022, the NSS debt issued for both projects are retired at a rate of 50 percent in 10 years.

## 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 (SDC) on the DCM ratios. Although not legal obligations of the state, the state appropriates debt service for SDC. 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 commitments (SDC) 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 79<sup>th</sup> Legislature’s Third Called Session (2006) authorized \$1.9 billion for TRBs. As of August 31, 2012 no significant TRB authority remains unissued.

#### Instructional Facilities Allotment (IFA)

The IFA program was authorized in House Bill 4 by the 75<sup>th</sup> Legislature (1997). The provisions that authorize the IFA program are incorporated into the Texas Education Code as Chapter 46. The IFA program 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).

Expansion of the IFA program through new award cycles is contingent on a specific appropriation for that purpose each biennium. Appropriations for the current biennium do not include funding for new IFA awards.

#### Existing Debt Allotment (EDA)

In 1999, the 76<sup>th</sup> 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, 81<sup>st</sup> 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 (2014–15) will be determined by the 2012–13 Interest and Sinking tax collections. If a district’s 2012–13 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 2015–16 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 sources 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 2013 to 2017**

Commitment	2013	2014	2015	2016	2017
<b>Special Debt</b>					
Outstanding TRBs	\$ 288,589,200	\$ 293,485,174	\$ 290,611,659	\$ 287,168,688	\$ 285,525,857
Authorized but Unissued TRBs	-	-	-	-	-
Instructional Facilities Allotment	306,347,430	299,024,013	293,526,195	287,519,404	283,705,632
Existing Debt Allotment	348,880,335	367,745,763	370,204,508	409,767,942	415,677,927
<b>Total Debt Service</b>	<b>\$ 943,816,965</b>	<b>\$ 960,254,950</b>	<b>\$ 954,342,362</b>	<b>\$ 984,456,034</b>	<b>\$ 984,909,415</b>

SOURCE: Texas Bond Review Board and Legislative Budget Board.

*Figure C2* summarizes Ratio 1 for fiscal years 2013 through 2017. The negative numbers indicate shortfalls in debt service capacity for the corresponding target, cap or maximum percentage. Excluding SDC for Ratio 1, NSS Annual Debt Service never exceeds the target capacity of 2 percent. Including SDC, debt service exceeds the 2 percent target and 3 percent cap beginning in 2013.



**Figure C2**  
**Impact of Special Debt Commitments on Ratio 1, Fiscal Years 2013 to 2017**

Fiscal Year	2013		2014		2015		2016		2017	
<b>RATIO 1: Not Self-Supporting Debt Service as a Percentage of Unrestricted General Revenue</b>										
<b>NSS Debt Service</b>										
Issued	\$ 512,765,914	1 22%	\$ 495,582,284	1 13%	\$ 481,444,985	1 06%	\$ 433,042,787	0 93%	\$ 371,308,008	0 76%
Authorized but Unissued	29,963,336	0 07%	176,163,389	0 40%	277,306,987	0 61%	371,165,203	0 80%	381,362,698	0 78%
Projected	-	0 00%	12,293,922	0 03%	33,368,464	0 07%	47,088,573	0 10%	66,426,512	0 14%
<b>Total NSS Debt Service</b>	<b>\$ 542,729,250</b>	<b>1 29%</b>	<b>\$ 684,039,595</b>	<b>1 56%</b>	<b>\$ 792,120,436</b>	<b>1 75%</b>	<b>\$ 851,296,563</b>	<b>1 83%</b>	<b>\$ 819,097,218</b>	<b>1 68%</b>
<b>Additional Debt-Service Capacity (Without SDC)</b>										
Target (2%)	\$ 295,959,408	0 71%	\$ 192,496,385	0 44%	\$ 114,220,438	0 25%	\$ 77,474,272	0 17%	\$ 155,406,408	0 32%
Cap (3%)	\$ 715,303,738	1 71%	\$ 630,764,375	1 44%	\$ 567,390,875	1 25%	\$ 541,859,689	1 17%	\$ 642,658,222	1 32%
Max (5%)	\$ 1,553,992,396	3 71%	\$ 1,507,300,356	3 44%	\$ 1,473,731,748	3 25%	\$ 1,470,630,523	3 17%	\$ 1,617,161,848	3 32%
<b>Debt Service including Special Debt Commitments</b>										
NSS Debt Service	\$ 542,729,250	1 29%	\$ 684,039,595	1 56%	\$ 792,120,436	1 75%	\$ 851,296,563	1 83%	\$ 819,097,218	1 68%
Special Debt Commitments	943,816,965	2 25%	960,254,950	2 19%	954,342,362	2 11%	984,456,034	2 12%	984,909,415	2 02%
<b>Total</b>	<b>\$ 1,486,546,216</b>	<b>3 54%</b>	<b>\$1,644,294,545</b>	<b>3 75%</b>	<b>\$1,746,462,798</b>	<b>3 85%</b>	<b>\$1,835,752,597</b>	<b>3 95%</b>	<b>\$1,804,006,633</b>	<b>3 70%</b>
<b>Additional Debt-Service Capacity (Includes SDC)</b>										
Target (2%)	\$ (647,857,557)	-1 54%	\$ (767,758,565)	-1 75%	\$ (840,121,924)	-1 85%	\$ (906,981,763)	-1 95%	\$ (829,503,007)	-1 70%
Cap (3%)	\$ (228,513,228)	-0 54%	\$ (329,490,575)	-0 75%	\$ (386,951,487)	-0 85%	\$ (442,596,345)	-0 95%	\$ (342,251,194)	-0 70%
Max (5%)	\$ 610,175,431	1 46%	\$ 547,045,405	1 25%	\$ 519,389,386	1 15%	\$ 486,174,489	1 05%	\$ 632,252,432	1 30%

## **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, 2012 the Constitutional Debt Limit (CDL) percentage for not self-supporting (NSS) debt outstanding was 1.34 percent and 3.48 percent including both outstanding and authorized but unissued debt. These figures were 1.35 and 3.70, respectively for FY2011 and represent decreases of 0.7 percent and 5.9 percent, respectively.

Based on the authorizations for which the approximate issuance date is known, an estimated \$5.62 billion in new, NSS debt is expected to be issued between fiscal years 2013 to 2017 for the following transactions:

- \$3.82 billion in General Obligation (GO) debt, related to Proposition 12 for transportation projects (TTC);
- \$1.20 billion in GO debt, related to Proposition 15 for cancer research (TPFA);
- \$443.9 million in GO debt for capital projects for certain state agencies (TPFA), including Proposition 4 authorization;
- \$29.4 million in GO bonds for the Texas Water Development Board's (TWDB) Economically Distressed Areas Program;
- \$50.0 million in GO bonds for the TWDB's Water Infrastructure Fund; 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 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 5.0 percent was used for the Master Lease Purchase Program and 6.0 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.

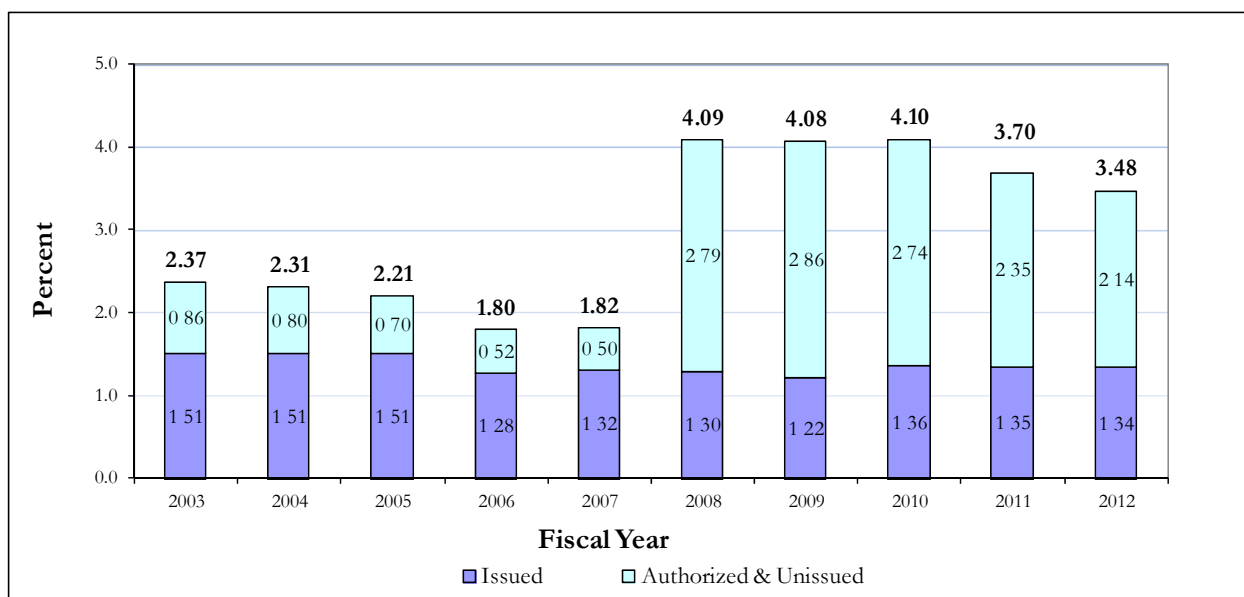
The impact of the fourth factor is determined by legislative action. The Constitution provides that debt service for NSS debt reasonably expected to be paid from other revenue sources and not

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, \$5.00 billion transportation authorization approved by the 80<sup>th</sup> 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.

A reclassification of NSS debt to SS debt occurred for the first time in fiscal 2010 when seven bond series consisting of TWDB State Participation Program and Water Infrastructure Fund debt were certified to have sufficient revenue streams for debt service. These reclassifications reduced the CDL by approximately 6 basis points (0.06%).

Figure D1 shows the CDL percentages from FY2003-2012. For FY2012 the CDL percentage was 1.34 for issued debt and 3.48 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 6.0 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*):

- *Debt Service on Outstanding Debt*
- *Debt Service for Authorized But Unissued Debt*
- *Unrestricted General Revenue for the three preceding fiscal years*

*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 \$38.17 billion for fiscal years 2010, 2011 and 2012 (*Figure D2*). Thus the maximum amount available for debt service is five percent of \$38.17 billion, or \$1.91 billion.

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

Unrestricted General Revenue (amounts in thousands)	
General Revenue Available After Constitutional Dedications (Year Ending 8/31/10)	\$ 34,014,030
General Revenue Available After Constitutional Dedications (Year Ending 8/31/11)	38,213,158
General Revenue Available After Constitutional Dedications (Year Ending 8/31/12)	42,287,113
Average Amount of Unrestricted General Revenue Available for the three preceding Fiscal Years	\$ 38,171,434

*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-GO 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, 2012 CDL the peak debt service year is 2013 (*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)						
	2013	2014	2015	2016	2017	2018 & beyond
<b>Not Self-Supporting<sup>1</sup></b>						
<b>General Obligation Debt</b>						
Higher Education Constitutional Bonds <sup>2</sup>	\$10,328	\$10,314	\$7,459	\$1,424	\$1,415	\$4,887
Texas Public Finance Authority Bonds	251,296	244,437	256,301	220,789	168,492	1,295,228
Park Development Bonds	1,878	1,830	1,781	1,740	1,693	2,567
Agriculture Water Conservation Bonds	-	-	-	-	-	-
Cancer Prevention and Research Institute of Texas	35,996	32,092	31,460	30,828	30,196	354,515
Water Development Bonds - EDAP <sup>3</sup>	22,153	22,032	21,888	21,552	21,381	155,279
Water Development Bonds - State Participation	2,119	2,104	2,089	3,809	3,719	39,146
Water Development Bonds - WIF	50,780	49,867	49,016	48,071	47,135	506,094
TTC GO Transportation Bonds	63,559	63,558	63,557	63,559	63,557	1,351,403
<b>Total General Obligation Debt</b>	<b>\$438,108</b>	<b>\$426,234</b>	<b>\$433,549</b>	<b>\$391,771</b>	<b>\$337,589</b>	<b>\$3,709,118</b>
<b>Non-General Obligation Debt</b>						
Texas Public Finance Authority Bonds	51,101	50,239	30,076	25,650	20,108	34,184
TPFA Master Lease Purchase Program	14,292	13,629	12,701	10,856	8,908	34,975
Texas Military Facilities Commission Bonds	1,980	1,974	1,674	1,377	1,375	8,601
Parks and Wildlife Improvement Bonds	7,284	3,507	3,445	3,388	3,328	6,493
<b>Total Non-General Obligation Debt</b>	<b>\$74,657</b>	<b>\$69,348</b>	<b>\$47,896</b>	<b>\$41,271</b>	<b>\$33,719</b>	<b>\$84,252</b>
<b>Total Not Self-Supporting</b>	<b>\$512,766</b>	<b>\$495,582</b>	<b>\$481,445</b>	<b>\$433,043</b>	<b>\$371,308</b>	<b>\$3,793,371</b>
<sup>1</sup> Bonds that are not self-supporting (general obligation and non-general obligation) depend solely on the state's general revenue for debt service.						
<sup>2</sup> 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.						
<sup>3</sup> Economically Distressed Areas Program (EDAP) bonds do not depend totally on the state's general revenue fund for debt service.						
<b>Source:</b> Texas Bond Review Board - Bond Finance Office.						

As of August 31, 2012, debt service for issued debt will require 1.34 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 cumulative debt-service for all authorized but unissued debt assuming that the debt is issued at an interest rate of 5.0 percent for the Master Lease Purchase Program and 6.0 percent for all other authorized but unissued debt. The calculation assumes a maturity of 20 years and level debt-service payments. *Figure D4* illustrates the principal amounts used for the CDL calculation for authorized and unissued debt as of August 31, 2012.

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

Not Self-Supporting Program Name	General Obligation Authorization		Total Authorized but Unissued (amounts in thousands)
	Constitutional Authorization	Statutory Authorization	
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		3,084,517
Transportation Commission GO Transportation Bonds	Article III Section 49-p	Transportation Code, Section 222.04	4,000,709
Water Development Bonds - EDAP <sup>1</sup>	Article III Sections 49-d-7 & 40-d-10	Texas Water Code, Chapter 17, Subchapter K	186,036
Water Development Bonds - State Participation	Article III Sections 49-c, 49-d, 49-d-2, 49-d-6 thru 49-d-9		0
Water Development Bonds - WIF <sup>2</sup>	Article III Sections 49-d-8 & 49-d-9	Texas Water Code, Chapter 16, Subchapters E & F, Chapter 17	152,134
<b>Total General Obligation Authorized But Unissued</b>			<b>\$7,588,236</b>
	<b>Revenue Authorization</b>		
Texas Public Finance Authority Bonds		Texas Government Code, Sections 1232.104, 1232.110; Senate Bill 1, 81st Leg. RS, p. II-93, Rider 33	\$120,881
TPFA Master Lease Purchase Program		Texas Government Code, Section 1232.103	73,210
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.	**
<b>Total Revenue Authorized But Unissued</b>			<b>194,091</b>
<b>Total Not Self-Supporting</b>			<b>\$7,782,327</b>

<sup>1</sup> Economically Distressed Areas Program (EDAP) bonds do not depend totally on the state's general revenue fund for debt service.  
<sup>2</sup> WIF bonds authorized with appropriations under the 82nd Legislature will expire August 31, 2013.

As of August 31, 2012, debt service for authorized but unissued debt will require 2.14 percent of UGR for the prior three fiscal years.

*Completing the CDL Calculation*

For fiscal 2012 the CDL for both debt classifications was computed by adding the 1.34 percent computed for debt service on outstanding debt plus the 2.14 percent computed for debt service on authorized but unissued debt to obtain the total of 3.48 percent.

*Calculation detail for the CDL for the fiscal 2012*

*Figure D5* illustrates the calculations made for fiscal 2012.

*Additional debt capacity under the CDL*

At fiscal year-end 2012, BRB staff estimated that slightly more than \$6.65 billion in additional debt capacity was available before reaching the CDL. However, because the interest rate for authorized but unissued debt is conservatively assumed to be 6.0 percent, debt issuance actually increases debt capacity under the CDL. Staff thus expects the CDL capacity for authorized but unissued debt to increase at fiscal year-end 2013 due to the issuance of almost \$1.0 billion of Proposition 12 debt for the Texas Department of Transportation during fiscal 2013.

**Figure D5  
Constitutional Debt Limit Calculation**

Constitutional Debt Limit - Article III Section 49-j Based on estimated Debt Outstanding as of 8/31/12 (All figures are thousands, except percentages)			
	Authorized Debt	Debt Service	Percentage of UGR
<b>Maximum Annual Debt Service on Outstanding Debt *</b>			
Debt Service on Bonds Payable from the General Revenue Fund			
General Obligation Bonds (Not Self-Supporting)		438,108	
(10 % of EDAP Considered Self-Supporting)		(2,215)	
Non-General Obligation Bonds (Not Self-Supporting)		<u>60,365</u>	
		496,258	
Debt Service on Commercial Paper Payable from the General Revenue Fund			
TPFA MLPP Commercial Paper (\$96.6 million MLPP outstanding)***		14,292	
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		<u>510,550</u>	<b>1.34%</b>
<b>Authorized but Unissued Debt</b>			
TTC Prop 12 General Obligation Bonds (Not Self-Supporting)	4,000,709	\$348,800.04	
General Obligation Bonds (Not Self-Supporting) excluding TTC Prop 12 (10 % of EDAP Considered Self-Supporting)	3,587,527	(18,604)	
Non-General Obligation Bonds (Not Self-Supporting) excluding MLPP	<u>120,881</u>		
Total Authorized but Unissued Bonds Payable from the General Revenue Fund	3,689,804		
Estimated Debt Service on Authorized but Unissued Bonds Payable from the General Revenue Fund **		\$321,693.93	
Estimated Debt Service on HEAF Bonds Payable from the General Revenue Fund		120,922	
Amount of Authorized but Unissued MLPP Commercial Paper	73,210		
Estimated Debt Service on MLPP Commercial Paper****		28,064	
Total Debt Service on Authorized but Unissued Debt Payable from the General Revenue Fund		<u>\$819,479.80</u>	<b>2.15%</b>
<b>Debt Service on Outstanding and Authorized but Unissued Debt</b>		<u>1,330,030</u>	<b>3.48%</b>
<b>Unrestricted General Revenue</b>			
General Revenue Available After Constitutional Dedications (Year Ending 8/31/10)	34,014,030		
General Revenue Available After Constitutional Dedications (Year Ending 8/31/11)	38,213,158		
General Revenue Available After Constitutional Dedications (Year Ending 8/31/12)	<u>42,287,113</u>		
Average Amount of Unrestricted General Revenue Available for the three preceding Fiscal Years	38,171,434		
<b>Debt Limit Percentages</b>			
Debt Service on Outstanding Debt as a Percentage of Unrestricted General Revenue			<b>1.34</b>
Debt Service on Authorized but Unissued Debt as a Percentage of Unrestricted General Revenue			<b>2.15</b>
Debt Service on Outstanding and Authorized but Unissued Debt as a Percentage of General Revenue After Constitutional Dedications ( <b>The Constitutional Debt Limit</b> )			<b>3.48</b>
Notes:			
* Debt service is based on maximum annual debt service payable from general revenue The maximum amount occurs in FY 2013			
** 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, Tax and Revenue Anticipation Notes, and non-general obligation debt issuances by university systems that have an unenhanced long-term debt rating of at least AA- or its equivalent.

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 four 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) debt payable from general revenue and administers the state’s Master Lease Purchase Program. Even though TPFA has historically been the issuer of most of the state’s NSS debt, the Texas Transportation Commission is now the largest issuer of such debt.

### Classifications 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 to 30 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 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 to 30 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.

*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.

*Not Self-Supporting* (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 the Cancer Prevention and Research Institute of Texas. Examples of NSS revenue debt include TPFA bonds to finance parks and wildlife improvements.

### **Debt Instruments used by the State of Texas**

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 GO pledge or by a specified revenue source(s). A CP program secured by the state's GO pledge must be initially approved by 2/3 vote of both houses and a majority of the voters. When CP matures it can 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 state revenues and expenditures in the general revenue fund. TRAN issuances 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. TRAN issuances 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.

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 and are considered to be SS debt. However, historically the legislature has appropriated general revenue to the institution to offset all or a portion of the debt service on TRBs.

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 tax-exempt 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.

### **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](http://www.brb.state.tx.us/bfo/bfo.aspx).

**Figure E2**  
**State Debt Outstanding, Fiscal Year 2012\* (thousands)**

Debt Type	Amount
<b>General Obligation Debt</b>	
Veterans' Land and Housing Bonds	\$2,113,682
Water Development Bonds	1,046,030
Water Development Bonds-State Participation	113,930
Water Development Bonds - WIF	222,200
Economic Development Bank Bonds	45,000
Park Development Bonds	0
College Student Loan Bonds	825,100
Texas Agricultural Finance Authority	9,000
Texas Mobility Fund Bonds	6,010,910
Texas Public Finance Authority - TMVRLF	48,680
<b>Total - Self-Supporting</b>	<b>\$10,434,532</b>
Higher Education Constitutional Bonds	\$32,067
Texas Public Finance Authority Bonds	1,713,250
Cancer Prevention and Research Institute of Texas	358,520
Park Development Bonds	9,925
Agriculture Water Conservation Bonds	0
Water Development Bonds - EDAP	197,100
Water Development Bonds - State Participation	35,080
Water Development Bonds - WIF	511,210
TTC GO Transportation Bonds	957,650
<b>Total - Not Self-Supporting</b>	<b>\$3,814,802</b>
<b>Total - General Obligation Debt</b>	<b>\$14,249,334</b>
<b>Non-General Obligation Debt</b>	
Permanent University Fund Bonds	
The Texas A&M University System	\$730,295
The University of Texas System	1,753,030
College and University Revenue Bonds	10,528,915
Texas Water Resources Finance Authority Bonds	0
Texas Department of Transportation Bonds - CTTS	2,536,049
Texas Department of Housing & Community Affairs - SF	1,278,105
Economic Development Program (Leverage Fund)	25,000
Veterans' Financial Assistance Bonds	0
Texas Workforce Commission Unemp Comp Bonds	1,466,625
State Highway Fund	3,963,935
Water Development Board Bonds - State Revolving Fund	881,493
<b>Total - Self-Supporting</b>	<b>\$23,163,447</b>
Texas Public Finance Authority Bonds	\$162,258
TPFA Master Lease Purchase Program	76,790
Texas Military Facilities Commission Bonds	13,450
Parks and Wildlife Improvement Bonds	23,700
<b>Total - Not Self-Supporting</b>	<b>\$276,198</b>
Texas Windstorm Insurance Association	\$500,000
Texas Small Business I.D.C. Bonds	20,000
Texas Dept. of Housing and Community Affairs Bonds - MF	1,075,881
Texas State Affordable Housing Corporation	432,787
Texas PAB Surface Transportation Corporation	1,015,000
TPFA Charter School Finance Corporation	259,621
<b>Total - Conduit</b>	<b>\$3,303,289</b>
<b>Total - Non-General Obligation Debt</b>	<b>\$26,742,934</b>
<b>Total - Debt Outstanding</b>	<b>\$40,992,268</b>

\*Does not include Tax and Revenue Anticipation Notes

Source: Texas Bond Review Board

## Appendix F – Texas’ Debt Compared to Other States

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 – Georgia, Maryland, North Carolina, and Virginia – use a debt affordability tool. In addition, other states including 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 September 2012**

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
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 2011 reports.

### Factors Affecting State Debt Ratings

Moody’s *2012 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 made a general obligation pledge of 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’ Net Tax-Supported Debt and Gross Tax-Supported Debt are slightly higher than the median, but the state’s Net Tax-Supported Debt per Capita and Net Tax-Supported Debt as a percentage of 2011 Personal Income are lower than the median (*Figure F2*). Texas ranks fifth for Net Tax-Supported Debt with

\$15.10 billion, compared to the group median of \$14.78 billion. Texas ranks fifth for Gross Tax-Supported Debt with \$23.90 billion, compared to the group median of \$23.37 billion. Texas ranks tenth in Net Tax-Supported Debt per Capita with \$588 compared to the group median of \$1,116.50. For Net Tax-Supported Debt as a percentage of 2011 Personal Income, Texas ranks tenth with 1.5 percent compared to the group median of 2.9 percent (Please note that in *Figure F2* and *Figure F4* debt burdens are ranked on a scale of 1 to 10, with 1 being the highest debt burden. For *Figure F3*, 1 indicates the highest debt burden while 50 represents the lowest).

**Figure F2**  
**State Debt: Texas Compared to Ten Most Populous States, 2012**

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 2011 Personal Income	
California	38,041,430	A1	\$96.44	1	\$102.30	1	\$2,559	3	6.0%	2
<b>Texas</b>	<b>26,059,203</b>	<b>Aaa</b>	<b>15.10</b>	<b>5</b>	<b>23.90</b>	<b>5</b>	<b>588</b>	<b>10</b>	<b>1.5%</b>	<b>10</b>
New York	19,570,261	Aa2	62.44	2	62.56	2	3,208	1	6.6%	1
Florida	19,317,568	Aa1	22.24	4	32.25	4	1,167	4	3.0%	5
Illinois	12,875,255	A2	33.00	3	34.67	3	2,564	2	6.0%	3
Pennsylvania	12,763,536	Aa1	14.45	6	19.29	7	1,134	5	2.8%	7
Ohio	11,544,225	Aa1	11.68	7	17.05	8	1,012	7	2.8%	6
Georgia	9,919,945	Aaa	10.79	8	10.79	9	1,099	6	3.1%	4
Michigan	9,883,360	Aa2	7.75	10	22.84	6	785	9	2.2%	9
North Carolina	9,752,073	Aaa	7.87	9	7.87	10	815	8	2.3%	8
Ten Most Populous Mean			<b>\$28.18</b>		<b>\$33.35</b>		<b>\$1,493</b>		<b>3.6%</b>	
Ten Most Populous Median			<b>\$14.78</b>		<b>\$23.37</b>		<b>\$1,117</b>		<b>2.9%</b>	
					<b>National Mean</b>		<b>\$1,408</b>		<b>3.4%</b>	
					<b>National Median</b>		<b>\$1,117</b>		<b>2.8%</b>	

SOURCE: Moody's 2012 State Debt Medians Report; U.S. Census Bureau – July 1, 2012 data.

*Figure F3* provides selected tax-supported debt measures for all fifty states. Texas' Net Tax-Supported Debt as a percentage of 2011 Personal Income was 1.5 percent, 40<sup>th</sup> among the states and below the national mean and median of 3.4 percent and 2.8 percent, respectively. Texas' Net Tax-Supported Debt per Capita was \$588, 39<sup>th</sup> among the states and below the national mean of \$1,408 and median of \$1,117.

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

State	Moody's Rating	Net Tax-Supported Debt as a % of 2011 Personal Income		Net Tax-Supported Debt Per Capita	
		Rank	Rank	Rank	Rank
Hawaii	Aa2	9.6%	1	\$3,899	4
Massachusetts	Aa1	9.4%	2	4,814	2
Connecticut	Aa3	9.1%	3	5,096	1
New Jersey	Aa3	7.8%	4	3,964	3
Delaware	Aaa	6.8%	5	2,676	6
New York	Aa2	6.6%	6	3,208	5
Kentucky	Aa2*	6.1%	7	2,035	10
California	A1	6.0%	8	2,559	9
Illinois	A2	6.0%	9	2,564	8
Washington	Aa1	6.0%	10	2,588	7
Mississippi	Aa2	5.6%	11	1,734	15
Oregon	Aa1	5.5%	12	2,015	11
Wisconsin	Aa2	4.8%	13	1,827	13
Rhode Island	Aa2	4.7%	14	1,997	12
Utah	Aaa	4.4%	15	1,393	19
New Mexico	Aaa	4.2%	16	1,406	17
Louisiana	Aa2	3.7%	17	1,398	18
Maryland	Aaa	3.6%	18	1,742	14
West Virginia	Aa1	3.6%	19	1,168	22
Alaska	Aaa	3.3%	20	1,454	16
Georgia	Aaa	3.1%	21	1,099	26
Kansas	Aa1*	3.1%	22	1,215	20
Florida	Aa1	3.0%	23	1,167	23
Arizona	Aa3	2.8%	24	966	28
Ohio	Aa1	2.8%	25	1,012	27
Pennsylvania	Aa1	2.8%	26	1,134	25
Minnesota	Aa1	2.7%	27	1,148	24
Virginia	Aaa	2.6%	28	1,169	21
Alabama	Aa1	2.5%	29	839	30
South Carolina	Aaa	2.5%	30	827	31
Maine	Aa2	2.3%	31	845	29
North Carolina	Aaa	2.3%	32	815	32
Michigan	Aa2	2.2%	33	785	35
Nevada	Aa2	2.2%	34	793	33
Missouri	Aaa	2.0%	35	741	37
Vermont	Aaa	2.0%	36	792	34
New Hampshire	Aa1	1.8%	37	776	36
Idaho	Aa1*	1.7%	38	558	40
Oklahoma	Aa2	1.7%	39	615	38
<b>Texas</b>	<b>Aaa</b>	<b>1.5%</b>	<b>40</b>	<b>588</b>	<b>39</b>
Colorado	Aa1*	1.3%	41	529	41
Indiana	Aaa*	1.3%	42	446	42
Arkansas	Aa1	1.0%	43	333	46
Montana	Aa1	1.0%	44	348	44
Tennessee	Aaa	1.0%	45	343	45
South Dakota	NGO**	0.9%	46	358	43
Iowa	Aaa*	0.8%	47	310	47
North Dakota	Aa1*	0.6%	48	255	48
Wyoming	NGO**	0.1%	49	64	49
Nebraska	NGO**	0.0%	50	15	50
Mean		3.4%		\$1,408	
Median		2.8%		\$1,117	
Puerto Rico***	Baa1	88.6%		\$14,004	
* Issuer Rating (No G.O. Debt)					
** No general obligation debt					
*** Included for comparison purposes only. Not included in any totals, averages or median calculations.					
<b>Source:</b> Moody's Investors Service, 2012 <i>State Debt Medians</i> .					

It is important to note that states with higher state debt levels may have lower local debt levels and vice-versa. During calendar year 2010 (most recent data available compared to other states) local debt accounted for approximately 83.2 percent of Texas' total debt burden. (Local debt includes debt issued by cities, school districts, water districts, counties, community colleges, special districts and health and hospital districts) 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 fourth for total state and local debt per capita (*Figure F4*).

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

State	Total State and Local Debt				State Debt				Local Debt			
	Population (thousands)	Amount (millions)	Per Capita Amount	Per Capita Rank	Amount (millions)	% of Total Debt	Per Capita Amount	Capita Rank	Amount (millions)	% of Total Debt	Capita Amount	Capita Rank
New York	19,378	\$316,668	\$16,342	1	\$129,530	40.9%	\$6,684	1	\$187,138	59.1%	\$9,657	1
California	37,254	403,985	10,844	2	148,929	36.9%	3,998	3	255,056	63.1%	6,846	3
Illinois	12,831	135,991	10,599	3	61,412	45.2%	4,786	2	74,579	54.8%	5,812	5
Pennsylvania	12,702	122,319	9,630	5	44,738	36.6%	3,522	4	77,581	63.4%	6,108	4
<b>Texas</b>	<b>25,146</b>	<b>249,882</b>	<b>9,937</b>	<b>4</b>	<b>42,034</b>	<b>16.8%</b>	<b>1,672</b>	<b>9</b>	<b>207,848</b>	<b>83.2%</b>	<b>8,266</b>	<b>2</b>
Florida	18,801	150,579	8,009	6	41,324	27.4%	2,198	7	109,255	72.6%	5,811	6
Michigan	9,884	77,302	7,821	7	32,146	41.6%	3,252	5	45,156	58.4%	4,569	7
Ohio	11,537	76,279	6,612	8	30,004	39.3%	2,601	6	46,275	60.7%	4,011	8
Georgia	9,688	52,446	5,414	10	13,789	26.3%	1,423	10	38,657	73.7%	3,990	9
North Carolina	9,535	51,831	5,436	9	18,853	36.4%	1,977	8	32,978	63.6%	3,459	10
<b>MEAN</b>		<b>\$163,728</b>	<b>\$9,064</b>		<b>\$56,276</b>	<b>34.7%</b>	<b>\$3,211</b>		<b>\$107,452</b>	<b>65.3%</b>	<b>\$5,853</b>	

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: 2009-2010*, 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 ratings provide a benchmark rate for the state’s revenue debt.

Rating agencies consider four factors in determining a state’s GO bond rating: economy, finances, debt and management. Specific items considered are shown in *Figure G2*.

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

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

Source: Texas Bond Review Board.

### **Ratings for Texas General Obligation Debt**

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

*S&P's* outlook for the state's rating remains stable. In its September 2012 report, "State Review: Texas," S&P stated that "The state's economy is large and steadily diversifying and continues to perform better than the nation in terms of both economic activity and employment. Furthermore, we expect that Texas' economy will continue to outperform the nation's given its continued population growth and relatively low cost of doing business, which we expect will contribute to gradual employment gains through the remainder of 2012 and into 2013, particularly in the health, education and services sectors. Factors that limit the rating to the current level include our opinion of the state's ongoing budgetary pressures, which are primarily related to the growing proportion of school revenues Texas is required to fund, as well as insufficient new sources of recurring dedicated tax revenues to support the increased funding; and the increasing spending pressure from public assistance payments, including Medicaid." S&P's latest action on Texas' GO rating was an upgrade from AA to AA+ in August 2009.

*Moody's* outlook for Texas' rating remains stable. In its May 2012 report, "Rating Action: Moody's Assigns Aaa/VMIG 1 Rating to \$75 Million of Texas General Obligation Bonds Issued Through The Veterans' Land Board," Moody's stated that "The long-term rating reflects the strong fundamentals of the Texas economy and the expectation that it will continue to perform more strongly than the nation; a notably large rainy day fund even after the state has used a portion of it to help balance the current biennium but that still provides a healthy budgetary cushion; and low debt levels. Those strengths are offset by a weakened GAAP-basis available fund balances and structural budget imbalance that, while reduced based on the fiscal 2012-2013 enacted budget, will continue to pressure the state's finances as it seeks to maintain education and property tax relief spending amid



high population growth.” Moody’s latest action on Texas’ GO rating was to affirm its stable outlook in May 2012.

*Fitch’s* outlook for Texas’ rating is also stable. In its August 2012 report, “Fitch Rates Texas Water Development Board’s \$250MM State GOs AAA” Fitch stated that “The state’s long-term AAA GO rating reflects its low debt burden, conservative financial operations and a growth-oriented economy that continues to outpace national averages. Financial pressures arise from the demand that rapid growth places on the state’s consumption-based tax system, including longer term transportation needs and the state’s commitment to education.” Fitch’s latest action on Texas’ GO rating was to affirm its stable outlook in July 2011.

The state’s past and current GO bond ratings are shown in *Figure G3*.

**Figure G3**  
**Changes in Texas’ GO Bond Ratings from years 1961 to 2013**

<u>Year</u>	<u>Moody's</u>	<u>Standard &amp; Poor's</u>	<u>Fitch</u>
1961 (Initial)	*	AAA	*
1962-1985	Aaa	AAA	*
1986	Aaa	AA+	*
1987-1992	Aa	AA	*
1993-1996	Aa	AA	AA+
1997-1998	Aa2**	AA	AA+
1999-2008	Aa1	AA	AA+
2009	Aa1	AA+	AA+
2010-2013	Aaa**	AA+	AAA**
* Not Rated			
** Recalibration			

Source: Texas Bond Review Board

## Appendix H - Glossary

**Advance Refunding** – A refunding transaction in which the issue to be refunded remains outstanding for a period of more than 90 days after the issuance of the refunding issue.

**Average Daily Attendance (ADA)** – The total number of students in attendance each day of the entire school year divided by the number of instructional days in the school year.

**Bond** – A certificate of debt issued by a government or corporation guaranteeing payment of the original investment plus interest by a specific future date. The bond specifies the date the debt is due (“term” or “maturity,” i.e. 20 years), the interest rate (i.e. 5%), the repayment dates (i.e. monthly, semi-annually, annually) and the revenue source pledged to make the payments.

**Budgeted General Revenue** – The amount of revenue 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 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.

**Current Refunding** – A refunding transaction in which the securities to be refunded will mature or be redeemed within 90 days or less from the date of issuance of the refunding issue.

**Debt Capacity Model (DCM)** – A financial model that assesses the impact on unrestricted 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 beginning in 1985 through Constitutional Amendment to fund permanent capital improvements for certain public higher education institutions. This term may refer either to Higher Education Assistance Fund (HEAF) 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<sup>th</sup> Legislature (1997) and 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 76<sup>th</sup> 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. Currently, the guaranteed yield for EDA provides \$35 per student in average daily attendance (ADA) per penny of tax effort.

**Lease Purchase** – The purchase of an asset over time through lease payments that include principal and interest. Lease purchases can be financed through a private vendor or through one of the state's pool programs such as the Texas Public Finance Authority's Master Lease Purchase Program.

**Municipal Bond** – A debt security issued by a state, municipality or county. Municipal securities are generally exempt from federal taxes and from most state and local taxes.

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

**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 21 institutions and certain 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).

**Refunding Bond** – Bond issued to retire or defease all or a portion of outstanding debt.

**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 but not legally backed by the state’s GO pledge: Tuition Revenue Bonds, Existing Debt Allotment and Instructional Facilities Allotment.

**Tax and Revenue Anticipation Notes (TRAN)** – Short-term loans used to address a mismatch between state revenues and expenditures.

**Tuition Revenue Bonds (TRB)** – Revenue bonds issued by the revenue finance systems of institutions of higher education 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.

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