TEXAS BOND REVIEW BOARD

2019 ANNUAL REPORT

FISCAL YEAR ENDED AUGUST 31, 2019

Supplement to the Fiscal Year 2019 State Debt Annual Report

This supplement, dated February 5, 2020, to the Fiscal Year 2019 State Debt Annual Report updates unrestricted revenues available for the fiscal year ending August 31, 2018 and August 31, 2019 per Table 11 of the Comptroller of Public Accounts' 2018 and 2019 Annual Cash Reports as well as updates the Constitutional Debt Limit (CDL). On January 24, 2020, the Comptroller of Public Accounts published a revised unrestricted general revenue (UGR) figure for fiscal years 2018 and 2019. Because UGR impacts the CDL calculation, the following text and figures have been updated in this report as stated below.

The paragraph in the Executive Summary starting on page iii, regarding the Constitutional Debt Limit calculation, is replaced with the following text:

> Constitutional Debt Limit
> As of August 31, 2019, Texas' constitutional debt limit (CDL) remained below the maximum of 5 percent with 1.29 percent calculated for debt outstanding and 0.78 percent calculated for authorized but unissued debt of the three-year average of unrestricted general revenue funds for a total of 2.07 percent. Included in the CDL is the $767.7 million of revenue bonds authorized by the 84th Legislature for the Texas Facilities Commission. The CDL declined 6.3 percent from the 2.21 percent calculated for outstanding and authorized but unissued debt calculated for fiscal year 2018.

The paragraphs in Chapter 1 on page 7, regarding the not self-supporting scheduled annual debt service as a percentage of unrestricted general revenue and total unrestricted general revenue, is replaced with the following text:

> Total not self-supporting debt increased from $3.09 billion at the end of fiscal year 2010 to $7.01 billion at the end of fiscal year 2019, an increase of 126.6 percent, and an increase of 0.6 percent from the $6.97 billion outstanding in fiscal year 2018. Estimated scheduled annual debt service as a percentage of unrestricted general revenue increased slightly in fiscal year 2019 to 1.28 percent (*Figure 1.3*).
>
> Unrestricted general revenue increased 62.0 percent in fiscal year 2019 to $55.09 billion from $34.01 billion in fiscal year 2010 (*Figure 1.4*). Unrestricted general revenue is generally the most available funding source to make debt-service payments and to fund appropriations for state operations.

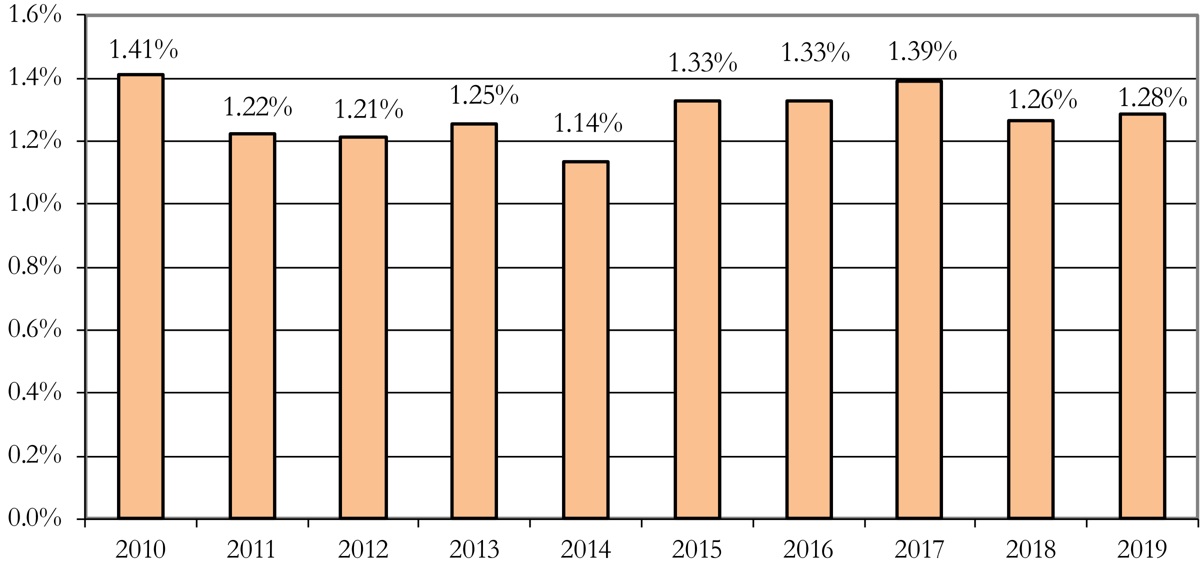
The paragraph in Chapter 1 on page 10, regarding the Constitutional Debt Limit calculation, is replaced with the following text:

> As of August 31, 2019, Texas' constitutional debt limit (CDL) remained below the maximum of 5 percent with 1.29 percent calculated for debt outstanding and 0.78 percent calculated for authorized but unissued debt for a total of 2.07 percent. Included in the CDL is the $767.7 million of revenue bonds authorized by the 84th Legislature for the Texas Facilities Commission. The CDL declined 6.3 percent from the 2.21 percent calculated for outstanding and authorized but unissued debt calculated for fiscal year 2018.

Supplement to the Fiscal Year 2019 State Debt Annual Report

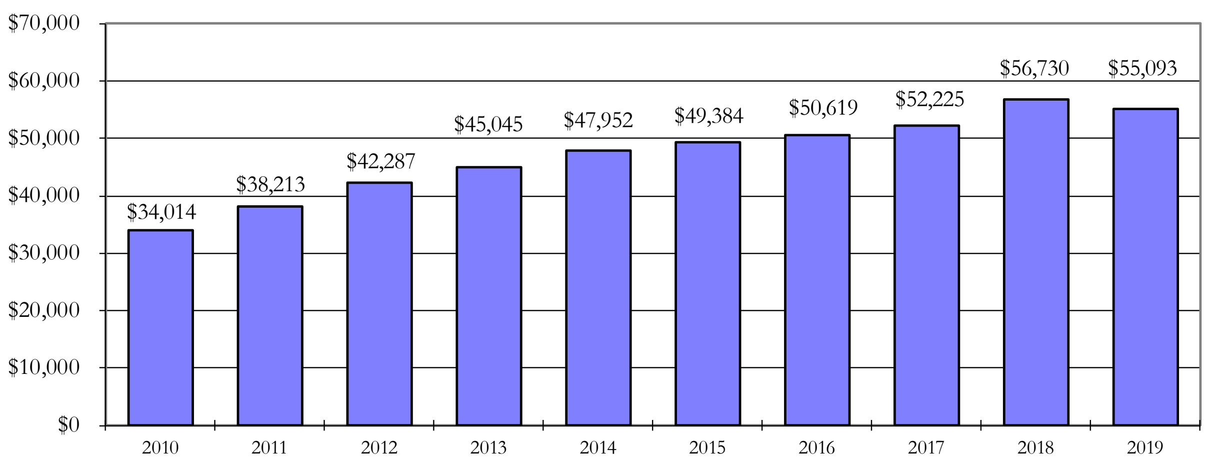
Figure 1.3 and *Figure 1.4* in Chapter 1 on page 11 are replaced with the following figures:

Figure 1.3
ANNUAL NOT SELF-SUPPORTING SCHEDULED DEBT SERVICE AS A PERCENTAGE OF UNRESTRICTED GENERAL REVENUE



Sources: Texas Bond Review Board - Bond Finance Office and the Texas Comptroller of Public

Figure 1.4
UNRESTRICTED GENERAL REVENUE
(millions of dollars)



Source: Texas Comptroller of Public Acounts

Texas Bond Review Board
Annual Report 2019

Fiscal Year Ended August 31, 2019

Greg Abbott, Governor
Chairman

Dan Patrick, Lieutenant Governor

Dennis Bonnen, Speaker of the House of Representatives

Glenn Hegar, Comptroller of Public Accounts

Robert B. Latsha II
Executive Director

December 2019

Overview

Background

The Texas Bond Review Board (BRB) is responsible for the approval of all state debt issues (excluding Permanent University Fund debt, Tax and Revenue Anticipation Notes, State Highway Fund Revenue Anticipation Notes, and self-supporting debt issued by institutions of higher education with an unenhanced rating of AA- or higher) and lease purchase obligations with an initial principal amount greater than $250,000 or a term of longer than five years. The BRB is also responsible for the collection, analysis, and reporting of information on state debt as well as the debt of local political subdivisions in Texas. In addition, the BRB administers the state's Private Activity Bond Allocation Program. This report discusses the activities undertaken by the Board and related events of the past fiscal year.

Texas' general obligation (GO) debt is rated Aaa/AAA/AAA/AAA by the credit rating agencies Moody's Investors Service (Moody's), Standard & Poor's (S&P), Fitch Ratings (Fitch), and Kroll Bond Rating Agency (Kroll), respectively. All four rating agencies maintain their outlook as "stable."

The last time Moody's reaffirmed the U.S. government's Aaa rating and maintained its outlook as stable was on April 25, 2018. On March 28, 2019, Kroll reaffirmed a long-term rating of AAA for the United States with a stable outlook. On April 2, 2019, Fitch reaffirmed its AAA rating for the United States with a long-term outlook of stable. Similarly, on June 27, 2019, S&P reaffirmed its AA+ long-term debt rating for the United States and maintained its long-term outlook as stable. Historically, Texas' GO borrowing costs have not been impacted by changes in U.S. credit ratings.

Texas ended fiscal year 2019 with a total consolidated General Revenue Fund cash balance of $8.42 billion, an 87.9 percent increase from the fiscal year 2018 year-end closing balance of $4.48 billion.

According to Moody's 2019 State Debt Medians, Texas ranked 42nd among all states in net tax-supported debt per capita. Texas had $389 in net tax-supported debt per capita compared to the national mean and median of $1,493 and $1,068, respectively. Texas' net tax-supported debt per capita ranked second lowest when compared to that of the nine other states rated AAA.

Total not self-supporting debt increased from $3.09 billion at the end of fiscal year 2010 to $7.01 billion at the end of fiscal year 2019, an increase of 126.6 percent, and an increase of 0.6 percent from the $6.97 billion outstanding in fiscal year 2018.

The most recent U.S. Census Bureau data for total state and local debt outstanding show that for census year 2016, Texas was the nation's second most populous state, and it ranked second among the ten most populous states in terms of Local Debt Per Capita, seventh in State Debt Per Capita, and fourth in Total State and Local Debt Per Capita with 82.3 percent of the state's total debt burden at the local level.

Constitutional Debt Limit

As of August 31, 2019, Texas' constitutional debt limit (CDL) remained below the maximum of 5 percent with 1.29 percent calculated for debt outstanding and 0.78 percent calculated for authorized but unissued debt of the three-year average of unrestricted general revenue funds for a total of 2.07 percent. Included in the CDL is the $767.7 million of revenue bonds authorized by the 84th

Legislature for the Texas Facilities Commission. The CDL declined 6.3 percent from the 2.21 percent calculated for outstanding and authorized but unissued debt calculated for fiscal year 2018.

State and Local Financings in Fiscal Year 2019

State Debt

In fiscal year 2019, the state's total debt outstanding (including conduit debt) increased 5.4 percent to $59.90 billion compared to $56.83 billion in fiscal year 2018 and $53.02 billion in fiscal year 2017. The $59.90 billion of total state debt outstanding for fiscal year 2019 includes $7.01 billion (11.7 percent) of not self-supporting debt which is included in the states CDL and $52.89 billion (88.3 percent) of self-supporting debt paid from various sources other than the state's general revenues.

Bonds issued by Texas state agencies, colleges, and universities during fiscal year 2019 decreased by 6.9 percent to an aggregate total of $6.59 billion compared to $7.07 billion issued in fiscal year 2018. Fiscal year 2019 issues included $4.41 billion in new-money and $2.18 billion in refunding bonds. Other debt issued included $1.17 billion in commercial paper.

As of August 31, 2019, a total of $6.58 billion was authorized for state commercial paper (CP) or variable-rate notes (VRN) programs. Of this amount, $2.27 billion was outstanding at fiscal year-end 2019, approximately $130.8 million more than the amount outstanding at fiscal year-end 2018.

Texas state issuers expect to issue approximately $4.68 billion in bonds, CP, and VRN during fiscal year 2020, a projected increase of $284.6 million (6.5 percent) over the amount projected for fiscal year 2019.

Local Debt

As of fiscal year-end 2019, Texas local governments (excluding conduit debt) had $239.98 billion in outstanding debt, an increase of $37.63 billion (18.6 percent) since fiscal year 2015. Of the 2019 total, 65.7 percent ($157.59 billion) is GO debt to be repaid from local *ad valorem* tax collections while the remaining 34.3 percent ($82.39 billion) will be repaid from revenues generated by various projects such as water, sewer, and electric utility fees. Since fiscal year 2015, tax-supported debt outstanding increased 21.0 percent ($27.33 billion) and revenue debt outstanding increased 14.3 percent ($10.31 billion).

School Districts accounted for 36.6 percent ($87.93 billion) of all local debt outstanding and Cities accounted for 32.4 percent ($77.85 billion). Water districts held the third highest percentage and accounted for 13.9 percent ($33.46 billion) of all local debt outstanding. The remaining 17.0 percent ($40.75 billion) was held by Community and Junior Colleges, Counties, Health/Hospital Districts and Other Special Districts.

Texas issuance of local debt (excluding conduit debt and commercial paper) has fluctuated over the past decade from a low of $21.68 billion in fiscal year 2010 to a high of $39.41 billion in fiscal year 2016. Additionally, the local issuance total in fiscal year 2019 decreased $9.64 billion (24.5 percent) from the record issuance total in fiscal year 2016.

Over the past five fiscal years, new-money debt issuance totaled $91.93 billion and refunding debt totaled $77.79 billion. During that time, the top two issuers of both new-money and refunding money were school districts and cities which together comprised 70.0 percent of the new-money volume ($64.31 billion) and 66.0 percent of the refunding transaction volume ($51.48 billion).

Issuance Costs
Excluding issuances of conduit and private placement debt, during fiscal year 2019, the weighted average of issuance costs for state bond issuers was $5.54 per $1,000 compared to $4.69 per $1,000 for fiscal year 2018. The issuances ranged in size from $7.4 million to $1.67 billion.

Private Activity Bond Allocation Program and Other Bonding Authority
Texas again experienced an increase in volume cap for the Program Year 2019 Private Activity Bond (PAB) Allocation Program. The 2019 volume cap was set at $3.01 billion, an increase of $41.7 million (1.4 percent) over the calendar 2018 cap. The total size of the PAB program, including 2019 volume cap and carryforward, was $6.87 billion, a 9.4 percent increase from the 2018 total. As of November 15, 2019, $2.80 billion had been allocated and application requests totaled $6.20 billion, a decrease of 16.6 percent of the total application requests from Program Year 2018.

86th Legislature – Regular Session
The 86th Legislature authorized additional GO debt that was approved by the voters at the November 5, 2019, general election. This included House Joint Resolution (HJR) 12 for an additional $3 billion in bonding authority to finance cancer research up to a maximum of $6 billion, and Senate Joint Resolution (SJR) 79 for $200 million in evergreen bonding authority to provide financial assistance for the development of certain water projects in economically distressed areas.

Additionally, the 86th Legislature passed House Bill (HB) 1052 authorizing the TWDB to use the state participation account of the water development fund to provide financial assistance for the development of certain facilities in an amount not to exceed $200 million.

Furthermore, the 86th Legislature passed Senate Bill (SB) 1474 as a comprehensive modernization of the Private Activity Bond (PAB) program, along with additional cleanup language to assist in the administration of the PAB program. Updates were made to several sections of Chapter 1372 of the Texas Government Code. These updates allow issuers more freedom in their closing deadlines, encourage larger project reservations, grant earlier access to program funds, allow additional issuers to use the program, and give issuers more freedom with project specific carryforward funds.

At the November 5, 2019, general election, the voters approved the use of a Flood Infrastructure Fund as a special fund in the State Treasury outside the general revenue fund to be used to provide financing for drainage, flood mitigation, or flood control projects. The fund will receive a one-time transfer of $793 million from the state's Economic Stabilization Fund to help communities throughout Texas recover from severe flooding. The Texas Legislature passed two related bills, SB 7 and SB 8, which address flood control and mitigation.

In the General Appropriations Act (GAA), the 86th Legislature authorized the issuance of $475.2 million of additional revenue bonds and appropriated those bond proceeds to the Texas Facilities Commission for phase two of the North Austin and Capitol Complex projects. The bonds are anticipated to be repaid with lease payments and are subject to biennial appropriation by the Legislature of funds available for payment. Lease payments were appropriated to the Texas Facilities Commission for the 2020–21 biennium (GAA Rider 16, I-46).

The 86th Legislature appropriated $208.8 million to the Health and Human Services Commission for deferred maintenance at state hospitals and state supported living centers, to be financed through the Texas Public Finance Authority (GAA Rider 2, II-48). Also, the Department of

Transportation was authorized to issue revenue bonds, not to exceed $326 million, to construct and equip the Austin Campus Consolidation project on land owned by the agency in southeast Austin. The bonds are to be issued by the Texas Public Finance Authority (GAA Rider 42, VII-29).

Additional Detail

This report concludes with seven appendices. Appendix A provides a detailed description of each state bond transaction closed in fiscal year 2019. Appendix B reports on commercial paper and variable-rate debt programs used by state agencies and universities. Appendix C provides a background discussion of Texas Swap Programs and reports on swaps outstanding and debt-service requirements. While not a debt of the state, the aggregate notional amount of interest rate swaps outstanding at the state level was $5.36 billion at fiscal year-end 2019. Appendix D provides an overview of the costs of issuance and underwriting spread. Appendix E provides a brief description of each of the state's bond-issuing entities. Appendix F provides a brief overview of the Private Activity Bond Program. Appendix G provides a glossary of terms.

For limitations on the purpose and use of this report, see the disclosure preceding Chapter 1.

Contents

Figures

Tables

Cautionary Statements

Chapter 1231 of the Texas Government Code directs issuers of state securities to report their securities transactions to the Bond Review Board (BRB). Chapter 1231 also requires the BRB to report the data to the governor, lieutenant governor, the speaker of the house, and each member of the legislature in an annual report within 90 days of the end of each state fiscal year. 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 and defeasance 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, State Energy Conservation Office (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 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 data could be affected by changes in legislative and oversight direction, agency financing decisions, prevailing interest rates, market conditions, and other factors that cannot be predicted. Consequently, actual future data could differ from the estimates, 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 refers to credit ratings. An explanation of the significance of the ratings may be obtained from the rating agencies furnishing the ratings. Ratings reflect only the respective views of each rating agency. In reporting ratings herein, the BRB does not intend to endorse the ratings or make any recommendation to buy, sell or hold securities.

This report is intended to meet Chapter 1231 requirements and inform the state leadership and the Legislature. 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' websites 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
Texas Debt in Perspective

Texas' general obligation (GO) debt is rated Aaa/AAA/AAA/AAA by the credit rating agencies Moody's Investors Service (Moody's), Standard & Poor's (S&P), Fitch Ratings (Fitch) and Kroll Bond Rating Agency (Kroll), respectively. All four rating agencies maintain their outlook as "stable". Table 1.2 provides a tier-ranking of each state relative to the states rated AAA by the three major credit rating agencies.

The last time Moody's reaffirmed the U.S. government's Aaa rating and maintained its outlook as stable was on April 25, 2018. On March 28, 2019, the Kroll Bond Rating Agency reaffirmed a long-term rating of AAA for the United States with a stable outlook. On April 2, 2019, Fitch reaffirmed its AAA rating for the United States with a long-term outlook of stable. Similarly, on June 27, 2019, S&P reaffirmed its AA+ long-term debt rating for the United States and maintained its long-term outlook as stable. Historically, Texas' GO borrowing costs have not been impacted by changes in U.S. credit ratings.

According to Moody's 2019 State Debt Medians, Texas ranked 42nd among all states in net tax-supported debt per capita. Texas had $389 in net tax-supported debt per capita compared to the national mean and median of $1,493 and $1,068, respectively.

STATE DEBT

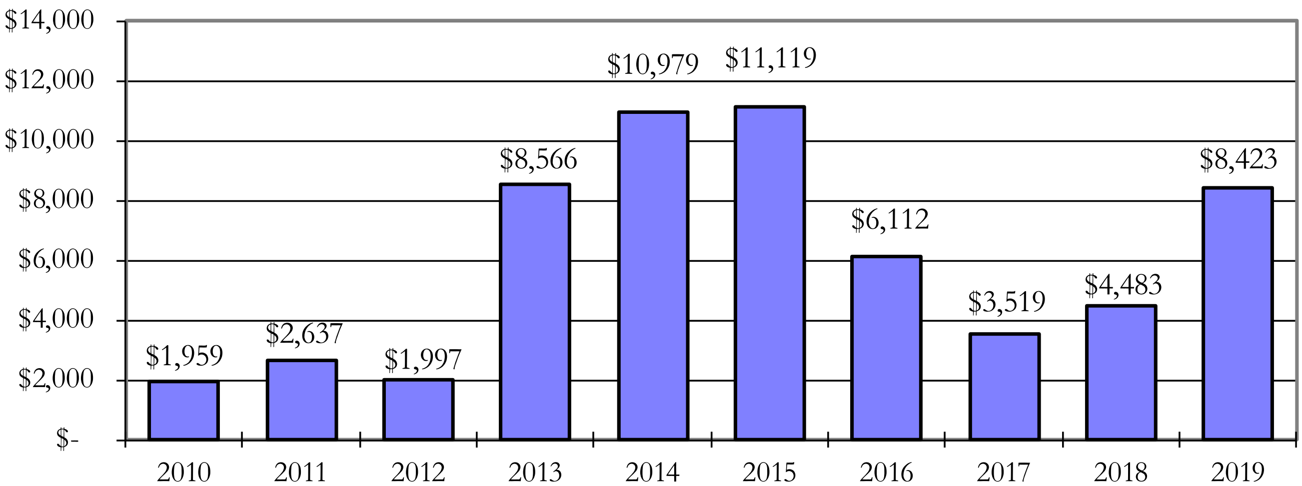
Texas' Financial Position

Texas ended fiscal year 2019 with a total consolidated General Revenue Fund cash balance of $8.42 billion (*Figure 1.1*), an 87.9 percent increase from the fiscal year 2018 year-end closing balance of $4.48 billion.

Total Tax Collections increased by 6.2 percent to $57.24 billion. Total Net Revenues and Other Sources increased by 1.5 percent to $148.42 billion, and Total Expenditures and Other Uses decreased by 0.5 percent to $144.48 billion (*Table 1.1*).

The Sales Tax remained the state's primary source of revenue and accounted for 59.4 percent of Total Tax Collections during fiscal

Figure 1.1
ENDING CASH BALANCE IN TEXAS' CONSOLIDATED GENERAL REVENUE FUND
(amounts in millions)



Source: Texas Comptroller of Public Accounts, 2019 Annual Cash Report.

Table 1.1

STATEMENT OF CASH CONDITION

CONSOLIDATED GENERAL REVENUE FUND

(amounts in thousands)

		Fiscal Year 2018		Fiscal Year 2019	% Change
Revenues and Beginning Balance					
Beginning Balance, September 1st	$	3,519,222	$	4,483,075	27.4%
Tax Collections					
General Revenue Fund					
Sales Tax		31,894,667		33,980,716	6.5%
Motor Vehicle Sales / Rental Taxes		4,948,939		4,985,936	0.7%
Motor Fuel Taxes		3,674,997		3,743,004	1.9%
Franchise Tax		2,829,812		2,962,146	4.7%
Insurance Taxes		2,508,434		2,599,025	3.6%
Natural Gas Production Tax		1,431,106		1,685,681	17.8%
Cigarette and Tobacco Taxes		561,826		594,145	5.8%
Alcoholic Beverages Taxes		1,291,989		1,369,402	6.0%
Oil Production and Regulation Taxes		3,391,518		3,886,824	14.6%
Utility Taxes		452,391		471,362	4.2%
Hotel Occupancy Tax		601,244		636,110	5.8%
Other Taxes		315,941		326,547	3.4%
Total Tax Collections	**$**	**53,902,863**	**$**	**57,240,898**	**6.2%**
Federal Income		35,664,625		37,774,035	5.9%
Licenses, Fees, Permits, Fines, & Penalties		4,080,047		3,998,273	-2.0%
State Health Service Fees and Rebates		7,598,886		7,087,932	-6.7%
Interest and Investment Income		32,826		171,572	422.7%
Net Lottery Proceeds		2,228,779		2,510,143	12.6%
Escheated Estates		636,257		693,355	9.0%
Sales of Goods and Services		188,911		191,013	1.1%
Settlements of Claims		519,896		619,296	19.1%
Land Income		3,089		16,165	423.3%
Other Revenue Sources		2,841,129		3,460,200	21.8%
Interfund Transfers/Investment Transactions		38,533,381		34,654,243	-10.1%
Total Net Revenue and Other Sources	**$**	**146,230,689**	**$**	**148,417,125**	**1.5%**
Expenditures and Ending Balance					
General Government		3,182,988		3,384,180	6.3%
Education		34,712,555		32,474,685	-6.4%
Employee Benefits		4,315,637		4,499,076	4.3%
Health and Human Services		50,299,421		51,620,784	2.6%
Public Safety and Corrections		5,358,084		5,081,955	-5.2%
Lottery Winnings Paid		627,933		684,278	9.0%
Other Expenditures*		2,793,154		2,652,895	-5.0%
Interfund Transfers / Investment Transactions		43,977,385		44,079,390	0.2%
Total Expenditures and Other Uses	**$**	**145,267,157**	**$**	**144,477,243**	**-0.5%**
Net Increase to Petty Cash Accounts		321		367	**14.3%**
Ending Balance, August 31st	**$**	**4,483,075**	**$**	**8,423,321**	**87.9%**

Totals may not sum due to rounding.

* Includes Transportation, Natural Resources/Recreational Services, Regulatory Agencies, Payment of Interest, and Capital Outlays.

Source: Texas Comptroller of Public Accounts, 2019 Cash Report, Tables 1 & 11.

year 2019. Sales Tax revenues increased 6.5 percent from the prior fiscal year to $33.98 billion. The Natural Gas Production Tax revenue increased 17.8 percent ($254.6 million), the Oil Production and Regulation Tax revenue increased 14.6 percent ($495.3 million), the Alcoholic Beverages Tax revenue increased 6.0 percent ($77.4 million), the Hotel Occupancy Tax revenue increased by 5.8 percent ($34.9 million), while the state's Motor Vehicle Sales/Rental Tax revenue increased only 0.7 percent ($37.0 million)

86th Legislature – Regular Session

The 86th Legislature authorized additional GO debt that was approved by the voters at the November 5, 2019, general election. This included HJR 12 for an additional $3 billion in bonding authority to finance cancer research up to a maximum of $6 billion and SJR 79 for $200 million in evergreen bonding authority to provide financial assistance for the development of certain water projects in economically distressed areas.

Additionally, the 86th Legislature passed HB 1052 authorizing the TWDB to use the state participation account of the water development fund to provide financial assistance for the development of certain facilities in an amount not to exceed $200 million.

At the November 5, 2019, general election, the voters approved the use of a Flood Infrastructure Fund as a special fund in the State Treasury outside the general revenue fund to be used to provide financing for drainage, flood mitigation, or flood control projects. The Texas Legislature passed two related bills, SB 7 and SB 8, which address flood control and mitigation.

In the General Appropriations Act (GAA), the 86th Legislature authorized the issuance of $475.2 million of additional revenue bonds and appropriated those bond proceeds to the Texas Facilities Commission for phase two of the North Austin and Capitol Complex projects. The bonds are anticipated to be repaid with lease payments and are subject to biennial appropriation by the Legislature of funds available for payment. Lease payments were appropriated to the Texas Facilities Commission for the 2020–21 biennium (GAA Rider 16, I-46).

The 86th Legislature appropriated $208.8 million to the Health and Human Services Commission for deferred maintenance at state hospitals and state supported living centers, to be financed through the Texas Public Finance Authority (GAA Rider 2, II-48). Additionally, the Department of Transportation was authorized to issue revenue bonds, not to exceed $326 million, to construct and equip the Austin Campus Consolidation project on land owned by the agency in southeast Austin. The bonds are to be issued by the Texas Public Finance Authority (GAA Rider 42, VII-29).

85th Legislature – Regular Session and 1st Called Special Session

No new state debt authorizations were approved during the 85th Legislative Session. The 85th Legislature appropriated debt service for the 2018–19 biennium to the Cancer Prevention and Research Institute of Texas (CPRIT) to issue $600 million in GO debt under the $3 billion in authority approved by voters in 2007. In addition, the Texas Public Finance Authority (TPFA) is authorized to issue on behalf of the Texas Facilities Commission (TFC) the remainder of the $767.7 million of revenue bonds originally authorized during the 2016–17 biennium for the office buildings and utility infrastructure in the Capital Complex and the office building and parking structure in the North Austin complex.

84th Texas Legislature

The 84th Legislature authorized the issuance of $767.7 million of revenue bonds and appropriated those bond proceeds in the General Appropriations Act to TFC for the

North Austin and Capitol Complex projects. The bonds are anticipated to be repaid with lease payments from state agencies subject to biennial appropriation by the legislature. Such lease payments were appropriated to the TFC for the 2016–17 biennium. In addition, the 84th Legislature appropriated debt service for the Texas Transportation Commission to issue $1.35 billion of Prop 12 GO debt and for CPRIT to issue $600 million in GO debt for the biennium.

The legislature also authorized $3.10 billion in Tuition Revenue Bond (TRB) debt with the passing of HB 100. Historically, the legislature has appropriated funds in an amount equal to all or a portion of the debt service on TRB debt issued.

Additionally, the 84th Legislature passed HB 122, which limits the issuance of debt secured by the Texas Mobility Fund solely to refundings or issuances that replace variable-rate debt.

Recent Credit Rating Agency Reports on Texas' General Obligation Debt

On August 8, 2019, the Kroll Bond Rating Agency affirmed its long-term rating of AAA with a stable outlook to the State of Texas' GO Bonds. Kroll stated that "The economy of Texas is very strong based on an increasingly broad and diverse employment base, ongoing increases in population and above average growth in gross state product (GSP). Kroll believes the economy has diversified well beyond its past reliance on the oil and gas industry although this sector remains a significant component of economic activity."

S&P's latest action on Texas' GO rating was to affirm its AAA rating and stable outlook on October 15, 2019. In its report of that date, entitled "Texas Transportation Commission, Texas; Appropriations; General Obligation; General Obligations Equivalent Security; Joint Criteria", S&P stated that "The rating reflects our view of the state's diverse and resilient economy that we expect will outpace the nation in terms of job growth and productivity; strong revenue forecasting and cash management practices, including comprehensive monthly revenue and expenditure cash monitoring and forecasts, as well as a willingness to maintain strong liquidity to meet constitutionally defined priorities; low overall net debt, but with rising unfunded pension and long-term liabilities, which we believe will require active management to ensure that benefit costs remain affordable; and potential long-term budgetary pressures related to growing public school expenses and modifications to the school funding formula that could shift a greater burden of the cost to the state."

On October 16, 2019, Moody's affirmed its Aaa rating and stable outlook of Texas' GO debt. In its report of that date, entitled "Moody's assigns Aaa to Texas Highway Improvement General Obligation Refunding Bonds, Taxable Series 2019; outlook stable", Moody's stated that "The Aaa general obligation rating reflects multiple strengths, including a strong economy that will continue to outpace the nation, robust population growth, reserves that provide a healthy cushion even after recent appropriations, good fiscal management and governance, and low bonded debt, offset by high pension liabilities."

On October 17, 2019, Fitch affirmed its AAA rating and stable outlook of Texas' GO debt. In its report of that date, entitled "Fitch Rates Texas Transportation Commission $750MM GO Bonds' AAA; Outlook Stable", Fitch stated that "Texas' 'AAA' Issuer Default Rating (IDR) and GO bond rating reflect its growth-oriented economy and the ample fiscal flexibility provided both by its conservative approach to financial operations and maintenance of substantial reserve balances. Overall state economic and fiscal trends remain solid, with employment and revenue collections rising steadily. The state has demonstrated its ability to take budgetary

Table 1.2

STATE BOND RATINGS as of September 2019

States With a General Obligation Rating

Steps from AAA Ranking	State	Moody's Investors Service	Standard & Poor's	Fitch Ratings
-	Delaware	Aaa	AAA	AAA
-	Florida	Aaa	AAA	AAA
-	Georgia	Aaa	AAA	AAA
-	Maryland	Aaa	AAA	AAA
-	Missouri	Aaa	AAA	AAA
-	North Carolina	Aaa	AAA	AAA
-	Tennessee	Aaa	AAA	AAA
-	**TEXAS**	**Aaa**	**AAA**	**AAA**
-	Utah	Aaa	AAA	AAA
-	Virginia	Aaa	AAA	AAA
1	Minnesota	Aa1	AAA	AAA
1	South Carolina	Aaa	AA+	AAA
2	Washington	Aaa	AA+	AA+
3	Arkansas	Aa1	AA	**
3	New York	Aa1	AA+	AA+
3	Ohio	Aa1	AA+	AA+
3	Oregon	Aa1	AA+	AA+
3	Vermont	Aa1	AA+	AA+
4	Alabama	Aa1	AA	AA+
4	Hawaii	Aa1	AA+	AA
4	Massachusetts	Aa1	AA	AA+
4	Montana	Aa1	AA	AA+
4	New Hampshire	Aa1	AA	AA+
4	New Mexico	Aa2	AA	**
4	Wisconsin	Aa1	AA	AA+
5	Michigan	Aa1	AA	AA
5	Nevada	Aa2	AA	AA+
6	Mississippi	Aa2	AA	AA
6	Maine	Aa2	AA	AA
6	Rhode Island	Aa2	AA	AA
7	West Virginia	Aa2	AA-	AA
8	Alaska	Aa3	AA	AA-
8	California	Aa3	AA-	AA
9	Louisiana	Aa3	AA-	AA-
10	Pennsylvania	Aa3	A+	AA-
13	Connecticut	A1	A	A+
17	New Jersey	A3	A-	A
26	Illinois	Baa3	BBB-	BBB
	States With Only an Issuer Credit Rating			
*	Arizona	Aa2	AA	**
*	Colorado	Aa1	AA	**
*	Idaho	Aa1	AA+	AA+
*	Indiana	Aaa	AAA	AAA
*	Iowa	Aaa	AAA	AAA
*	Kansas	Aa2	AA-	**
*	Kentucky	Aa3	A	AA-
*	Nebraska	Aa1	AAA	**
*	North Dakota	Aa1	AA+	**
*	Oklahoma	Aa2	AA	AA
*	South Dakota	Aaa	AAA	AAA
*	Wyoming	**	AA+	**

* Issuer Credit Rating.
** Not rated.
Sources: Moody's Investors Service, Standard & Poor's, and Fitch Ratings.

actions as needed to maintain balance while historically keeping strong balances in its budgetary reserve, the economic stabilization fund (ESF)."

Factors Affecting the Rating of Texas' General Obligation Debt

Credit rating agencies consider four primary factors when rating a state's debt: economy, finances, debt, and management. Within economic factors, the agencies review the state's income, employment, economic diversity, and demographics. Financial factors considered are the state's revenues, cost structure, balance sheet health, and liquidity. Debt factors reviewed include debt ratios and debt security and structure. Management factors include: budget development and management practices; constitutional constraints, initiatives, and referenda; executive branch controls; mandates to maintain a balanced budget; rainy day funds; and political polarization.

The sometimes overlapping conclusions reached by the major rating agencies reflect their collective judgment that several challenges may arise if Texas is faced with a low-revenue environment. Among the most prominent and commonly cited of these problems are: 1) the state's heavy dependence on the sales tax without support from a state income tax; 2) issues related to unfunded pension liabilities, funding for public schools, and assistance programs such as Medicaid; and 3) the state's continued rapid population growth that will necessitate budget increases for operating costs as well as increases in capital expenditures for growing infrastructure needs, including transportation and water development.

Table 1.2 provides a tier ranking of each state's rating relative to states that are rated Triple-A by the three major credit rating agencies. Texas is one of ten states that is rated Triple-A by Moody's, S&P, and Fitch.

Changes in State Bond Ratings

During the past year, two states received upgrades in ratings: Fitch upgraded California one notch to AA from AA-, and Moody's upgraded Washington to Aaa from Aa1.

Two states received ratings downgrades: Alaska was downgraded by Fitch, and Vermont was downgraded by Moody's and Fitch. (*Table 1.3*).

Texas' Debt Ratios Compared to AAA-Rated and Other States

According to Moody's 2019 State Debt Medians, Texas ranked 42nd among all states in net tax-supported debt per capita. Texas had $389 in net tax-supported debt per capita compared to the national mean and median of $1,493 and $1,068, respectively (*Table 1.4*). Texas' net tax-supported debt per capita ranked second lowest when compared to that of the nine other states rated AAA (*Table 1.5*). By comparison, AAA-rated Delaware had the highest debt per capita at $3,206. Additionally, Texas' 2018 personal income (the most recent data available) per capita of $50,355 is above that of six other AAA states: Florida, Georgia, Missouri, North Carolina, Tennessee and Utah.

Texas' net tax-supported debt as a percent of calendar 2017 personal income was 0.8 percent, 42nd among all the states and below the national mean and median of 2.8 percent and 2.2 percent, respectively (*Table 1.4*). Compared to the nine other states also rated AAA by all three major rating agencies, Texas ranked second lowest on this measure with the mean and median for all ten AAA-rated states at 2.3 percent and 1.8 percent, respectively (*Table 1.5*).

The most recent U.S. Census Bureau data for total state and local debt outstanding show that for census year 2016, Texas was the nation's second most populous state and ranked second among the ten most populous states in terms of Local Debt Per Capita, seventh in State Debt Per Capita, and fourth in Total State and

Table 1.3 **CHANGES IN STATE BOND RATINGS** **September 2018 to September 2019**			
State	**Moody's**	**Standard & Poor's**	**Fitch**
Upgrades			
California			AA- to AA
Washington	Aa1 to Aaa		
Downgrades			
Alaska			AA to AA-
Vermont	Aaa to Aa1		AAA to AA+

Sources: Moody's Investors Service, Standard & Poor's, and Fitch Ratings.

Local Debt Per Capita (*Table 1.6*) with 82.3 percent of the state's total debt burden at the local level. Listed by decreasing amount outstanding, local debt is issued by Public School Districts; Cities, Towns, and Villages; Water Districts; Special Districts; Counties; Community and Junior Colleges; and Health/Hospital Districts.

Texas state and local debt outstanding as a percentage of gross state product has remained relatively constant, indicating that economic growth has kept pace with state and local debt outstanding (*Figure 1.2*).

Many communities throughout Texas are continuing to experience significant population growth with increasing demand for infrastructure, programs, and services. Population growth in the state, according to the U.S. Census Bureau, increased 6.4 percent (1.7 million) from 2014 to 2018 (most recent data available), forcing many small and medium-sized communities to increase financing for infrastructure such as roads, schools, water, and wastewater services to meet expanded needs. Based on projections of current demographic trends, Texas will continue to experience increasing demand for expenditures in these areas.

General Obligation Debt Has Increased Over the Past Decade

General obligation (GO) debt pledges "the full faith and credit of the state" to back the payment of the debt. In the event that program or project revenue is insufficient to pay debt service on self-supporting debt, the first monies coming into the state treasury not otherwise constitutionally appropriated shall be used to pay the debt service.

Some GO debt, such as that issued by the Texas Veterans' Land Board, is self-supporting, and other GO debt, such as that issued by the Texas Public Finance Authority to finance programs for the Cancer Prevention and Research Institution of Texas as well as the capital expenditure needs of various state agencies is not self-supporting and must receive annual appropriations from the legislature for debt-service payments from the state's general revenue fund.

Total not self-supporting debt increased from $3.09 billion at the end of fiscal year 2010 to $7.01 billion at the end of fiscal year 2019, an increase of 126.6 percent, and an increase of 0.6 percent from the $6.97 billion outstanding in fiscal year 2018. Estimated scheduled annual debt service as a percentage of unrestricted general revenue increased slightly in fiscal year 2019 to 1.28 percent (*Figure 1.3*).

Unrestricted general revenue increased 62.0 percent in fiscal year 2019 to $55.09 billion from $34.01 billion in fiscal year 2010 (*Figure 1.4*). Unrestricted general revenue is generally the most available funding source to make debt-service payments and to fund appropriations for state operations.

Authorized but Unissued Debt Decreases

Authorized but unissued debt (debt that has been authorized by the legislature and may be issued at any time without further legislative action) decreased by 2.2 percent from approximately $13.65 billion at the end of fiscal year 2018 to approximately $13.35 billion at the end of fiscal year 2019. This decrease is mainly attributable to GO new-money bond issuances by the Texas Higher Education Coordinating

Table 1.4

SELECTED TAX-SUPPORTED DEBT MEASURES BY STATE

State	Moody's Rating	Net Tax-Supported Debt as a % of 2017 Personal Income	Rank	Net Tax-Supported Debt Per Capita	Rank
Hawaii	Aa1	10.3%	1	$5,453	3
Connecticut	A1	9.4%	2	6,802	1
Massachusetts	Aa1	9.1%	3	6,113	2
Delaware	Aaa	6.5%	4	3,206	6
New Jersey	A3	6.4%	5	4,154	4
Illinois	Baa3	5.1%	6	2,752	7
New York	Aa1	5.0%	7	3,247	5
Mississippi	Aa2	4.9%	8	1,782	14
Kentucky	Aa3	4.8%	9	1,932	12
Washington	Aa1	4.6%	10	2,613	8
Rhode Island	Aa2	4.2%	11	2,216	10
Oregon	Aa1	4.0%	12	1,921	13
Maryland	Aaa	3.8%	13	2,343	9
West Virginia	Aa2	3.7%	14	1,437	21
California	Aa3	3.7%	15	2,194	11
Louisiana	Aa3	3.5%	16	1,523	17
Wisconsin	Aa1	3.2%	17	1,571	16
Kansas	Aa2	3.1%	18	1,518	18
New Mexico	Aa2	3.0%	19	1,192	23
Pennsylvania	Aa3	3.0%	20	1,577	15
Virginia	Aaa	2.7%	21	1,502	19
Minnesota	Aa1	2.6%	22	1,415	22
Alaska	Aa3	2.6%	23	1,466	20
Ohio	Aa1	2.5%	24	1,156	24
Georgia	Aaa	2.3%	25	996	26
Vermont	Aa1	2.2%	26	1,140	25
Alabama	Aa1	2.2%	27	877	27
Utah	Aaa	1.9%	28	792	30
Maine	Aa2	1.8%	29	842	28
Florida	Aaa	1.7%	30	812	29
Arkansas	Aa1	1.4%	31	591	35
Nevada	Aa2	1.4%	32	630	32
Michigan	Aa1	1.4%	33	630	33
Arizona	Aa2	1.4%	34	559	36
New Hampshire	Aa1	1.3%	35	765	31
South Dakota	Aaa	1.3%	36	618	34
Idaho	Aa1	1.2%	37	506	38
South Carolina	Aaa	1.2%	38	503	39
North Carolina	Aaa	1.2%	39	531	37
Missouri	Aaa	1.1%	40	487	40
Colorado	Aa1	0.9%	41	484	41
Texas	**Aaa**	**0.8%**	**42**	**389**	**42**
Oklahoma	Aa2	0.7%	43	320	43
Tennessee	Aaa	0.7%	44	305	44
Indiana	Aaa	0.6%	45	270	45
Iowa	Aaa	0.4%	46	207	46
Montana	Aa1	0.3%	47	149	47
North Dakota	Aa1	0.3%	48	131	48
Wyoming	NGO**	0.1%	49	33	49
Nebraska	Aa1	0.0%	50	23	50
Mean		2.8%		$1,493	
Median		2.2%		$1,068	

* Issuer Rating (No GO Debt)

** No general obligation debt

Analysis based on calendar year 2018 data.

Source: Moody's Investors Service, *2019 State Debt Medians - June 3, 2019*.

Table 1.5

SELECTED DEBT MEASURES FOR TEXAS AND STATES RATED AAA

State	Rating*	Net Tax-Supported Debt as a % of 2017 Personal Income	Rank	Net Tax-Supported Debt Per Capita	Rank	2018 Personal Income Per Capita
Delaware	AAA	6.5%	4	3,206	6	52,507
Florida	AAA	1.7%	30	812	29	50,070
Georgia	AAA	2.3%	25	996	26	46,482
Maryland	AAA	3.8%	13	2,343	9	63,354
Missouri	AAA	1.1%	40	487	40	47,746
North Carolina	AAA	1.2%	39	531	37	46,117
Tennessee	AAA	0.7%	44	305	44	46,900
TEXAS	AAA	0.8%	42	389	42	50,355
Utah	AAA	1.9%	28	792	30	46,320
Virginia	AAA	2.7%	21	1,502	19	57,799
Mean of AAA States		**2.3%**		**$1,136**		**$50,765**
Median of AAA States		**1.8%**		**$802**		**$48,908**

* Rated Aaa by Moody's, and AAA by Standard & Poor's and Fitch Ratings.
Analysis based on calendar year 2018 data.
Sources: Moody's Investors Service, *2019 State Debt Medians;* Bureau of Economic Analysis, State BEAR Facts

Board (THECB) ($160.0 million), Texas Water Development Board (TWDB) ($50.1 million), Texas Public Finance Authority (TPFA) ($298.8 million), and Veteran's Land Board (VLB) ($250.0 million). Of the $13.35 billion of authorized but unissued debt remaining as of fiscal year-end 2019, approximately $10.15 billion is GO debt while $3.20 billion is non-GO debt. Approximately $2.24 billion of the authorized but unissued amount is considered not self-supporting and includes GO and non-GO debt payable from general revenue.

Texas' Constitutional Debt Limit and Debt-Management Policy

In 1997, the 75th Legislature passed and voters

Table 1.6

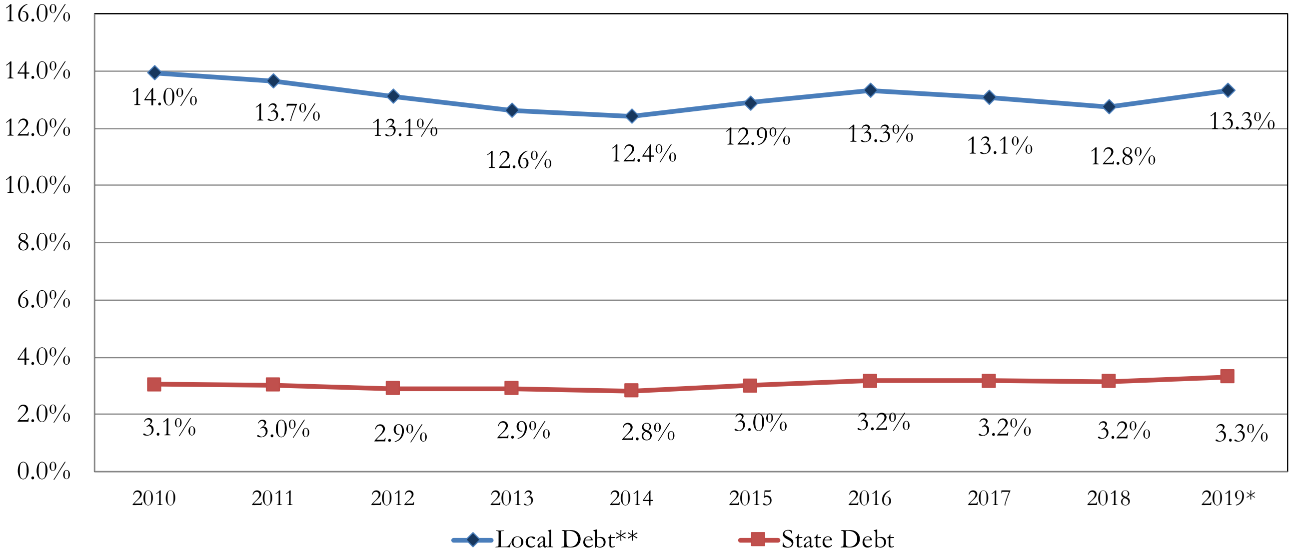
TOTAL STATE AND LOCAL DEBT OUTSTANDING: TEN MOST POPULOUS STATES

	Total State and Local Debt				State Debt				Local Debt			
State	Population (thousands)	Amount (millions)	Per Capita Amount	Per Capita Rank	Amount (millions)	% of Total Debt	Per Capita Amount	Per Capita Rank	Amount (millions)	% of Total Debt	Per Capita Amount	Per Capita Rank
New York	19,542	$356,519	$18,244	1	$137,480	38.6%	$7,035	1	$219,039	61.4%	$11,209	1
Illinois	12,741	151,666	11,904	2	65,792	43.4%	5,164	2	85,874	56.6%	6,740	4
California	39,557	433,917	10,969	3	151,308	34.9%	3,825	3	282,609	65.1%	7,144	3
Texas	28,702	279,349	**9,733**	**4**	**49,357**	**17.7%**	**1,720**	**7**	229,992	**82.3%**	**8,013**	**2**
Pennsylvania	12,807	121,864	9,515	5	47,099	38.6%	3,678	4	74,765	61.4%	5,838	5
Ohio	11,689	85,210	7,289	6	33,165	38.9%	2,837	6	52,045	61.1%	4,452	7
Michigan	9,996	72,507	7,254	7	33,745	46.5%	3,376	5	38,762	53.5%	3,878	9
Florida	21,299	139,084	6,530	8	33,469	24.1%	1,571	9	105,615	75.9%	4,959	6
Georgia	10,519	57,938	5,508	9	13,131	22.7%	1,248	10	44,808	77.3%	4,260	8
North Carolina	10,384	47,252	4,551	10	16,919	35.8%	1,629	8	30,333	64.2%	2,921	10
MEAN		**$174,531**	**$9,150**		**$58,146**	**34.1%**	**$3,208**		**$116,384**	**65.9%**	**$5,941**	

Note: Detail may not add to total due to rounding.
Sources: U.S. Census Bureau, *State and Local Government Finances by Level of Government and by State: 2016,* the most recent data available. July 2018 U.S. Census Bureau, Population Division.

Figure 1.2

STATE AND LOCAL DEBT AS A PERCENT OF GROSS STATE PRODUCT



* Uses gross state product as reported for 2018 - Most recent data available.
** Excludes conduit debt of local governments.
Sources: Texas Bond Review Board - Bond Finance Office; U.S Department of Commerce Bureau of Economic Analysis

approved HJR 59, which added Section 49-j to Article III of the Texas Constitution. This amendment states that additional tax-supported debt may not be authorized if the maximum annual debt service on debt payable from general revenue, including authorized but unissued debt, exceeds 5 percent of the average annual unrestricted General Revenue Fund revenues for the previous three fiscal years.

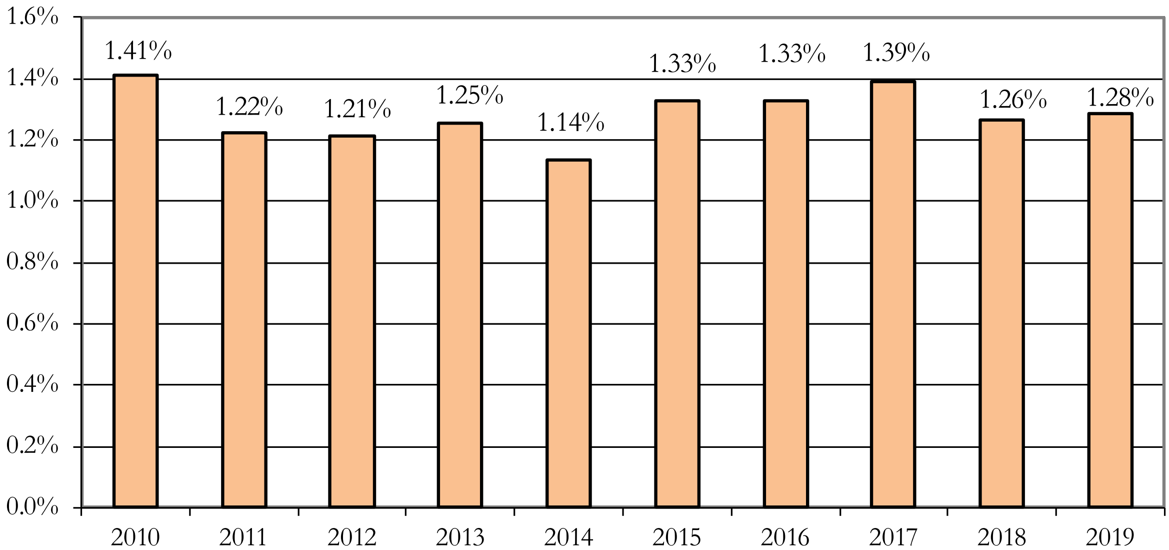
As of August 31, 2019, Texas' constitutional debt limit (CDL) remained below the maximum of 5 percent with 1.29 percent calculated for debt outstanding and 0.78 percent calculated for authorized but unissued debt for a total of 2.07 percent. Included in the CDL is the $767.7 million of revenue bonds authorized by the 84th Legislature for the Texas Facilities Commission. The CDL declined 6.3 percent from the 2.21 percent calculated for outstanding and authorized but unissued debt calculated for fiscal year 2018.

The decrease in the CDL was mainly due to an increase in the three-year rolling average of unrestricted general revenue available to pay debt service and a decline in the debt service on authorized but unissued debt payable from general revenue. This decline in authorized but unissued debt service is due to the issuance of GO debt in the amount of approximately $207.7 million by TPFA for cancer research and $53.5 million by TWDB for water development projects as well as revenue debt in the amount of $227 million for the Texas Facilities Commission. The CDL is expected to increase as a result of the voters authorizing an additional $3.20 billion of debt at the November 5, 2019, general election.

HB 2190, passed in the 77th Legislature, directed the Bond Review Board (BRB) to adopt formal debt policies and issuer guidelines to provide guidance to issuers of state securities and to ensure that state debt is prudently managed. These policies and guidelines are posted on the agency's website.

SB 1332, passed in the 80th Legislature, amended the agency's statutes to require the BRB to adopt a state policy related to the risks and effects of derivative agreements. This

Figure 1.3
ANNUAL NOT SELF-SUPPORTING SCHEDULED DEBT SERVICE AS A PERCENTAGE OF UNRESTRICTED GENERAL REVENUE



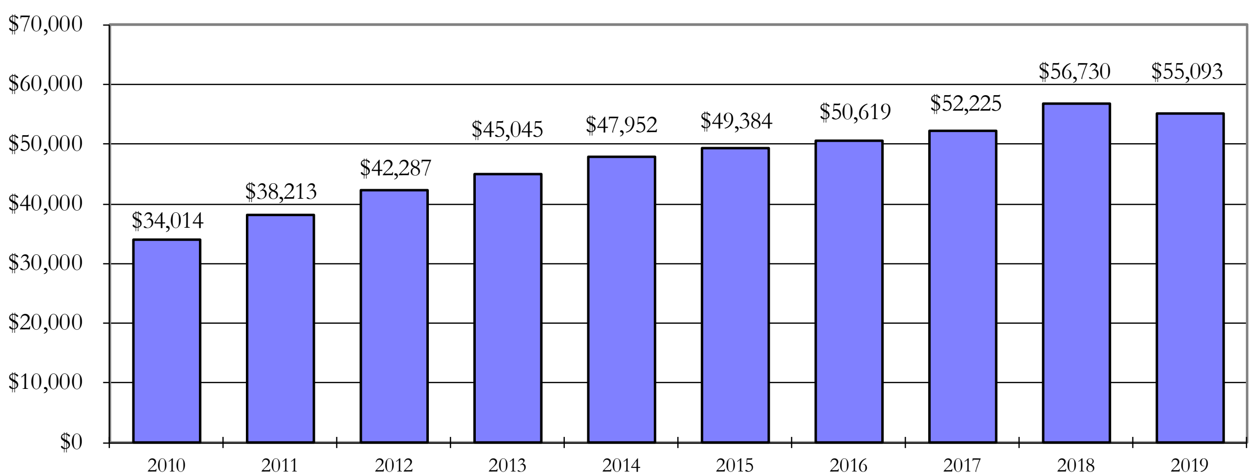
Sources: Texas Bond Review Board - Bond Finance Office and the Texas Comptroller of Public

policy was adopted in fiscal year 2009 and is available on the agency's website.

Capital Planning Review and Approval Process

The 76th Legislature (1999) passed legislation that biennially directs the BRB to produce the state's Capital Expenditure Plan (CEP). The legislation specifies that all state agencies and higher education institutions appropriated funds by the General Appropriations Act (GAA) are required to report capital planning

Figure 1.4
UNRESTRICTED GENERAL REVENUE
(millions of dollars)



Source: Texas Comptroller of Public Acounts information for projects that fall within four specific project areas: 1) acquisition of land and other real property; 2) construction of buildings and facilities; 3) renovations of buildings and other facilities estimated to exceed $1 million for a single state agency or institution of higher education; and (4) major information resources projects estimated to exceed $1 million. In previous reports, the BRB requested that all planned expenditures exceeding $250,000 must be reported, but the threshold was adjusted to $1 million in 2006 for future reports.

From a budgetary and capital planning standpoint, a number of state agencies work together to coordinate the budgetary and capital reporting and approval process for state agencies. These include the Governor's Office of Budget, Planning & Policy (GOBPP), the Legislative Budget Board (LBB), the Texas Higher Education Coordinating Board, the Texas Facilities Commission, the Comptroller of Public Accounts, the House Committee on Appropriations (HAC), and the Senate Finance Committee (SFC).

The legislature defines the types of projects and cost thresholds to be reported in the CEP. The BRB coordinates the submission of capital projects through the CEP, develops the report, and determines the effect of the additional capital requests on the state's budget and debt capacity. The completed plan is then provided to the GOBPP and the LBB to develop recommendations for appropriations to the legislature.

The GOBPP and LBB also assess short-term and long-term budget needs. Through the HAC and SFC, the legislature makes the final decisions on projects to be funded for the two-year biennial period. Approved capital and operating budgets are integrated into the GAA that authorizes specific debt issuance for capital projects. Through the capital budgeting process, capital projects are approved for the two-year biennial period. Additionally, the CEP reports on the preceding year and the remaining two out years for identifying long-term needs of the state and for future planning purposes.

The 2020–21 CEP was released September 1, 2018, pursuant to Senate Bill 1, Article IX, Section 11.03 of the 85th Legislature and covers the out years 2022–23. Historical CEP reports are available on the agency's website. The CEP is a management tool for state decision makers to use in assessing future individual capital expenditure requests within the framework of the state's overall financial position. The 2020–21 CEP is available on the agency's website.

Debt Affordability Study

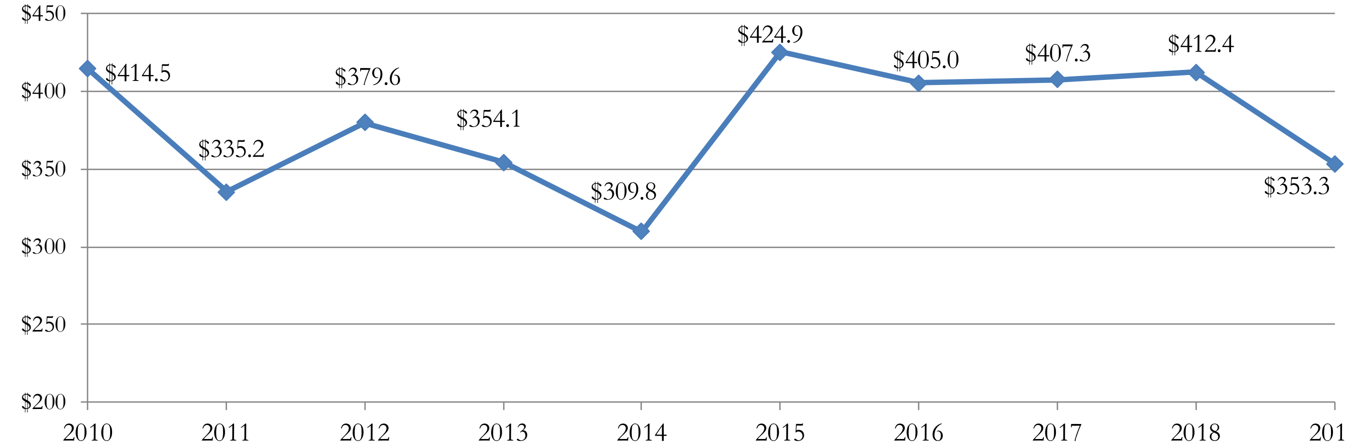
The state's Debt Affordability Study (DAS) is designed to provide the state leadership with an integrated approach to manage state debt by assessing historical debt use and analyzing the state's financial and economic resources in conjunction with long-term needs contained in the CEP. The BRB, LBB and the Texas Public Finance Authority prepared the state's first DAS, released in February 2007. With the passage of SB 1332 (80th Legislature), the BRB in conjunction with the LBB is responsible for subsequent editions of the DAS. Historical DAS reports are available on the agency's website. The 2020 DAS will be released in February 2020.

LOCAL DEBT

Local Debt Issuance Process

Local governments in Texas issue debt to finance construction and renovation of government facilities (e.g., schools, public safety buildings, city halls, and county courthouses), public infrastructure (e.g., roads, water, and sewer systems), and various other projects authorized by law. Key factors that affect a government's need and ability to borrow funds for infrastructure development include population changes, revenue sources, tax rates and levies, interest rates, and

Figure 1.5
NATIONWIDE GOVERNMENT DEBT ISSUANCE
(amounts in billions)

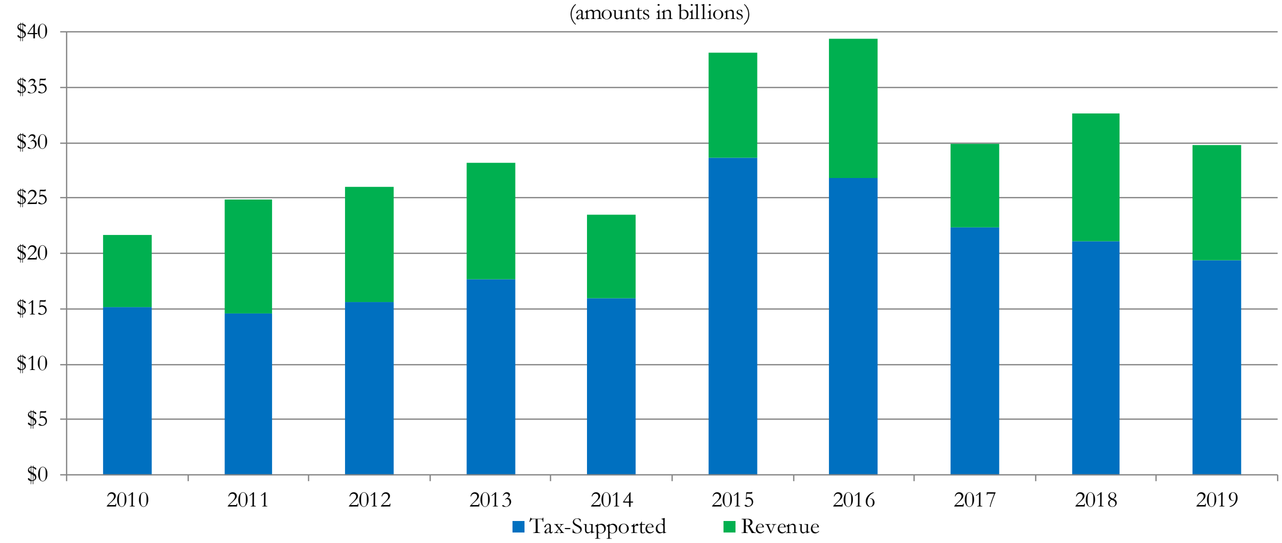


Source: The Bond Buyer

construction costs. Local governments issue two main types of debt: tax (general obligation or GO) and revenue. GO debt is secured by the full faith and credit of the issuer's *ad valorem* tax revenue while revenue debt is secured by a specified revenue source.

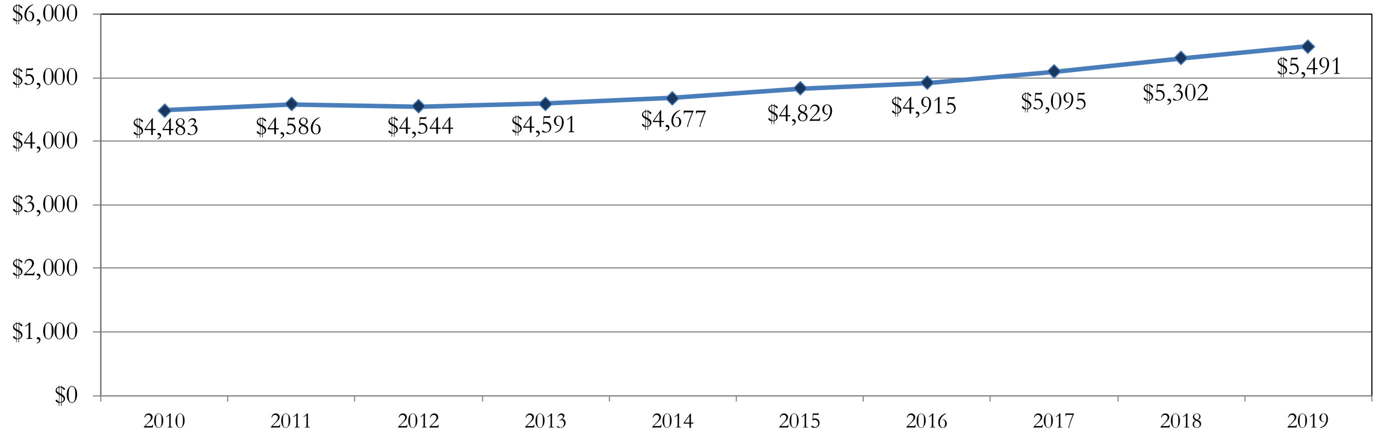
State law sets limitations on certain local government debt issuers by setting maximum *ad valorem* tax rates per $100 of assessed property valuation. These rates vary by government type, but all must generate sufficient funds based on annual *ad valorem* tax collections to provide for the payment of the debt service on outstanding and projected ad valorem tax (GO) debt. Additionally, all public securities issued by local debt issuers must be approved by the Office of the Attorney General – Public Finance Division (OAG) and registered with the Texas Comptroller of

Figure 1.6
TEXAS LOCAL GOVERNMENT DEBT ISSUANCE
(amounts in billions)



Excludes commercial paper and conduit debt.
Source: Texas Bond Review Board - Bond Finance Office

Figure 1.7
TEXAS LOCAL GOVERNMENT
TOTAL TAX-SUPPORTED DEBT PER CAPITA*



*Includes debt secured by a combination of ad valorem taxes and other revenue sources. Excludes conduit debt.
Sources: Texas Bond Review Board - Bond Finance Office; July 1, 2018 Annual Estimates, U.S. Census Bureau, Population Division
(Population totals used are 1 year in arrears due to timing of census estimate release dates.)

Public Accounts. For reporting purposes, issuances that combine both tax-supported and revenue bonds are categorized as tax-supported debt.

Texas Bond Review Board and Local Government Debt

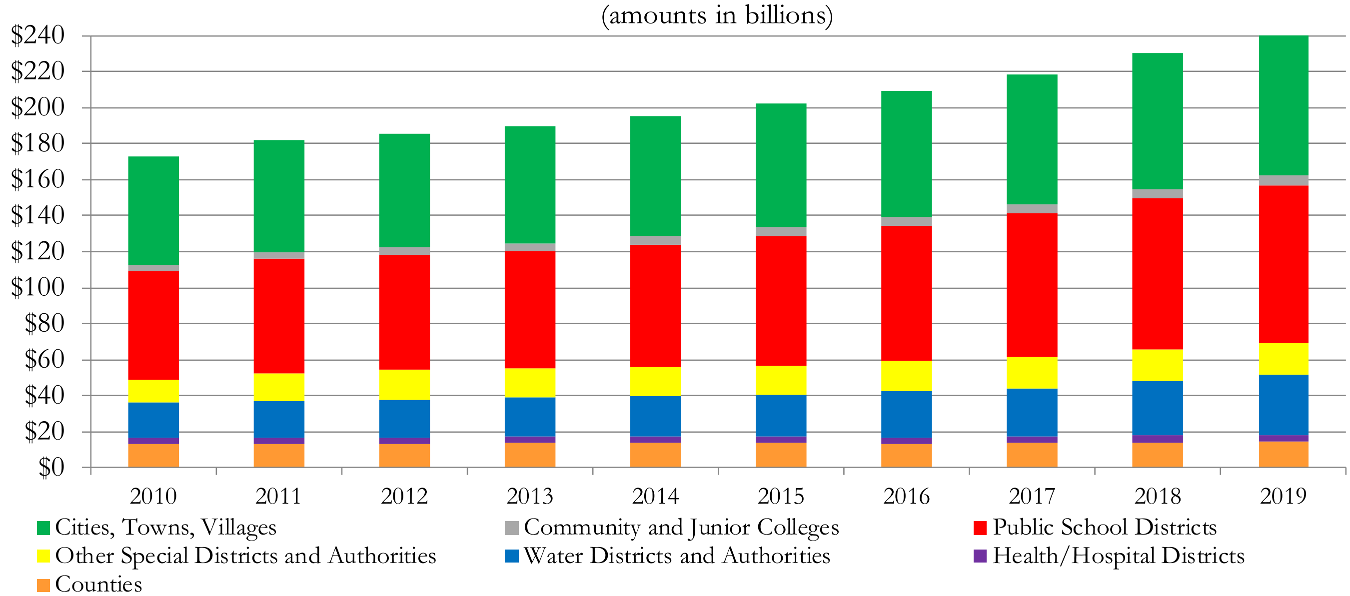
The Texas Bond Review Board (BRB) has no direct oversight of local government debt issuance. Chapter 1231 of the Texas Government Code requires the BRB to prepare statistical reports on local government debt. This information on debt issued by political subdivisions is primarily collected by the OAG in its review and approval of public securities under Chapter 1202 of the Texas Government Code and then forwarded to the BRB for its report on local debt statistics pursuant to Section 1202.008 of the Texas Government Code. Conduit debt issued by nonprofit corporations as well as local indebtedness not approved by the OAG will not be reflected in this report.

All reporting on local debt is presented on the agency's website and on the Texas Open Data Portal. Visitors to the BRB website can search databases and access the Data Portal to download spreadsheets that contain debt outstanding, debt ratios, and population data by government type at each fiscal year-end. The BRB posts this information to its website and the Data Portal annually within four months after the close of the fiscal year. In fiscal year 2019, approximately 16,611 different users of the BRB's website downloaded over 34,700 spreadsheets containing Texas local government debt data.

The BRB separates the local government issuances into seven categories: Cities, Towns, Villages (Cities); Public School Districts (School Districts); Water Districts and Authorities (WD); Counties; Other Special Districts and Authorities (OSD); Community and Junior Colleges (CCD); and Health/Hospital Districts and Authorities (HHD).

The data in this report and on the website is compiled from information provided to the Bond Review Board from various sources and has not been independently verified.

Figure 1.8
TEXAS LOCAL GOVERNMENT DEBT OUTSTANDING BY FISCAL YEAR
(amounts in billions)



Excludes conduit debt.
Source: Texas Bond Review Board - Bond Finance Office

Nationwide Debt Issuance Continues to Decline from Peak Years

Over the past decade, nationwide issuance of government debt has fluctuated from issuances totaling $414.50 billion in fiscal year 2010 to a total of $353.30 billion issued in fiscal year 2019 (*Figure 1.5*). Texas issuance of local debt (excluding conduit debt and commercial paper) has fluctuated over the past decade from a low of $21.68 billion in fiscal year 2010 to a high of $39.41 billion in fiscal year 2016. Additionally, the local issuance total in fiscal year 2019 decreased $9.64 billion (24.5 percent) from the record issuance total in fiscal year 2016 (*Figure 1.6*).

Majority of Local Debt Issuance Supports Educational Facilities and Equipment

During the five-year reporting period, 43.0 percent of Texas' new-money local debt issuance was used to finance educational facilities and equipment including school buses. Water related financings were the second highest use (20.9 percent), and the third highest use (18.3 percent) was for general-purpose debt, which includes public improvements. (The water related figure was likely understated because some issuers, especially cities, borrow for multiple purposes in one transaction, over half of which involve financings for water and transportation purposes.) The fourth highest use (7.3 percent) was to finance transportation projects, including roads, toll roads, bridges, parking facilities, airports, rapid transit, and other public transportation needs, including the acquisition of hybrid diesel-electric buses.

The remaining 10.5 percent of local debt issuance was used for the following additional categories: utility systems, recreation, commerce, pension obligations, health-related, toll roads, power, public safety, prison/detention centers, economic development, solid waste, computer technology, fire protection, and housing.

School Districts and Cities Account for 70 Percent of New-Money Transactions; and 66 Percent of Refunding Transactions

Over the past five fiscal years, new-money debt issuance totaled $92.01 billion, and refunding debt totaled $77.91 billion. During that time, the top two issuers were school districts and cities, which together comprised 70.0 percent ($64.40 billion) of the total new money volume and 66.0 percent ($51.40 billion) of the total refunding transaction volume.

Fiscal year 2019 was a low year for refundings at $8.80 billion, a decrease of 61.8 percent from the record total of $23.02 billion issued during fiscal year 2016. Over the past five fiscal years, 94.9 percent of local governmental refundings achieved both a cash and net present value savings, 1 percent provided only a net present value savings with a cash loss, 0.2 percent provided a cash savings but a net present value loss, and 1.6 percent resulted in a loss in both. In the latter cases, the primary objective was to restructure debt-service requirements to more evenly match budget flows and thus avoid raising taxes during times of economic weakness. The remaining 2.4 percent includes refundings of commercial paper and variable rate debt for which savings information was not provided.

Since fiscal year 2015, refundings for Texas local issuers achieved cash savings of $12.73 billion with a net present value savings of $9.05 billion including $1.41 billion in cash savings and $1.00 billion in net present value savings realized in fiscal year 2019.

Capital Appreciation Bonds

During fiscal year 2019, local governments issued $1.9 million of capital appreciation bonds (CABs), a decrease of 99.1 percent from the fiscal year 2015 issued amount of $215.9 million. Additionally, CABs only accounted for approximately 0.01 percent of the total par amount issued by Texas local governments. School Districts issued approximately 82.2 percent of the total CABs issued by local governments during fiscal year 2019 (*Table 1.7*).

CABs are sold at a discounted price called the par amount. They are often sold in combination with current interest bonds (CIBs). While the debt service for CIBs is paid throughout the life of the obligation, principal and interest on CABs is paid at maturity.

Table 1.7

TEXAS LOCAL GOVERNMENT

CAPITAL APPRECIATION BONDS PAR AMOUNT ISSUED BY FISCAL YEAR

(amounts in millions)

	2015	**2016**	**2017***	**2018**	**2019**
Public School Districts	$214.1	$70.5	$38.1	$16.3	$1.5
Cities, Towns, Villages	-	0.7	1.2	0.4	-
Water Districts and Authorities	1.8	2.5	11.6	0.6	0.3
Community and Junior Colleges	-	-	0.0	-	-
Health/Hospital Districts and Authorities	-	-	-	-	-
Other Special Districts and Authorities	-	-	-	-	-
Counties	-	-	-	-	-
Total CAB Par Amount Issued	**$215.9**	**$73.8**	**$51.0**	**$17.3**	**$1.9**
Total Par Amount Issued**	$38,152.2	$39,412.4	$29,942.5	$32,645.2	$29,767.9
CAB Par Amount % of Total	**0.6%**	**0.2%**	**0.2%**	**0.1%**	**0.0%**

* CCDs issued $35,000 of CABs in 2017.

** Includes current interest bonds, excludes commercial paper authorizations and conduit issuances.

Sums may not total due to rounding.

Source: Bond Review Board - Bond Finance Office

Interest on CABs compounds semiannually and accumulates over the life of the bond, and the amount paid at the maturity is called the maturity value. Interest rates for CABs are generally higher than for CIBs. The total debt outstanding figures are understated to the extent that these bonds are reported at their par issuance price rather than their maturity value.

Local governments issue more premium CABs than non-premium CABs. Premium CABs have lower initial stated par amounts to: 1) lessen the impact of an issuance on par-based debt limits (e.g., the "50-cent test" for school districts as provided in Texas Education Code Section 45.0031), 2) increase the amount of proceeds not subject to debt limits, and 3) help local governments reach tax-rate targets.

The 84th Legislature passed House Bill 114, effective September 1, 2015, that prohibits Texas local governments from issuing CABs secured by property taxes with terms of more than 20 years, and (with some exceptions) from refunding CABs to extend their maturity dates. It also limits each government's CAB debt to no more than 25 percent of its total outstanding bond debt, including principal and interest. The 85th Legislature passed Senate Bill 295, which extends the allowed maturity date for CABs issued for refunding purposes and financing transportation projects.

Texas Local Governments: $239.98 Billion of Outstanding Debt

As of fiscal year-end 2019, Texas local governments (excluding conduit debt) had $239.98 billion in outstanding debt (*Table 1.8*), an increase of $37.63 billion (18.6 percent) since fiscal year 2015. Of the 2019 total, 65.7 percent ($157.59 billion) is GO debt to be repaid from local *ad valorem* tax collections, while the remaining 34.3 percent ($82.39 billion) will be repaid from revenues generated by various projects such as water, sewer, and electric utility fees. Since fiscal year 2015, tax-supported debt outstanding increased 21.0 percent ($27.33 billion) and revenue debt outstanding increased 14.3 percent ($10.31 billion).

School Districts accounted for 36.6 percent ($87.93 billion) of all local debt outstanding and Cities accounted for 32.4 percent ($77.85 billion). Water Districts held the third highest percentage and accounted for 13.9 percent ($33.46 billion) of all local debt outstanding. The remaining 17.0 percent ($40.75 billion) was held by Community and Junior Colleges, Counties, Health/Hospital Districts and Other Special Districts (*Table 1.8*).

The most recent U.S. Census Bureau data, for census year 2016, showed that Texas continued to be ranked second in population, second among the ten most populous states in terms of Local Debt Per Capita, fourth in Total State and Local Debt Per Capita, and seventh in State Debt Per Capita.

Total tax-supported debt per capita increased by 3.6 percent from $5,302 in fiscal year 2018 to $5,491 in fiscal year 2019. Over the past 10 years, debt per capita has increased by 22.5 percent ($1,008) while the state's population has increased by 15.7 percent (3.9 million) (*Figure 1.7*).

Over the past decade, total local debt outstanding (excluding conduit debt) increased by 39.0 percent from $172.70 billion to $239.98 billion. Notable debt increases during this period included Water Districts (water, sewer, and roads), which increased 70.3 percent from $19.64 billion to $33.46 billion; School Districts, which increased 46.2 percent from $60.14 billion to $87.93 billion; Community and Junior Colleges, which increased 37.9 percent from $3.81 billion to 5.26 billion; and Other Special Districts, which increased 35.6 percent from $12.64 billion to $17.14 billion (*Figure 1.8*).

Tax-Supported Debt Rises 21.0 Percent in Five Years

Total tax-supported debt has increased 21.0

percent from $130.26 billion in fiscal year 2015 to $157.59 billion in fiscal year 2019 (*Table 1.9*).

Tax-supported debt for Texas School Districts increased over the past five years from $71.96 billion in fiscal year 2015 to $87.67 billion in fiscal year 2019 (21.8 percent) while public school attendance for districts with debt outstanding increased by 6.9 percent to 5,027,329 students. Tax-supported school district debt accounted for 55.6 percent of all tax-supported debt and is primarily used to finance instructional facilities while only a handful of school districts carry revenue debt for constructing, improving, and equipping athletic/stadium facilities.

Over the five-year period, tax-supported debt carried by Texas Cities, Towns and Villages has increased from $29.53 billion to $34.77 billion (17.7 percent) and accounted for 22.1 percent of all tax-supported debt.

During the past five fiscal years, tax-supported debt for Water Districts, including navigation and port districts, river authorities, municipal utility districts (MUDs), and municipal water authorities increased from $11.32 billion to $16.18 billion (42.9 percent) and accounted for 10.3 percent of all tax-supported debt.

During the same period, County tax-supported debt increased from $11.26 billion to $12.31 billion (9.3 percent).

During the five-year period, enrollment for the 50 Junior and Community College Districts in Texas increased 5.4 percent from 762,506 in 2015 to 803,483 in 2019. Tax-supported debt outstanding increased from $3.61 billion to $4.07 billion (12.8 percent) during the same time period.

During the five-year period, tax-supported debt for Health/Hospital Districts increased from $2.38 billion to $2.43 billion (1.9 percent). Population increases along with the increasing healthcare needs of aging baby boomers also contributed to increased debt issuance. In addition, aging healthcare facilities continue to be renovated or replaced to accommodate advances in medical technology and energy efficiency as well as to comply with new fire and building codes.

During the five-year period, tax-supported debt for Other Special Districts decreased from $191.8 million to $159.3 million (16.9 percent). The majority of Other Special District issuances are issued as revenue debt.

Revenue Debt – 14.3 Percent Increase in Five Years

Since fiscal year 2015, revenue debt has increased by 14.3 percent ($10.31 billion) from $72.09 billion to $82.39 billion (*Table 1.9*).

City revenue debt increased by 10.3 percent from $39.07 billion to $43.08 billion in the five-year period. As the state's population increased by 6.4 percent (1.7 million) from 2014 to 2018 (most recent data available), urban areas have experienced particularly rapid growth that has created the need for new infrastructure, including roads and construction for new and expanded water and sewer systems. The majority of city revenue debt has been used to finance utility-related projects, including water, wastewater, and, in some localities, electric utility systems.

Since fiscal year 2015, Water District revenue debt increased 47.4 percent from $11.72 billion to $17.28 billion, Health/Hospital revenue debt increased 1.1 percent from $1.11 billion to $1.13 billion, revenue debt for Other Special Districts increased 4.7 percent from $16.22 billion to $16.98 billion, Community College Districts revenue debt rose by 2.6 percent from $1.15 billion to $1.18 billion as a response to increased enrollments, and revenue debt for Counties increased 0.6 percent from $2.47 billion to $2.49 billion. During the five-year period, revenue debt for School Districts decreased 23.9 percent, from $340.1 million to $258.8 million.

Table 1.8

TEXAS LOCAL GOVERNMENT

DEBT OUTSTANDING AS OF AUGUST 31, 2019

(amounts in millions)

Type of Issuer		Tax-Supported*	Revenue**	Total Debt
Public School Districts	Voter-approved tax	86,550.1		86,550.1
	Maintenance tax (ed. equipment)	1,119.2		1,119.2
	Lease-purchase contracts		257.7	257.7
	Revenue (athletic facilities)		1.0	1.0
	Subtotal	**$ 87,669.3**	**$ 258.8**	**$ 87,928.1**
Cities, Towns, Villages	Tax	34,766.8		34,766.8
	Revenue		42,921.7	42,921.7
	Sales Tax		155.1	155.1
	Lease-purchase contracts		2.6	2.6
	Subtotal	**$ 34,766.8**	**$ 43,079.4**	**$ 77,846.2**
Water Districts and Authorities	Tax	16,179.0		16,179.0
	Revenue		17,260.9	17,260.9
	Sales Tax		17.0	17.0
	Subtotal	**$ 16,179.0**	**$ 17,277.9**	**$ 33,456.9**
Other Special Districts and Authorities	Tax	159.3		159.3
	Revenue		12,349.8	12,349.8
	Sales Tax		4,571.9	4,571.9
	Lease-purchase contracts		59.5	59.5
	Subtotal	**$ 159.3**	**$ 16,981.2**	**$ 17,140.5**
Counties	Tax	12,311.7		12,311.7
	Revenue		2,466.8	2,466.8
	Lease-purchase contracts		19.5	19.5
	Subtotal	**$ 12,311.7**	**$ 2,486.3**	**$ 14,798.1**
Community and Junior Colleges	Tax	4,074.2		4,074.2
	Revenue		1,184.0	1,184.0
	Subtotal	**$ 4,074.2**	**$ 1,184.0**	**$ 5,258.2**
Health/Hospital Districts and Authorities	Tax	2,427.8		2,427.8
	Revenue		1,069.8	1,069.8
	Sales Tax		55.3	55.3
	Subtotal	**$ 2,427.8**	**$ 1,125.1**	**$ 3,552.9**
	Total Local Debt Outstanding	**$ 157,588.1**	**$ 82,392.6**	**$ 239,980.7**

*Includes debt secured by a combination of ad valorem taxes and other revenue sources.

**Excludes conduit debt.

Source: Texas Bond Review Board - Bond Finance Office

Table 1.9

TEXAS LOCAL GOVERNMENT
DEBT OUTSTANDING BY FISCAL YEAR

(amounts in millions)

	8/31/2015	8/31/2016	8/31/2017	8/31/2018	8/31/2019
Public School Districts					
Tax-Supported*	$71,962.1	$74,580.1	$79,610.2	$83,895.1	$87,669.3
Revenue**	340.1	313.3	300.6	268.7	258.8
Total	**$72,302.3**	**$74,893.4**	**$79,910.7**	**$84,163.8**	**$87,928.1**
Cities, Towns, Villages					
Tax-Supported*	$29,531.8	$30,529.1	$31,262.0	$33,110.2	$34,766.8
Revenue**	39,072.9	39,302.5	40,586.0	42,021.5	43,079.4
Total	**$68,604.7**	**$69,831.7**	**$71,848.0**	**$75,131.8**	**$77,846.2**
Water Districts and Authorities					
Tax-Supported*	$11,322.8	$12,524.5	$13,653.7	$14,843.4	$16,179.0
Revenue**	11,718.9	12,807.0	13,392.1	15,338.2	17,277.9
Total	**$23,041.7**	**$25,331.5**	**$27,045.8**	**$30,181.6**	**$33,456.9**
Other Special Districts and Authorities					
Tax-Supported*	$191.8	$175.0	$178.9	$166.2	$159.3
Revenue**	16,217.6	16,889.1	17,145.6	17,221.2	16,981.2
Total	**$16,409.4**	**$17,064.1**	**$17,324.5**	**$17,387.4**	**$17,140.5**
Counties					
Tax-Supported*	$11,259.7	$11,221.3	$11,699.4	$11,558.6	$12,311.7
Revenue**	2,471.5	2,302.2	2,144.9	2,538.8	2,486.3
Total	**$13,731.1**	**$13,523.5**	**$13,844.3**	**$14,097.4**	**$14,798.1**
Community College Districts					
Tax-Supported*	$3,612.4	$3,676.8	$3,645.4	$4,076.6	$4,074.2
Revenue**	1,153.8	1,105.9	1,225.1	1,184.4	1,184.0
Total	**$4,766.2**	**$4,782.6**	**$4,870.5**	**$5,260.9**	**$5,258.2**
Health/Hospital Districts and Authorities					
Tax-Supported*	$2,382.7	$2,399.0	$2,302.5	$2,517.2	$2,427.8
Revenue**	1,112.4	1,118.8	1,068.1	1,175.9	1,125.1
Total	**$3,495.0**	**$3,517.8**	**$3,370.6**	**$3,693.0**	**$3,552.9**
Total Tax-Supported*	$130,263.2	$135,105.9	$142,352.0	$150,167.3	$157,588.1
Total Revenue**	$72,087.2	$73,838.8	$75,862.4	$79,748.7	$82,392.6
Total Debt Outstanding	**$202,350.4**	**$208,944.7**	**$218,214.4**	**$229,915.9**	**$239,980.7**

*Includes debt secured by a combination of ad valorem taxes and other revenue sources.

**Excludes conduit debt.

Source: Texas Bond Review Board - Bond Finance Office

Chapter 2
State Debt Issued in Fiscal Year 2019 and Debt Outstanding

In fiscal year 2019, the state's total debt outstanding (including conduit debt) increased 5.4 percent to $59.90 billion compared to $56.83 billion in fiscal year 2018 and $53.02 billion in fiscal year 2017 (Table 2.3).

Bonds issued by Texas state agencies, colleges, and universities during fiscal year 2019 decreased by 6.9 percent to an aggregate total of $6.59 billion compared to $7.07 billion issued in fiscal year 2018. Fiscal year 2019 issues included $4.41 billion in new-money and $2.18 billion in refunding bonds (Table 2.1). Other debt issued included $1.17 billion of commercial paper.

Detail on bond transactions can be found in Appendix A, and detail on commercial paper and variable-rate notes can be found in Appendix B.

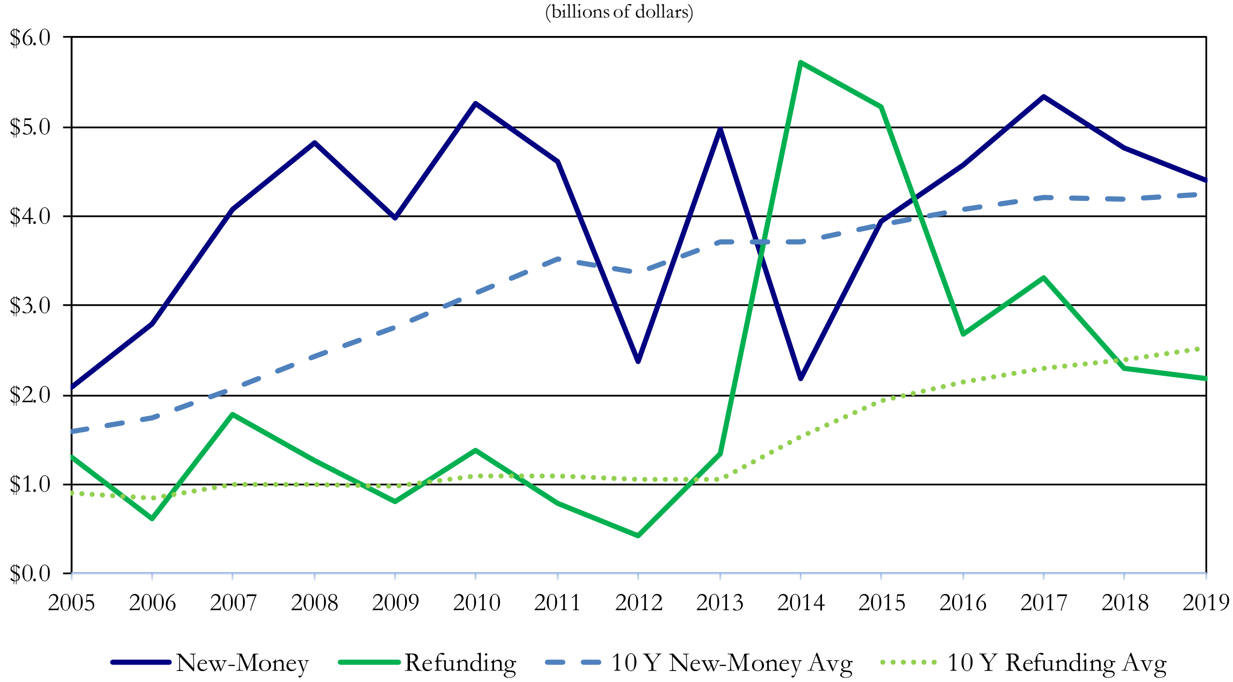
New-Money and Refunding Issuances Decrease in Fiscal Year 2019

A total of $6.59 billion in bonds was issued in fiscal year 2019. Of that amount, $4.41 billion (66.9 percent) was issued as new-money bonds, a decrease of $358.7 million (7.5 percent) from $4.77 billion issued during fiscal 2018. The remaining $2.18 billion (33.1 percent) was issued as refunding bonds, a decrease of $126.5 million (5.5 percent) from $2.30 billion issued during fiscal year 2018 (*Figure 2.1*). Overall net present value savings from fiscal year 2019 refundings totaled $152.1 million.

Of the $4.41 billion in new-money bonds issued in fiscal year 2019, approximately $1.98 billion (44.9 percent) was issued by Texas Water Development Board (TWDB), $653.9 million (14.8 percent) was issued by Texas Private Activity Bond Surface Transportation Corporation (PABST), $577.1 million was issued by Texas Department of Housing and Community Affairs (TDHCA) (13.1 percent), and $250.0 million was issued by Texas Veterans Land Board (VLB) (5.7 percent).

Of the $2.18 billion in refunding bonds issued in fiscal year 2019, the University of Texas System (UTS) issued $639.2 million (29.4

Figure 2.1
TEXAS NEW-MONEY AND REFUNDING BOND ISSUES 2005-2019
(billions of dollars)



Source: Texas Bond Review Board - Bond Finance Office.

Table 2.1 **TEXAS BONDS ISSUED DURING FISCAL YEAR 2019** **SUMMARIZED BY ISSUER**				
ISSUER	**REFUNDING BONDS**	**NEW-MONEY BONDS**	**TOTAL BONDS ISSUED**	**New-Money Use of Proceeds**
Stephen F. Austin State University	$ -	$ 110,215,000	$ 110,215,000	Acquire, purchase, construct, and equip various facilities
Texas Dept. of Housing and Comm. Affairs	-	577,050,000	577,050,000	Single family mortgage bonds and multifamily bonds
Texas Higher Education Coordinating Board	140,880,000	159,965,000	300,845,000	College Student Loan Program
Texas Public Finance Authority	510,845,000	200,975,000	711,820,000	CPRIT and Texas Facilities Commission projects
Texas State Affordable Housing Corporation	-	80,017,000	80,017,000	Single family mortgage bonds and multifamily bonds
Texas Transportation Commission	-	249,251,954	249,251,954	Highway Improvement Projects
TTC PABST Corporation	-	653,865,000	653,865,000	Highway Improvement Projects
Texas Veteran's Land Board	-	250,000,000	250,000,000	Veteran's Home Loan Program
Texas Water Development Board	200,800,000	1,978,951,000	2,179,751,000	Water Financial Assistance Programs and SWIRFT
Texas Woman's University	7,885,000	-	7,885,000	N/A
The Texas A&M University System	595,880,000	57,495,000	653,375,000	Acquire, purchase, construct, and equip various facilities
The University of Texas System	639,150,000	-	639,150,000	N/A
University of North Texas System	81,520,000	90,590,000	172,110,000	Acquire, purchase, construct, and equip various facilities
Total Texas Bonds Issued	**$ 2,176,960,000**	**$ 4,408,374,954**	**$ 6,585,334,954**	

Note: Table 2.1 includes private placements. Excludes commercial paper and variable-rate notes. See Table B1, Appendix B, for these issuances. Excludes lease purchases.
Source: Texas Bond Review Board - Bond Finance Office.

percent), TAMUS issued $595.9 million (27.4 percent), TPFA issued $510.8 million (23.4 percent), and TWDB issued $200.8 million (9.2 percent) (*Table 2.1*).

Build America Bonds Outstanding for Fiscal Year 2019

In fiscal year 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) created Build America Bonds (BABs) that could be issued as Tax Credit BABs or Direct-Payment BABs. Authority to issue BABs expired on December 31, 2010. As of August 31, 2019, Texas Transportation Commission (TTC), UTS, and University of Houston System, had $3.50 billion, $1.25 billion, and $67.7 million of BABs outstanding, respectively.

Under the Budget Control Act of 2011, across-the-board sequestration took effect on March 1, 2013, and direct-pay bonds such as BABs experienced a 8.7 percent reduction of the original 35 percent federal subsidy on BABs interest payments. The Internal Revenue Service reported that, effective October 1, 2014, issuers of BABs and other direct-pay bonds would have their subsidy payments processed in federal fiscal year 2015 reduced by 7.3 percent. In federal fiscal years 2017, 2018 and 2019, the subsidy payments were further reduced by 6.9 percent, 6.6 percent, and 6.2 percent, respectively. In federal fiscal year 2020 the subsidy payments are expected to be reduced by 5.9 percent.

Interim Financing in Fiscal Year 2019

Several state agencies and institutions of higher education have established variable-rate debt financing programs that provide financing for equipment or capital projects or provide loans to eligible entities.

As of August 31, 2019, a total of $6.58 billion was authorized for state commercial paper (CP) or variable-rate note (VRN) programs. Of this amount, $2.27 billion was outstanding at fiscal year-end 2019 (*Table B1* in *Appendix B*), approximately $130.8 million more than the amount outstanding at fiscal year-end 2018. Additional information about individual CP and VRN programs is included in Appendix B.

Projected Issuances in Fiscal Year 2020

Texas state issuers expect to issue approximately $4.68 billion in bonds, CP, and VRN during fiscal year 2020 (*Table 2.2*), a projected increase of $284.6 million (6.5 percent) over the amount projected for fiscal year 2019.

General Obligation Debt Outstanding Decreases in Fiscal Year 2019

Texas General Obligation (GO) debt has a constitutional pledge of the full faith and credit

Table 2.2

TEXAS STATE DEBT ISSUES EXPECTED DURING FISCAL YEAR 2020

ISSUER	APPROXIMATE AMOUNT	PURPOSE	APPROXIMATE ISSUE DATE
General Obligation Debt			
Self-Supporting			
Texas Higher Education Coordinating Board	$87,265,000	Refunding of certain outstanding college student loan bonds	Jun-20
Texas Higher Education Coordinating Board	170,000,000	College Student Loan Bonds	Jul-20
Texas Veterans Land Board	250,000,000	Proceeds will be used to augment the Veterans' Housing Assistance Program	Jan-20
Total Self-Supporting	**$507,265,000**		
Not Self-Supporting			
Texas Public Finance Authority	TBD	Cancer Prevention and Research Institute of Texas new money/ refunding bonds	TBD
Texas Public Finance Authority	TBD	Refunding of Outstanding CP Series 2008	TBD
Total Not Self-Supporting	**$0**		
Total General Obligation Debt	**$507,265,000**		
Non-General Obligation Debt			
Self-Supporting			
Texas Dept. of Housing and Communtiy Affairs	$150,000,000	Single Family First-Time Home Buyer Program	Feb-20
Texas Dept. of Housing and Community Affairs	150,000,000	Single Family First-Time Home Buyer Program	Jun-20
Texas Water Development Board	TBD	Clean Water and Drinking Water State Revoloving Fund	Mar-20
Texas Water Development Board	TBD	State Water Implementation Revenue Fund for Texas (SWIRFT) new money bonds	Aug-20
Texas Public Finance Authority	326,000,000	TxDOT Austin Campus Consolidation Proj 86th Leg GAA Rider 42, VII-29	TBD
Texas Public Finance Authority	TBD	RFS Midwestern State University New Issuance	TBD
Texas State Technical College	4,400,000	Financing of purchase of University Center at TSTC Harlingen	TBD
Texas State University System	131,066,000	Various projects	TBD
The Texas A&M University System - RFS	634,000,000	RFS Bonds/Commercial Paper Notes for the financing of educational facilities	TBD
The Texas A&M University System - PUF	745,000,000	PUF Bonds/Commercial Paper Notes for the financing of educational facilities	TBD
The University of Texas System - RFS	750,000,000	RFS Bonds/Commercial Paper Notes for the financing of educational facilities	TBD
The University of Texas System - PUF	600,000,000	PUF Bonds/Commercial Paper Notes for the financing of educational facilities	TBD
Texas Tech University System	338,880,000	Various projects	TBD
University of Houston System	244,462,000	Various projects	TBD
Total Self-Supporting	**$4,073,808,000**		
Not Self-Supporting			
Texas Public Finance Authority	$208,816,277	Deferred Maint for HHSC 86th Leg GAA Rider 2, II-48	TBD
Texas Public Finance Authority	TBD	TFC Capitol Complex financings	TBD
Texas Public Finance Authority	TBD	MLPP Commercial Paper Program	TBD
Total Not Self-Supporting	**$0**		
Total Non-General Obligation Debt	**$4,073,808,000**		
Conduit Debt			
Texas State Affordable Housing Corporation	$40,000,000	Ventura at Fairgrounds Apartments Multi-Family Residential Bond Project	Nov-19
Texas State Affordable Housing Corporation	39,000,000	Hamilton Valley Portfolio Multi-Family Residential Bond Project	Nov-19
TPFA Charter School Finance Corporation	TBD	Charter School Financing	TBD
Texas Windstorm Insurance Association	TBD	Insurance Claims Refunding Bonds	TBD
Texas Dept. of Housing and Comm Affairs	18,000,000	The Haven at Willow Creek Park Multi-Family Residential Bond Projects	TBD
Texas Dept. of Housing and Comm Affairs	10,000,000	Fishpond at Corpus Christi Multi-Family Residential Bond Project	TBD
Texas Dept. of Housing and Comm Affairs	41,000,000	The Reserves at San Marcos Multi-Family Residential Bond Project	TBD
Texas Dept. of Housing and Comm Affairs	30,000,000	Ventura at Hickory Tree Multi-Family Residential Bond Project	Nov-19
Total Conduit	**$99,000,000**		
Total All Debt	**$4,680,073,000**		

Includes commercial paper and variable rate notes

Source: Texas Bond Review Board - Bond Finance Office.

of the state to repay the debt and requires passage of a proposition by a vote of two-thirds of both houses of the Texas Legislature and a majority of Texas voters.

As of fiscal year-end 2019, $18.14 billion (30.3 percent) of the state's $59.90 billion in total debt outstanding was backed by the state's GO pledge, a decrease of $450.7 million (2.4 percent) from the $18.59 billion backed by the GO pledge at the end of fiscal year 2018 (*Figure 2.2* and *Table 2.3*). During the fiscal year, the Texas Higher Education Coordinating Board (THECB) issued $300.8 million of GO student loan bonds, VLB issued $250.0 million of GO housing bonds, and TWDB issued $250.9 million of GO water financial assistance bonds for various programs.

Governmental Revenue Debt Outstanding Increases in Fiscal Year 2019

The repayment of revenue debt is dependent on project revenue or revenue from a designated fund. The Constitution prohibits any pledge of state funds beyond the current biennium. Investors may require a higher rate of interest to compensate for the additional risks associated with revenue debt.

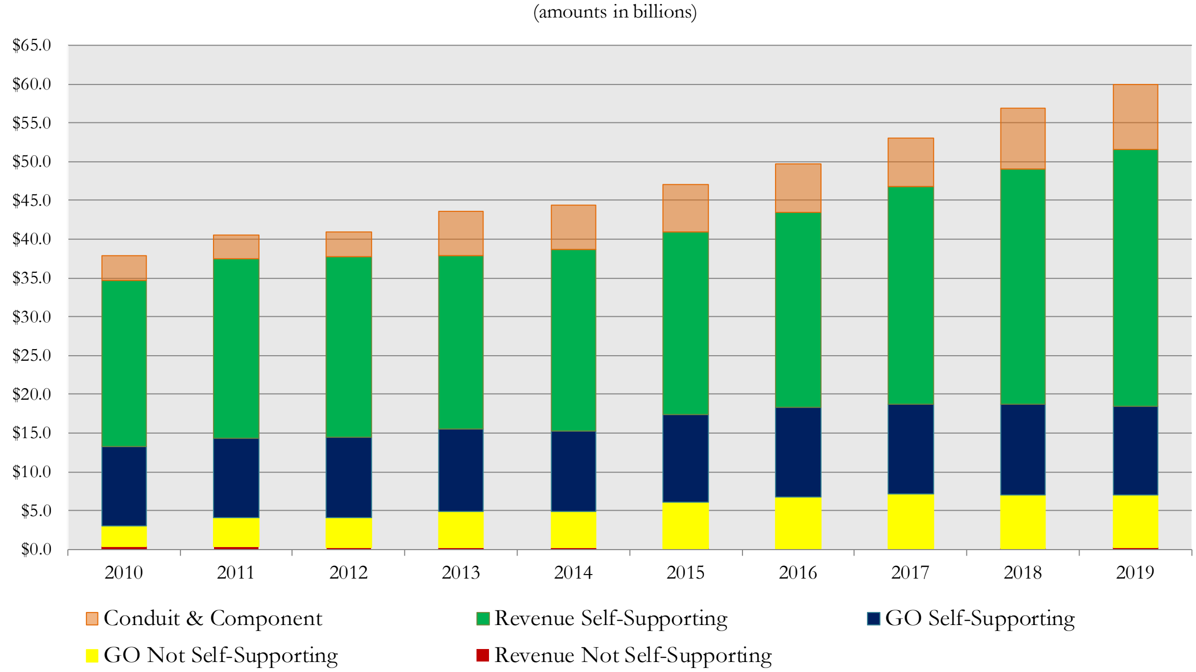
Excluding conduit and component debt, $33.38 billion (55.7 percent) of the state's $59.90 billion in total debt outstanding as of fiscal year-end 2019 was backed by non-GO revenue pledges, an increase of $2.90 billion (9.5 percent) from the $30.47 billion backed by non-GO revenue pledges at the end of fiscal year 2018 (*Figure 2.2* and *Table 2.3*).

Colleges and universities are the largest issuer of revenue debt with $15.53 billion outstanding. See *Table 2.5* and *Table 2.6* for more detail on college and university debt outstanding and debt service requirements.

Conduit Revenue and Component Debt

The state is authorized by statute to issue conduit debt for certain purposes, including charter schools, transportation, single family mortgages, multifamily dwellings, and economic development. Debt-service for

Figure 2.2
STATE OF TEXAS DEBT OUTSTANDING
(amounts in billions)



Source: Texas Bond Review Board - Bond Finance Office

conduit debt is typically provided by project revenue and is secured by a third party.

Although conduit revenue debt obligations bear the name of the agency as the issuer, the agency is not financially liable for the debt beyond the revenues provided by a lease or loan with the third party on whose behalf they are issued. For example, the Texas Department of Housing and Community Affairs (TDHCA) is not liable for debt service for issuances of its multifamily mortgage revenue bonds beyond the revenues it receives from the borrower that is acquiring, constructing, or renovating the multifamily facility.

Component debt obligations are issued by legally separate units of the agency, and the agency is not financially liable for the debt. For example, the Texas Public Finance Authority (TPFA) is not liable for debt service for issuances of the Texas Public Finance Authority Charter School Finance Corporation.

Of the state's $59.90 billion in debt outstanding as of fiscal year-end 2019, $8.39 billion (14.0 percent) was state conduit and component debt which includes $4.49 billion of debt outstanding by Grand Parkway Transportation Corporation (GPTC) (*Table 2.3*). As conduit debt, GPTC debt service is payable solely from payments received from transportation projects it finances. The $8.39 billion of conduit and component debt outstanding represents an increase of $618.5 million (8.0 percent) from the $7.77 billion outstanding at the end of fiscal year 2018.

General Revenue Supported Debt Increases in Fiscal Year 2019

All debt does not have the same financial impact on the state's general revenue. Self-supporting debt relies on sources other than the state's general revenue to pay debt service; thus self-supporting debt does not directly impact state finances. Debt service for not self-supporting debt is primarily derived from the state's general revenue fund and thus draws on the same sources used by the legislature to finance state government.

As of August 31, 2019, Texas had a total of $7.01 billion in GO and non-GO not self-supporting debt outstanding to be repaid from the state's general revenue compared to $6.97 billion outstanding at fiscal year-end 2018. During fiscal year 2019, non-GO not self-supporting debt increased by $168.7 million, but GO not self-supporting debt decreased by $125.3 million for a net increase in not self-supporting debt of $43.4 million (0.6 percent) (*Figure 2.3*).

Variable Rate Debt Outstanding Increases in Fiscal Year 2019

State issuers and institutions of higher education have established variable-rate debt financing programs to provide financing for equipment and capital projects, provide loans to eligible entities, diversify their debt portfolio, and take advantage of lower short-term interest rates.

Variable rate debt outstanding totaled $8.38 billion in fiscal year 2019. Of this amount, approximately $2.27 billion (27.1 percent) was short-term commercial paper (CP) or variable-rate notes (VRN), and the remaining $6.10 billion (72.9 percent) was long-term variable-rate debt. See *Table B1 in Appendix B* for more information regarding CP and VRN programs. Variable-rate debt increased by approximately $310.6 million (3.9 percent) in fiscal year 2019 to $8.38 billion compared with $8.06 billion outstanding in fiscal year 2018. Variable-rate GO debt accounted for $3.63 billion (43.3 percent), and revenue debt accounted for $4.75 billion (56.7 percent) of the total amount of variable-rate debt outstanding at the end of fiscal year 2019. Variable-rate GO debt increased by $65.8 million (1.8 percent), and variable-rate revenue debt increased by $244.8 million (5.4 percent) from amounts outstanding at fiscal year-end 2018 (*Table 2.3A*).

Table 2.3

STATE OF TEXAS DEBT OUTSTANDING

(amounts in thousands)

	8/31/2015	8/31/2016	8/31/2017	8/31/2018	8/31/2019
General Obligation Debt					
Self-Supporting					
Veterans' Land and Housing Bonds	$2,672,253	$2,782,245	$2,875,515	$2,957,335	$2,950,180
Water Development Bonds	1,090,430	1,308,360	1,259,490	1,229,720	966,300
Water Development Bonds - State Participation	118,340	113,080	104,350	102,035	89,265
Water Development Bonds - WIF	199,855	190,375	171,835	238,895	207,315
Economic Development Bank Bonds	45,000	45,000	45,000	45,000	45,000
College Student Loan Bonds	826,965	920,595	1,020,215	1,115,475	1,187,945
Texas Agricultural Finance Authority	6,750	5,250	0	0	0
Texas Mobility Fund Bonds	6,400,485	6,268,985	6,093,175	6,024,765	5,943,130
Texas Public Finance Authority - TMVRLF	35,220	34,015	25,420	24,175	22,885
Total, Self-Supporting	**$11,395,298**	**$11,667,905**	**$11,595,000**	**$11,737,400**	**$11,412,020**
Not Self-Supporting [1]					
Higher Education Constitutional Bonds [2]	$6,521	$35,204	$25,986	$22,080	$17,855
Texas Public Finance Authority Bonds	1,512,875	1,395,260	1,289,230	1,182,845	1,049,025
Cancer Prevention and Research Institute of Texas	716,440	966,520	1,143,710	1,301,455	1,444,695
Park Development Bonds	5,260	3,725	2,220	1,465	725
Water Development Bonds - EDAP [3]	216,210	236,830	213,425	192,535	217,772
Water Development Bonds - State Participation	0	0	0	0	0
Water Development Bonds - WIF	468,755	439,450	409,115	275,190	249,570
TTC GO Transportation Bonds	2,991,410	3,521,965	4,004,360	3,876,440	3,747,065
Total, Not Self-Supporting	**$5,917,471**	**$6,598,954**	**$7,088,046**	**$6,852,010**	**$6,726,707**
Total General Obligation Debt	**$17,312,769**	**$18,266,859**	**$18,683,046**	**$18,589,410**	**$18,138,727**
Non-General Obligation Debt					
Self-Supporting					
Permanent University Fund Bonds					
The Texas A&M University System	$953,145	$968,675	$932,850	$1,233,095	$1,258,580
The University of Texas System	2,169,085	2,615,155	2,695,035	2,922,895	3,106,760
College and University Revenue Bonds [4]	11,657,222	12,874,295	15,132,309	15,266,896	15,526,283
Texas Water Resources Finance Authority Bonds	0	0	0	0	0
TxDOT Toll Revenue Bonds [6]	2,402,352	2,401,472	2,721,029	2,714,721	2,955,531
Texas Department of Housing & Community Affairs - SF	567,675	521,460	533,325	471,578	874,549
Economic Development Program (Leverage Fund)	25,000	20,000	15,000	5,000	0
Veterans' Financial Assistance Bonds	0	0	0	0	0
Texas Workforce Commission Unemp Comp Bonds	628,355	298,625	0	0	0
State Highway Fund	4,461,105	3,972,595	4,417,980	4,202,305	3,976,805
Water Development Bonds - State Revolving Fund	670,115	609,935	164,010	288,395	502,085
Water Development Bonds - SWIRFT	0	810,410	1,392,700	3,251,740	4,889,925
Total, Self-Supporting	**$23,534,055**	**$25,092,622**	**$28,004,238**	**$30,356,625**	**$33,090,518**
Not Self-Supporting [1]					
Texas Public Finance Authority Bonds	$68,175	$45,835	$45,470	$75,910	$256,865
TPFA Master Lease Purchase Program	43,019	44,480	35,850	33,650	24,390
Texas Military Facilities Commission Bonds	8,640	7,680	6,740	5,765	4,740
Parks and Wildlife Improvement Bonds	11,150	8,375	5,575	2,710	705
Total, Not Self-Supporting	**$130,984**	**$106,370**	**$93,635**	**$118,035**	**$286,700**
Conduit, Component and Related Organizations [5]					
Texas Windstorm Insurance Association	$500,000	$458,400	$414,600	$368,500	$318,600
Texas Dept. of Housing and Community Affairs Bonds - MF	965,352	957,970	875,230	973,529	937,790
Texas State Affordable Housing Corporation	280,262	241,536	228,300	224,673	277,708
Texas Grand Parkway Transportation Corporation [6]	2,900,940	2,900,940	3,007,779	4,491,734	4,491,734
Texas PAB Surface Transportation Corporation	1,289,030	1,561,665	1,561,665	1,561,665	2,215,530
TPFA Charter School Finance Corporation	176,410	163,646	155,744	149,309	146,562
Total Conduit, Component and Related Organizations	**$6,111,994**	**$6,284,157**	**$6,243,318**	**$7,769,409**	**$8,387,924**
Total Non-General Obligation Debt	**$29,777,033**	**$31,483,149**	**$34,341,191**	**$38,244,069**	**$41,765,141**
Total Debt Outstanding	**$47,089,802**	**$49,750,007**	**$53,024,237**	**$56,833,479**	**$59,903,869**

1 Not self-supporting debt (general obligation and non-general obligation) depends solely on the state's general revenue fund for debt service.

2 While not explicitly a general obligation or full faith and credit bond, the revenue pledge in Constitutional Bonds has the same effect.

3 Economically Distressed Areas Program (EDAP) bonds depend on the state's general revenue fund for 90 percent of their debt service.

4 Tuition Revenue Bonds are included in these totals. See Table 2.5.

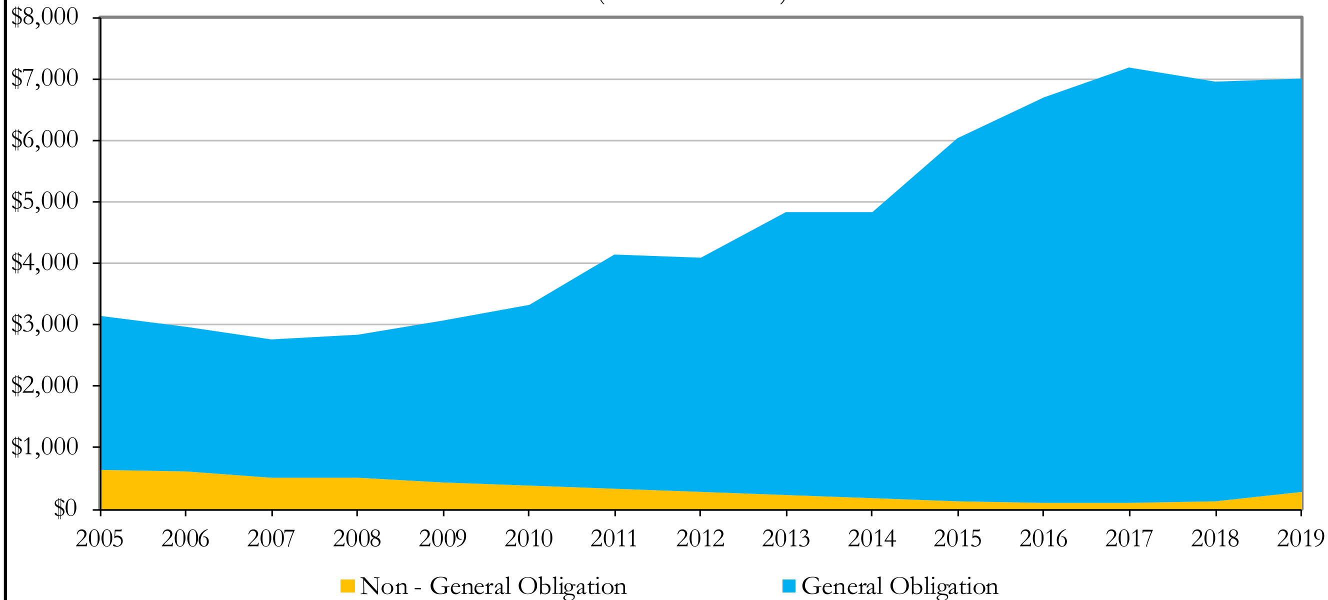
5 This section contains debt that is not a legal liability of the state but rather is backed by third party entities.

6 Includes TIFIA loan debt outstanding. Amortization schedule provided by TxDOT.

Note: Certain lease purchase, SECO LoanSTAR and other revolving loan program debt is not included.

Source: Texas Bond Review Board - Bond Finance Office.

Figure 2.3
TEXAS STATE DEBT OUTSTANDING
BACKED BY GENERAL REVENUE (NOT SELF-SUPPORTING)
(amounts in millions)



Source: Texas Bond Review Board - Bond Finance Office.

The largest issuers of variable-rate debt are: VLB with $2.90 billion outstanding, UTS with $2.87 billion outstanding, TXDOT with $1.01 billion outstanding, and TPFA with $293.2 million outstanding.

Scheduled Debt-Service Payments from General Revenue Decrease for Fiscal Year 2020

During fiscal years 2017, 2018, and 2019, scheduled debt service from general revenue was $673.3 million, $726.6 million, and $716.6 million, respectively. Scheduled debt-service payments from general revenue are expected to decrease by 1.4 percent to $707.6 million in fiscal year 2020 (*Figure 2.4*). (See *Table 2.4* for debt-service requirements by fiscal year for Texas state bonds.) See the *State of Texas Annual Cash Report 2019* published by the Texas Comptroller of Public Accounts for actual debt-service paid by the state from General Revenue.

Debt service for tuition revenue bond (TRB) debt is not included in this analysis. Although college and university revenue debt is payable from a pledge of certain "revenue funds" of the applicable system or institution of higher education, pursuant to authorizations to individual institutions in Chapter 55, Texas Education Code, the legislature has historically appropriated funds in an amount equal to all or a portion of the debt service on tuition revenue debt issued. (For revenue debt outstanding and debt-service requirements for each system or institution, see *Tables 2.5* and *2.6*, respectively.)

Authorized but Unissued Debt Decreases in Fiscal Year 2019

Authorized but unissued debt is defined as debt that may be issued without further legislative or voter action. As of August 31, 2019, Texas had $13.35 billion in authorized but unissued debt compared to $13.65 billion in fiscal year 2018 (*Table 2.7*). Of the $13.35 billion, $10.15 billion (76.0 percent) was GO debt. Of the GO debt, $8.67 billion (85.4 percent) was self-supporting and $1.48 billion (14.6 percent) was not self-supporting. This is a decrease of $273.0 million compared to $1.75 billion in not self-supporting authorized but

Table 2.3A

STATE OF TEXAS VARIABLE RATE DEBT OUTSTANDING

(amounts in thousands)

	8/31/2015	8/31/2016	8/31/2017	8/31/2018	8/31/2019
General Obligation Debt					
Texas Department of Agriculture	$6,750	$5,250	$0	$0	$0
Texas Department of Transportation	400,000	400,000	400,000	400,000	400,000
Texas Economic Development Bank	45,000	45,000	45,000	45,000	45,000
Texas Public Finance Authority	321,460	284,760	11,600	255,550	176,925
Texas Tech University[1]	0	7,642	1,540	855	0
Texas Water Development Board	51,140	74,925	57,960	25,475	105,450
Veterans Land Board	2,528,325	2,645,575	2,745,630	2,834,010	2,899,270
Total General Obligation Variable Rate Debt	**$3,352,675**	**$3,463,152**	**$3,261,730**	**$3,560,890**	**$3,626,645**
Revenue Debt					
Texas A&M University System	$160,705	$178,962	$295,974	$325,461	$261,985
Texas Department of Housing and Community Affairs	505,650	424,595	369,940	332,545	333,410
Texas Department of Transportation	975,000	625,000	614,370	614,370	614,370
Texas Economic Development Bank	25,000	20,000	15,000	5,000	0
Texas Grand Parkway Transportation Corporation	190,730	190,730	0	166,525	166,525
Texas Public Finance Authority	128,992	150,650	154,358	192,389	116,250
Texas State Affordable Housing Corporation	18,406	0	0	0	0
Texas State Technical College	3,524	3,194	2,878	2,535	2,201
Texas State University System	0	2,588	10,258	55,600	124,980
Texas Tech University System	22,483	44,454	41,713	51,830	50,795
Texas Water Development Board	0	0	0	0	0
TPFA Charter School Finance Corporation	4,311	4,046	3,756	0	0
University of Houston System	71,641	56,367	49,117	83,567	162,050
University of North Texas System	157,567	20,150	25,275	83,600	49,180
University of Texas System	2,748,487	3,093,790	2,924,768	2,590,228	2,866,727
Total Revenue Variable Rate Debt	**$5,012,497**	**$4,814,526**	**$4,507,407**	**$4,503,651**	**$4,748,473**
Total Variable Rate Debt	**$8,365,172**	**$8,277,677**	**$7,769,137**	**$8,064,541**	**$8,375,118**

[1] While not explicitly a general obligation or full faith and credit bond, the revenue pledge in Constitutional Bonds has the same effect.

Includes Commercial Paper and Variable-Rate Notes.

Source: Texas Bond Review Board - Bond Finance Office.

unissued GO debt at fiscal year-end 2018. The overall decrease resulted mainly from the issuance of debt in the amount of $207.7 million by TPFA for cancer research and $53.5 million by TWDB for water development projects.

Authorized but unissued not self-supporting revenue debt totaled $757.2 million at the end of fiscal 2019 compared to $942.9 million at fiscal year-end 2018. The remaining authorized but unissued revenue debt was self-supporting and increased from $2.23 billion to $2.44 billion.

86th Legislature – Regular Session

The 86th Legislature authorized additional GO debt that was approved by the voters at the November 5, 2019, general election. This included HJR 12 for an additional $3 billion in bonding authority to finance cancer research up to a maximum of $6 billion and SJR 79 for $200 million in evergreen bonding authority to provide financial assistance for the development of certain water projects in economically distressed areas.

Additionally, the 86th Legislature passed HB 1052 authorizing the TWDB to use the state participation account of the water development fund to provide financial assistance for the development of certain

Table 2.4

DEBT-SERVICE REQUIREMENTS OF TEXAS STATE DEBT BY FISCAL YEAR

(amounts in thousands)

	2020	2021	2022	2023	2024	2025 & beyond
General Obligation Debt						
Self-Supporting						
Veterans' Land and Housing Bonds	$274,849	$276,133	$273,906	$256,856	$242,956	$2,214,852
Water Development Bonds	93,302	94,514	86,851	78,965	78,796	1,061,880
Water Development Bonds - State Participation	6,815	6,292	8,856	8,637	8,536	88,057
Water Development Bonds - WIF	30,226	31,463	31,473	31,428	32,082	101,648
Economic Development Bank Bonds	2,048	2,048	2,048	2,048	2,048	87,892
Park Development Bonds	0	0	0	0	0	0
College Student Loan Bonds	110,535	114,157	112,507	115,420	115,497	1,150,235
Texas Agriculture Finance Authority	0	0	0	0	0	0
Texas Mobility Fund Bonds	374,142	381,576	389,148	396,824	404,614	7,974,522
Texas Public Finance Authority - TMVRLF	2,138	2,138	2,136	2,132	2,136	18,037
Total Self-Supporting	**$894,055**	**$908,321**	**$906,925**	**$892,310**	**$886,665**	**$12,697,122**
Not Self-Supporting [1]						
Higher Education Constitutional Bonds [2]	$3,103	$2,977	$2,975	$2,972	$2,977	$5,945
Texas Public Finance Authority Bonds	154,443	148,068	143,610	138,559	129,361	619,116
Park Development Bonds	743	0	0	0	0	0
Agriculture Water Conservation Bonds	0	0	0	0	0	0
Cancer Prevention and Research Institute of Texas	136,741	134,577	132,198	129,660	126,963	1,258,867
Water Development Bonds - EDAP [3]	30,354	28,380	27,496	25,603	24,282	146,542
Water Development Bonds - State Participation	0	0	0	0	0	0
Water Development Bonds - WIF	35,265	34,163	33,027	31,894	30,751	144,798
TTC GO Transportation Bonds	311,852	307,377	302,880	298,363	293,816	4,664,160
Total Not Self-Supporting	**$672,501**	**$655,541**	**$642,184**	**$627,051**	**$608,151**	**$6,839,427**
Total General Obligation Debt Service	**$1,566,556**	**$1,563,862**	**$1,549,109**	**$1,519,361**	**$1,494,816**	**$19,536,550**
Non-General Obligation Debt						
Self-Supporting						
Permanent University Fund Bonds						
The Texas A&M University System	$100,277	$102,480	$101,943	$101,634	$96,447	$1,397,331
The University of Texas System	215,643	215,645	215,644	215,642	215,645	4,059,167
College and University Revenue Bonds	1,470,027	1,454,084	1,427,061	1,354,002	1,323,316	16,289,434
Texas Water Resources Finance Authority Bonds	0	0	0	0	0	0
TxDOT Toll Revenue Bonds [4]	141,565	151,330	164,337	177,396	186,204	5,452,642
Texas Dept of Housing & Community Affairs - SF	37,037	43,949	44,245	41,497	41,587	1,301,869
Economic Development Program (Leverage Fund)	0	0	0	0	0	0
Veterans' Financial Assistance Bonds	0	0	0	0	0	0
Texas Workforce Commission Unemp Comp Bonds	0	0	0	0	0	0
State Highway Fund	423,416	423,420	423,411	423,414	422,248	3,255,412
Water Development Bonds - State Revolving Fund	44,822	44,701	44,703	44,688	44,688	543,114
Water Development Bonds - SWIRFT	304,166	313,712	319,580	318,295	318,060	7,180,255
Total Self-Supporting	**$2,736,953**	**$2,749,322**	**$2,740,924**	**$2,676,569**	**$2,648,196**	**$39,479,225**
Not Self-Supporting [1]						
Texas Public Finance Authority Bonds	$24,657	$22,246	$24,377	$22,714	$22,055	$252,225
TPFA Master Lease Purchase Program	8,415	7,825	5,822	2,779	840	1,494
Texas Military Facilities Commission Bonds	1,256	1,259	917	920	926	0
Parks and Wildlife Improvement Bonds	723	0	0	0	0	0
Total Not Self-Supporting	**$35,051**	**$31,330**	**$31,116**	**$26,412**	**$23,820**	**$253,718**
Conduit, Component and Related Organizations						
Texas Windstorm Insurance Association	$80,285	$80,330	$80,303	$80,381	$80,322	$0
Texas Small Business I.D.C. Bonds	0	0	0	0	0	0
Texas Dept. of Housing & Community Affairs - MF	70,059	98,835	48,469	48,483	48,568	1,210,424
Texas State Affordable Housing Corporation	15,906	34,748	16,188	17,568	16,447	416,613
Texas Grand Parkway Transportation Corporation [4]	163,952	198,480	198,527	798,813	265,045	8,288,068
Texas PAB Surface Transportation Corporation	133,414	136,774	136,774	136,774	136,774	4,596,698
TPFA Charter School Finance Corporation	10,641	10,630	10,770	10,781	10,759	176,398
Total Conduit, Component and Related Organizations	**$474,257**	**$559,796**	**$491,032**	**$1,092,800**	**$557,915**	**$14,688,202**
Total Non-General Obligation Debt Service	**$3,246,261**	**$3,340,448**	**$3,263,072**	**$3,795,781**	**$3,229,931**	**$54,421,145**
Total Debt Service	**$4,812,816**	**$4,904,310**	**$4,812,181**	**$5,315,142**	**$4,724,746**	**$73,957,694**

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

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

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

[4] Includes TIFIA loan debt outstanding. Amortization schedule provided by TxDOT.

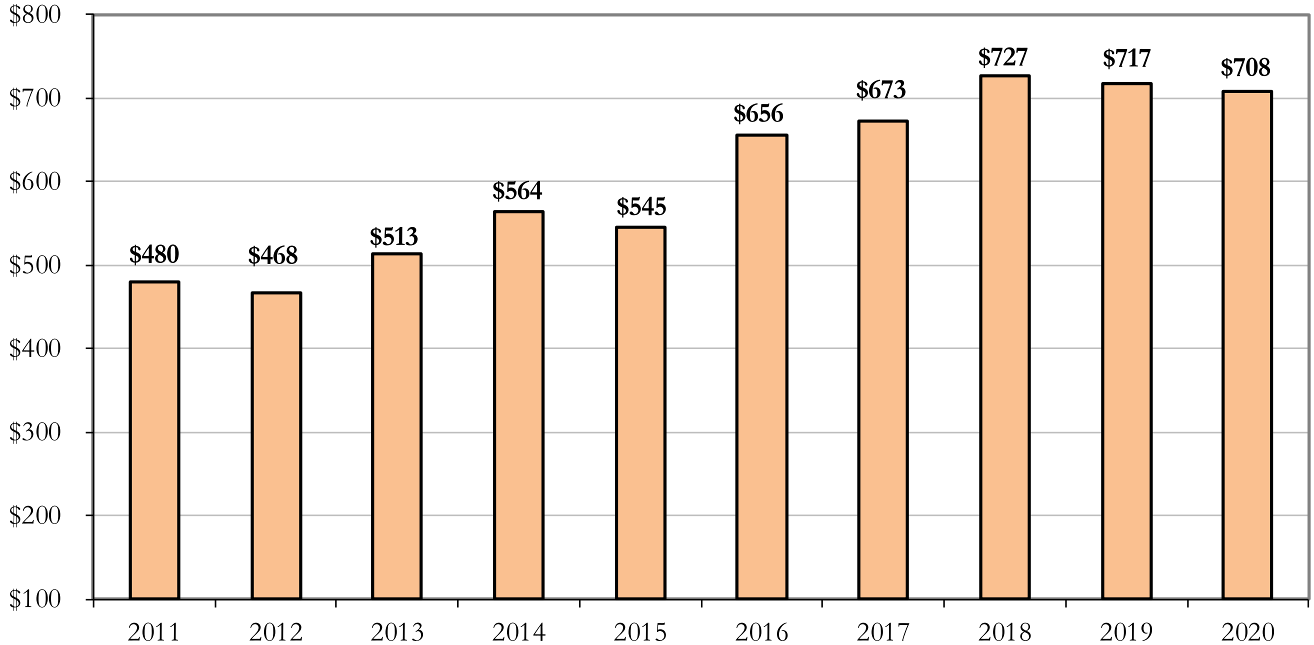
Notes: The debt-service figures do not include the early redemption of bonds under the state's various loan programs or cash defeasances after August 31, 2019, or the Build America Bond subsidy payments. Certain lease purchase, SECO LoanSTAR, and other revolving loan program debt is not included.

All future debt-service payments are estimated. Future debt-service payments for variable-rate bonds are calculated based on information provided by the issuer. Future debt-service payments for commercial paper are calculated at 5 percent for a 20-year period.

Detail may not add to total due to rounding.

Source: Texas Bond Review Board - Bond Finance Office.

Figure 2.4
ANNUAL DEBT SERVICE SCHEDULED TO BE PAID FROM GENERAL REVENUE
(amounts in millions)



Source: Texas Bond Review Board - Bond Finance Office.

facilities in an amount not to exceed $200 million.

At the November 5, 2019, general election, the voters approved the use of a Flood Infrastructure Fund, to be initially funded by the state's Economic Stabilization Fund, as a special fund in the State Treasury outside the general revenue fund to be used to provide financing for drainage, flood mitigation, or flood control projects. The Texas Legislature passed two related bills, SB 7 and SB 8, which address flood control and mitigation.

In the General Appropriations Act (GAA), the 86th Legislature authorized the issuance of $475.2 million of additional revenue bonds and appropriated those bond proceeds to the Texas Facilities Commission for phase two of the North Austin and Capitol Complex projects. The bonds are anticipated to be repaid with lease payments and are subject to biennial appropriation by the Legislature of funds available for payment. Lease payments were appropriated to the Texas Facilities Commission for the 2020-2021 biennium (GAA Rider 16, I-46).

The 86th Legislature appropriated $208.8 million to the Health and Human Services Commission for deferred maintenance at state hospitals and state supported living centers, to be financed through the Texas Public Finance Authority (GAA Rider 2, II-48). Also, the Department of Transportation was authorized to issue revenue bonds, not to exceed $326 million, to construct and equip the Austin Campus Consolidation project on land owned by the agency in southeast Austin. The bonds are to be issued by the Texas Public Finance Authority (GAA Rider 42, VII-29).

85th Legislature – Regular Session and 1st Called Special Session

No new state debt authorizations were approved during the 85th Legislative Session.

Table 2.5

TEXAS COLLEGE AND UNIVERSITY REVENUE DEBT OUTSTANDING

(amounts in thousands)

	FY 2017			FY 2018			FY 2019		
College and University Revenue Debt	**Non-TRB**	**TRB**	**Total**	**Non-TRB**	**TRB**	**Total**	**Non-TRB**	**TRB**	**Total**
Midwestern State University	$89,450	$59,150	$148,600	$86,775	$55,695	$142,470	$84,394	$52,155	$136,549
Stephen F. Austin State University	93,090	64,544	157,634	85,508	59,945	145,453	191,310	55,162	246,472
Texas Southern University	108,253	102,860	211,113	101,364	95,320	196,684	95,805	87,415	183,220
Texas State Technical College System	47,454	40,565	88,019	51,175	38,500	89,675	51,867	36,380	88,247
Texas State University System	810,196	300,397	1,110,593	817,995	275,560	1,093,555	848,183	253,647	1,101,830
Texas Tech University System	501,725	355,868	857,593	481,629	324,576	806,205	450,992	294,137	745,129
Texas Woman's University	102,439	54,945	157,384	110,045	50,640	160,685	103,975	45,735	149,710
The Texas A&M University System	2,107,509	1,057,232	3,164,741	2,241,674	985,004	3,226,678	2,439,653	911,405	3,351,058
The University of Texas System	5,794,878	1,401,930	7,196,808	5,948,033	1,267,100	7,215,133	6,096,479	1,128,458	7,224,937
University of Houston System	861,367	422,105	1,283,472	1,015,751	403,516	1,419,267	1,053,042	378,528	1,431,570
University of North Texas System	430,587	325,764	756,351	468,189	302,903	771,092	589,061	278,500	867,561
Total Revenue Debt Outstanding	**$10,946,949**	**$4,185,360**	**$15,132,309**	**$11,408,137**	**$3,858,759**	**$15,266,896**	**$12,004,760**	**$3,521,523**	**$15,526,283**

Legend: TRB = Tuition Revenue Bonds

Notes: No capital appreciation bonds outstanding as of fiscal years 2017, 2018 or 2019.

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 Chapter 55, Texas Education Code, as amended, of the applicable system or institution of higher education. Historically, however, the state has appropriated funds to the schools in an amount equal to all or a portion of the debt service on revenue bonds issued pursuant to certain specific authorizations to individual institutions in Chapter 55, Texas Education Code ("Tuition Revenue Bonds").

Includes commercial paper notes outstanding, lease purchases and SECO loans. Excludes HEAF and PUF debt.

Source: Texas Bond Review Board - Bond Finance Office.

The 85th Legislature appropriated debt service for the 2018–19 biennium to the Cancer Prevention and Research Institute of Texas (CPRIT) to issue $600 million in GO debt under the $3 billion in authority approved by voters in 2007. In addition, TPFA is authorized to issue on behalf of the Texas Facilities Commission (TFC) the remainder of the $767.7 million of revenue bonds originally authorized during the 2016–17 biennium for the office buildings and utility infrastructure in the capital complex and the office building and parking structure in the North Austin complex.

Debt Authority – 84th Texas Legislature

In the General Appropriations Act, the 84th Legislature authorized the issuance of $767.7 million of revenue bonds and appropriated those bond proceeds in the General Appropriations Act to TFC for the North Austin and Capitol Complex projects. The bonds are anticipated to be repaid with lease payments from state agencies and are subject to biennial appropriation by the legislature of funds available for payment. Lease payments were appropriated to TFC for the 2016–17 biennium.

The legislature also authorized $3.10 billion in tuition revenue bond (TRB) debt with the passing of HB 100. Historically, the legislature has appropriated funds in an amount equal to all or a portion of the debt service on TRBs issued. As of August 31, 2019, remaining authorized but unissued TRB debt totaled approximately $7.2 million for the University of Houston System and $1.8 million for the Texas State University System.

Additionally, the 84th Legislature passed HB 122 which limits the issuance of debt secured by the Texas Mobility Fund solely to refundings or issuances that replace variable-rate debt.

Long-Term Contracts and Lease Purchases

Long-term contracts and lease or installment-purchase agreements can serve as cost-effective financing alternatives to the issuance of bonds. Like bonds, these agreements are a method of financing capital purchases over time, and payments on these contracts and agreements are generally subject to biennial legislative appropriations.

The equipment lease purchases approved by the Bond Review Board are typically financed through the Texas Public Finance Authority's Master Lease Purchase Program and are included in the state's total debt outstanding.

Table 2.6

DEBT-SERVICE REQUIREMENTS OF TEXAS COLLEGE AND UNIVERSITY REVENUE DEBT BY FISCAL YEAR

(amounts in thousands)

College and University Revenue Debt	2020	2021	2022	2023	2024	2025 & Beyond
The University of Texas System - Non-TRB	$442,955	$437,967	$438,869	$424,037	$420,671	$8,033,574
The University of Texas System - TRB	201,318	201,318	201,320	198,362	180,818	382,588
The University of Texas System - TOTAL*	$644,274	$639,285	$640,189	$622,398	$601,489	$8,416,162
The Texas A&M University System - Non-TRB	$200,931	$196,168	$190,298	$184,280	$184,115	$2,621,998
The Texas A&M University System - TRB	105,263	105,148	105,274	95,739	95,737	603,850
The Texas A&M University System - TOTAL	$306,194	$301,317	$295,572	$280,019	$279,853	$3,225,848
Texas Tech University System - Non-TRB	$50,956	$48,176	$40,977	$40,895	$39,056	$405,836
Texas Tech University System - TRB	41,191	41,148	37,408	32,340	32,358	167,374
Texas Tech University System - TOTAL	$92,146	$89,324	$78,385	$73,236	$71,414	$573,209
Texas State University System - Non-TRB	$83,299	$81,534	$80,603	$76,828	$76,027	$855,182
Texas State University System - TRB	35,659	34,788	35,390	27,513	26,388	177,585
Texas State University System - TOTAL	$118,959	$116,322	$115,993	$104,341	$102,415	$1,032,767
University of Houston System - Non-TRB	$99,161	$98,607	$89,999	$87,507	$86,903	$1,101,715
University of Houston System - TRB	39,987	40,024	39,804	33,188	33,181	339,241
University of Houston System - TOTAL*	$139,149	$138,631	$129,804	$120,695	$120,084	$1,440,956
The University of North Texas System - Non-TRB	$52,072	$53,080	$53,031	$50,199	$47,829	$677,063
The University of North Texas System - TRB	33,183	33,171	33,169	29,273	29,289	199,901
The University of North Texas System - TOTAL	$85,254	$86,252	$86,200	$79,472	$77,118	$876,964
Texas Woman's University - Non-TRB	$9,295	$9,299	$9,296	$9,296	$9,297	$98,221
Texas Woman's University - TRB	6,249	6,240	6,240	4,844	4,841	29,224
Texas Woman's University - TOTAL	$15,544	$15,539	$15,536	$14,140	$14,138	$127,445
Texas State Technical College System - Non-TRB	$6,820	$6,503	$6,498	$6,272	$5,715	$36,095
Texas State Technical College System - TRB	3,759	3,757	3,753	2,985	2,715	32,539
Texas State Technical College System - TOTAL	$10,579	$10,260	$10,250	$9,257	$8,430	$68,634
Stephen F. Austin State University - Non-TRB	$19,214	$19,684	$18,392	$17,252	$17,278	$198,975
Stephen F. Austin State University - TRB	6,440	5,388	5,384	5,383	5,383	48,538
Stephen F. Austin State University - TOTAL	$25,655	$25,072	$23,776	$22,635	$22,661	$247,513
Midwestern State University - Non-TRB	$6,722	$6,617	$6,496	$6,528	$6,559	$93,264
Midwestern State University - TRB	5,196	5,107	4,501	4,502	4,501	48,015
Midwestern State University - TOTAL	$11,918	$11,724	$10,997	$11,030	$11,061	$141,279
Texas Southern University - Non-TRB	$7,964	$7,963	$7,964	$7,968	$7,964	$74,434
Texas Southern University - TRB	12,392	12,395	12,394	8,811	6,690	64,220
Texas Southern University - TOTAL	$20,356	$20,358	$20,359	$16,779	$14,654	$138,654
Total College and University Revenue Debt	**$1,470,027**	**$1,454,084**	**$1,427,061**	**$1,354,002**	**$1,323,316**	**$16,289,434**

*Excludes Build America Bond subsidy payments.

Legend: TRB = Tuition Revenue Bonds

Notes: 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 Chapter 55, Texas Education Code, as amended, of the applicable system or institution of higher education. Historically, however, the state has appropriated funds to the schools in an amount equal to all or a portion of the debt service on revenue bonds issued pursuant to certain specific authorizations to individual institutions in Chapter 55, Texas Education Code ("Tuition Revenue Bonds"). The table includes commercial paper, lease purchases and SECO loans but excludes HEAF and PUF debt.

Source: Texas Bond Review Board - Bond Finance Office

Table 2.7
TEXAS DEBT AUTHORIZED BUT UNISSUED
(amounts in thousands)

	8/31/2015	8/31/2016	8/31/2017	8/31/2018	8/31/2019
General Obligation Debt					
Self-Supporting					
Veterans' Land and Housing Bonds	$1,317,891	$1,208,929	$1,116,689	$1,035,813	$1,046,456
Water Development Bonds	6,279,132	5,998,014	5,973,405	5,937,044	5,945,878
Farm and Ranch Loan Bonds [1]	300,000	300,000	300,000	300,000	300,000
College Student Loan Bonds	1,308,525	1,214,895	1,115,275	1,020,015	947,545
Texas Agricultural Finance Authority Bonds	223,250	224,750	230,000	230,000	230,000
Texas Public Finance Authority - TMVRLF	200,405	200,405	200,405	200,405	200,405
Texas Mobility Fund Bonds	*	*	*	*	*
Texas Rail Relocation and Improvement Fund	*	*	*	*	*
Total Self-Supporting	**$9,629,203**	**$9,146,993**	**$8,935,774**	**$8,723,277**	**$8,670,284**
Not Self-Supporting [2]					
Agricultural Water Conservation Bonds	$164,840	$164,840	$164,840	$164,840	$164,840
Higher Education Constitutional Bonds	***	***	***	***	***
Texas Public Finance Authority [3]	2,370,637	2,037,487	1,779,437	1,535,487	1,315,937
Transportation Commission GO Transportation Bonds	1,442,008	697,008	0	0	0
Water Development Bonds - EDAP [4]	101,748	53,492	53,492	53,492	0
Water Development Bonds - State Participation	0	0	0	0	0
Water Development Bonds - WIF	0	0	0	0	0
Total Not Self-Supporting	**$4,079,233**	**$2,952,827**	**$1,997,769**	**$1,753,819**	**$1,480,777**
Total General Obligation Debt	**$13,708,436**	**$12,099,820**	**$10,933,543**	**$10,477,096**	**$10,151,061**
Non-General Obligation Debt					
Self-Supporting					
Permanent University Fund Bonds [5]					
The Texas A&M University System	$524,165	$548,407	$680,110	$589,676	$703,618
The University of Texas System	785,535	419,009	530,885	722,647	817,635
College and University Revenue Bonds	**	**	**	**	**
Texas Turnpike Authority Bonds	**	**	**	**	**
Texas Water Resources Finance Authority Bonds	**	**	**	**	**
Texas Water Development Bonds (Water Resources Fund	**	**	**	**	**
Texas Workers' Compensation Fund Bonds	**	**	**	**	**
Texas Workforce Commission Unemp Comp Bonds	***	***	***	***	***
Nursing Home Liability Insurance	75,000	75,000	75,000	75,000	75,000
FAIR Plan	75,000	75,000	75,000	75,000	75,000
Veterans' Financial Assistance Bonds	771,440	771,440	771,440	771,440	771,440
State Highway Fund Revenue Bonds	700,149	700,149	0	0	0
Water Development Board - State Revolving Fund	**	**	**	**	**
Total Self-Supporting	**$2,931,289**	**$2,589,005**	**$2,132,435**	**$2,233,763**	**$2,442,693**
Not Self-Supporting [2]					
Texas Public Finance Authority Bonds	$888,551	$888,551	$871,551	$826,551	$631,551
TPFA Master Lease Purchase Program	106,981	105,520	64,100	116,350	125,610
Texas Military Facilities Commission Bonds	**	**	**	**	**
Total Not Self-Supporting	**$995,532**	**$994,071**	**$935,651**	**$942,901**	**$757,161**
Conduit					
Texas Windstorm Insurance Association	***	***	***	***	***
Texas Small Business I.D.C. Bonds	**	**	**	**	**
Texas Department of Housing & Community Affairs	**	**	**	**	**
Texas State Affordable Housing Corporation	**	**	**	**	**
Total, Conduit	**$0**	**$0**	**$0**	**$0**	**$0**
Total Non-General Obligation Debt	**$3,926,821**	**$3,583,076**	**$3,068,086**	**$3,176,664**	**$3,199,854**
Total Debt	**$17,635,257**	**$15,682,896**	**$14,001,629**	**$13,653,760**	**$13,350,915**

* No bond issuance limit, but debt service on all bonds issued and proposed to be issued pursuant to the Article III, Section 49-k and 49-o of the Texas Constitution can not be greater than the Comptroller's certified projection that the amount of money dedicated to the fund is equal to at least 110 percent of the debt-service requirements for as long as the obligations are outstanding.

** No issuance limit has been set by the Texas Constitution. Bonds may be issued by the agency without further authorization by the legislature. However, university bonds rated lower than AA- or its equivalent may not be issued without the approval of the Bond Review Board. All bonds must be approved by the Attorney General.

*** No bond issuance limit, but HECB debt service may not exceed $196.88 million per year; TWIA has an annual limit of $500 Million in "Class 1," $250 Million of "Class 2," and $250 million of "Class 3" public securities.; and TWC may not exceed $2 billion per issuance.

1 Effective in November 1995, state voters authorized the use of $200 million of the existing $500 million Farm and Ranch Program authority for the purposes of the Texas Agricultural Finance Authority (TAFA). Of the $200 million, the Bond Review Board has approved an initial amount of $25 million for the Texas Agricultural Fund Program of TAFA.

2 Bonds that are not self-supporting depend solely on the state's general revenue for debt service.

3 Includes $3 billion for cancer prevention that was authorized by voters in November 2007 of which $1.28 billion remains unissued.

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

5 Issuance of PUF bonds by A&M is limited to 10 percent, and issuance by UT is limited to 20 percent of the cost value of investments and other assets of the PUF, except real estate. The PUF value used is as of August 31, 2019.

Source: Texas Bond Review Board - Bond Finance Office

Texas Swaps Outstanding

At the end of fiscal year 2019, three state issuers had swap agreements in place. VLB, UTS, and TDHCA entered the swap market in 1994, 1999, and 2004, respectively.

As of August 31, 2019, the aggregate notional amount of swaps outstanding at the state level was $5.36 billion. Interest rate swaps are primarily used as financial-management tools to reduce interest expense and hedge against interest rate, tax, basis, and other risks. (See *Appendix C* for a background discussion of swaps and related data.)

State issuers are authorized to enter into swap agreements under the Texas Government Code, Section 1371, which grants special authority to enter into credit agreements. However, TDHCA and VLB have broad authority to enter into swaps under Section 2306.351 of the Texas Government Code and Sections 161.074, 162.052, and 164.010 of the Texas Natural Resources Code, respectively.

At the end of fiscal year 2019, VLB was a party to 54 pay-fixed, receive-variable rate (synthetic fixed-rate) swaps associated with its variable-rate demand bond issues. The total notional amount for these swaps was $2.62 billion at fiscal year-end 2019. UTS had seven Revenue Financing System (RFS) swap agreements and two Permanent University Fund (PUF) swap agreements totaling $1.63 billion in notional amount. TDHCA had four such swaps on single-family bonds totaling $71.3 million in notional amount.

Additionally, at the end of fiscal year 2019 VLB had one outstanding basis rate (pay-variable, receive-variable) swaps with $26.0 million in notional amount. UTS had six Revenue Financing System and two PUF basis rate agreements totaling $1.02 billion in notional amount.

The Net Fair Values for the swap agreements in place at the end of fiscal year 2019 for the three state issuers were as follows: VLB, negative $276.0 million; UTS, negative $321.6 million; and TDHCA, negative $6.3 million. A negative fair value on a swap agreement indicates that the state issuer would owe its counterparty the amount indicated if the swaps were terminated. (See *Tables C1 and C2 in Appendix C* for details regarding Texas' interest rate swaps outstanding and fair value data at August 31, 2019.) VLB and TDHCA have the unilateral option to terminate their swap agreements. UTS has the unilateral option to terminate all of its swap agreements except for the Municipal Market Data (MMD) basis swap associated with its RFS 2016A bonds. Under this swap agreement, Deutsche Bank has the right to optionally terminate the swap on or after February 15, 2030, provided the mark-to-market value of the swap is positive to UTS and Deutsche Bank agrees to pay this amount to UTS.

See *Table C3 and Table C4 in Appendix C* for debt-service requirements of variable-rate and fixed-rate debt outstanding and net interest rate swap payments. At fiscal year-end 2019, estimated variable rate debt-service requirements and net swap payments for VLB's pay-fixed, receive-variable swaps (synthetic fixed-rate swaps) totaled $3.19 billion, and UTS totaled $1.98 billion. TDHCA had only synthetic fixed-rate swaps outstanding, the estimated variable rate debt-service requirements and net swap payments for which totaled $109.2 million. UTS had eight basis swaps outstanding, the estimated variable rate and fixed rate debt-service requirements and net swap payments for which totaled $1.29 billion. VLB had one basis swap outstanding, the estimated variable rate debt-service requirements and net swap payments for which totaled $29.2 million.

Chapter 3
State Bond Issuance Costs

Excluding issuances of conduit and private placement debt, during fiscal year 2019, the weighted average of issuance costs for state bond issuers was $5.54 per $1,000 compared to $4.69 per $1,000 for fiscal year 2018. The issuances ranged in size from $7.4 million to $1.67 billion. Appendix A of this report details the issuance costs associated with each of these issues as well as the conduit and private placement issues.

Issuance Costs for Texas Bond Issuers

In fiscal year 2019, the average issue size for Texas' state issuers decreased to $198.3 million from $266.5 million in fiscal year 2018 (*Table 3.1*). Excluding conduit and private placement issues, 17 (58.6 percent) of the 29 transactions completed in fiscal year 2019 were $100.0 million or greater in size compared to 14 (70 percent) of the 20 transactions completed in fiscal year 2018.

In fiscal year 2019, the weighted average underwriting spread accounted for 66.8 percent of all issuance costs. As a result of an increase in other underwriter's spread costs in fiscal year 2019, the weighted average underwriting spread per $1,000 of bonds issued increased to $3.70 from $3.37 in fiscal year 2018 (*Figure 3.1*). *(See Comparison of Issuance Costs by Transaction Size below).*

During fiscal year 2019, fees per bond increased overall compared to fiscal year 2018. Other Issuance Costs (bond counsel, financial advisor, rating agency, printing, and other costs) per $1,000 increased to an average of $1.84 ($364,712) compared to $1.32 ($351,013) in fiscal year 2018.

Table 3.1
WEIGHTED AVERAGE ISSUANCE COSTS FOR TEXAS BOND ISSUES
(Excludes Private Placements, Conduits and Remarketings)

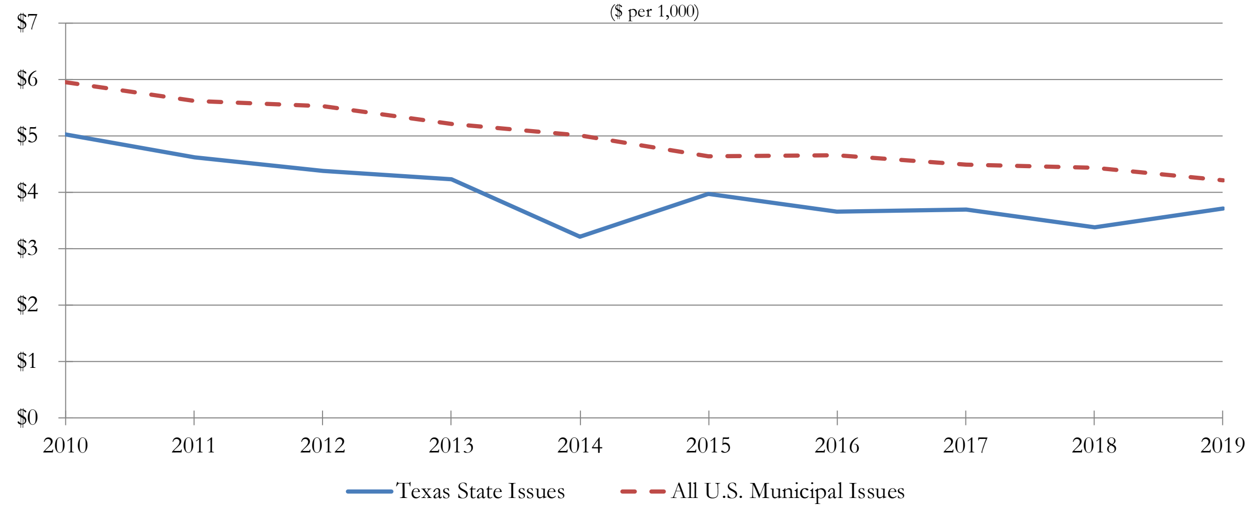
	Fiscal 2018			Fiscal 2019		
	Count	**Average Cost Per Bond Issue**	**Average Cost Per $1,000 of Bonds Issued**	**Count**	**Average Cost Per Bond Issue**	**Average Cost Per $1,000 of Bonds Issued**
Average Issue Size (In Millions)	20	$266.5		29	$198.3	
Costs of Issuance:						
Underwriter's Spread:						
Takedown	19	$878,734	$3.29	28	$677,343	$3.45
Spread Expenses	18	67,210	0.25	23	73,830	0.31
Underwriter's Counsel	16	31,898	0.11	24	37,581	0.17
Other Underwriter's Spread Costs*	3	17,018	0.41	7	89,470	0.52
Underwriter's Spread Subtotal	20	$897,839	$3.37	29	$734,137	$3.70
Other Issuance Costs:						
Bond Counsel	20	$107,924	$0.41	29	$100,601	$0.51
Financial Advisor	16	118,242	0.46	27	116,694	0.62
Printing	19	4,145	0.02	27	3,751	0.02
Other	20	40,180	0.15	29	53,571	0.27
Other Issuance Costs Subtotal	20	$246,635	$0.93	29	$264,259	$1.33
Rating Agencies:						
Moody's	14	$50,482	$0.23	26	$46,106	$0.31
Standard & Poor's	18	56,653	0.20	21	50,877	0.22
Fitch	8	45,130	0.14	16	40,372	0.19
Rating Agency Costs Subtotal	20	$104,378	$0.39	29	$100,453	$0.51
Total	20	$1,248,852	$4.69	29	$1,098,849	$5.54

Note: Figures exclude bond insurance premiums.

* Management Fee, Structuring Fee or Underwriter's Risk.

Source: Texas Bond Review Board

Figure 3.1
GROSS UNDERWRITING SPREADS: 2010 - 2019
TEXAS STATE BOND ISSUES vs. ALL U.S. MUNICIPAL BOND ISSUES
($ per 1,000)



Note: 2019 Municipal figures are through August 19, 2019. Amounts represent dollars per $1,000 face value of bond issues. Gross spreads include managers' fees, underwriting fees, average takedowns, and expenses. Private placements, conduits, short-term notes maturing in 12 months or less, and remarketings of variable-rate securities are excluded.
Sources: The Bond Buyer - 2019 in Statistics Midyear Review (08/19); Thomson Financial Securities; and Texas Bond Review Board - Bond Finance

Underwriting Costs for Texas Bond Issuers Compared to National Costs

Excluding conduit and private placement issuances, during fiscal year 2019, Texas' state bond issuers paid lower average underwriting fees compared to the national averages (*Figure 3.1*). This difference is primarily due to the generally higher credit quality of Texas issuers and the market's receptivity to Texas issues. Statistics published by Thomson Financial Securities Data show that underwriting spreads nationally averaged $4.21 per $1,000 compared to Texas' average of $3.70 per $1,000.

During fiscal year 2019, Texas issuers saw lower weighted average underwriting costs with negotiated and competitive transactions when compared to the national averages as reported by Thomson Financial Securities (*Figure 3.2*). Texas' average of $3.74 per $1,000 for negotiated sales and $3.11 per $1,000 for competitively bid sales were 13.8 percent lower and 8.8 percent lower than the national averages, respectively.

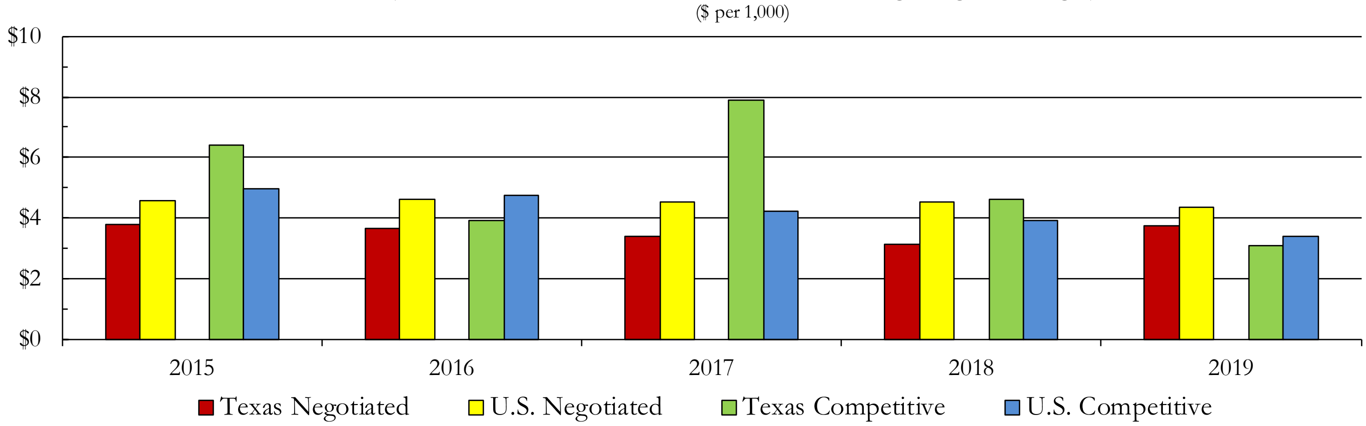
Comparison of Issuance Costs by Transaction Size

Larger bond issues usually have a lower cost per $1,000 because certain fixed costs of issuance, including some legal and financial advisory services and document drafting fees, do not vary proportionately with the size of the bond issue.

Texas' issuance costs increased overall in fiscal year 2019 and were generally consistent with those experienced during fiscal years 2015–18 (*Figure 3.3*). Appendix A details the issuance costs for each transaction in fiscal year 2019.

Figure 3.2

GROSS UNDERWRITING SPREADS: 2015 - 2019
NEGOTIATED vs. COMPETITIVE MUNICIPAL ISSUES
(Excludes Private Placements, Conduits and Remarketings; weighted averages)
($ per 1,000)



Note: 2019 US figures are through August 19, 2019. Amounts represent dollars per $1,000 face value of bond issues. Gross spreads include manager's fees, underwriting fees, average takedowns, and expenses. Private placements, short-term notes maturing in 12 months or less, and remarketings of variable-rate securities are excluded.
Sources: The Bond buyer - 2019 in Statistics Midyear Review (08/19); Thomson Financial Securities, and Texas Bond Review Board - Bond Finance Office.

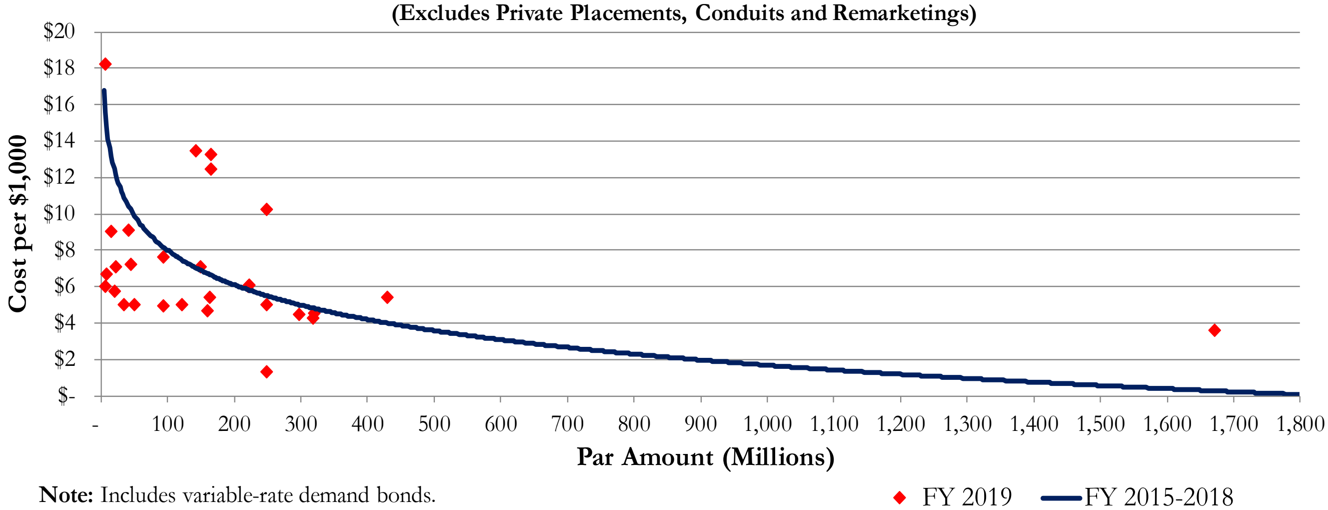
Trends in State Bond Issuance Costs in 2019

The characteristics of 29 non-conduit bond transactions were reviewed to determine trends in issuance costs during fiscal year 2019. Of those, 24 were negotiated sales and five were competitive sales. Of the 24 negotiated sales, eight were less than $100 million in size, 12 were from $100-$300 million, three were from $300-$500 million, and one was greater than $500.0 million. The five competitive transactions were for $8.8 million, $41.3 million, $46.0 million, $94.9 million, and $160.0 million, respectively. There were no non-conduit private placements issued during 2019.

As in the past, the cost per $1,000 in fiscal year 2019 generally decreased as transaction size increased (*Figure 3.3*).

Figure 3.3

COSTS OF ISSUANCE: FY 2015-2019
(Excludes Private Placements, Conduits and Remarketings)

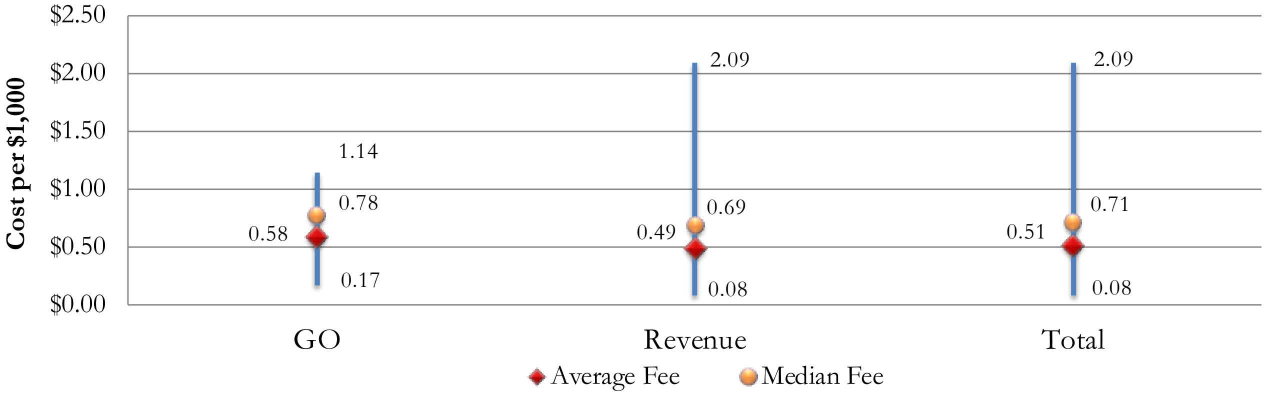


Note: Includes variable-rate demand bonds.

Figure 3.4

Range of Bond Counsel Fees for Fiscal Year 2019

(Excludes Private Placements, Conduits and Remarketings)



Note: Includes Co-Bond Counsel Fees and variable-rate demand bonds.
Sources: Texas Bond Review Board - Bond Finance Office.

Issuance Costs for State General Obligation and Revenue Bonds in 2019

Four component fees comprise most of the costs of issuing bonds: bond counsel, financial advisor, underwriters' spread, and credit rating agencies. To analyze these fees on a cost per $1,000 basis for state general obligation (GO) and revenue issues, data from fiscal year 2019 is shown graphically in *Figures 3.4, 3.5, 3.6,* and *3.7*. Each cost of issuance component has been compared by bond type (general obligation vs. revenue) and by total bonds issued.

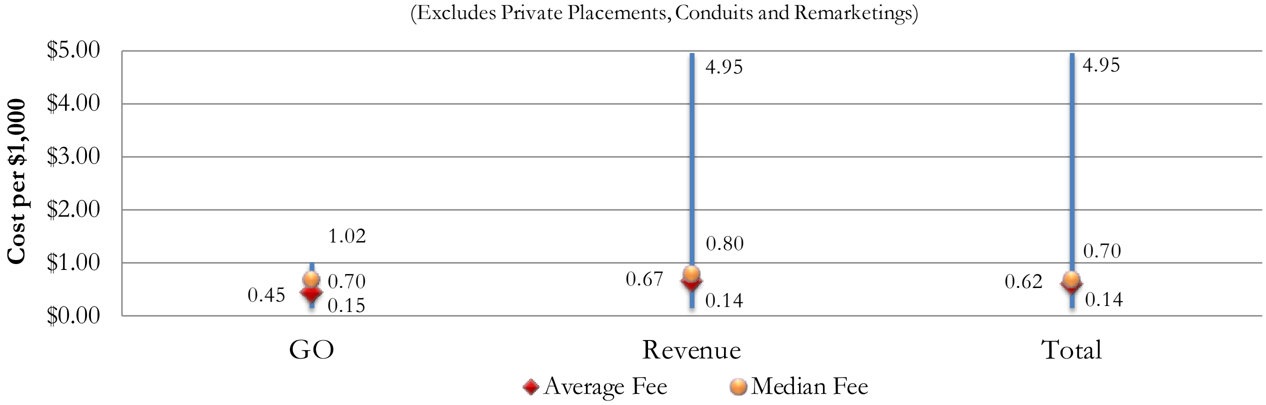
Cost of issuance data was obtained from twelve GO transactions and seventeen revenue transactions representing six state agencies and five institutions of higher education.

Figure 3.4 shows the bond counsel cost per $1,000 for bonds issued during 2019. The total weighted average cost for bond counsel fees remained at $0.51 per $1,000. GO bonds had higher costs per $1,000 than revenue bonds with a weighted average cost of $0.58 per $1,000 compared to $0.49 per $1,000 for revenue bonds. Additionally, the fees for revenue bonds had a larger variance than the fees for GO bonds. The fees for GO bonds ranged from $0.17 to $1.14 per $1,000 while

Figure 3.5

Range of Financial Advisor Fees for Fiscal Year 2019

(Excludes Private Placements, Conduits and Remarketings)

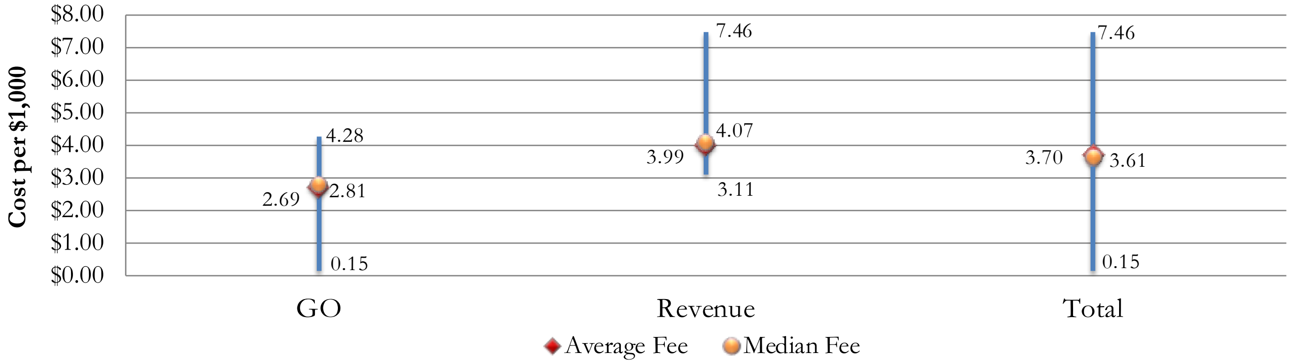


Note: Includes Co-Financial Advisor fees and variable-rate demand bonds.
Sources: Texas Bond Review Board - Bond Finance Office.

Figure 3.6

Range of Total Underwriter's Spread for Fiscal Year 2019

(Excludes Private Placements, Conduits and Remarketings)



Note: Includes variable-rate demand bonds. Total Underwriter's Spread includes Takedown, Spread Expenses, Management & Structuring Fees, Underwriting Risk and Underwriter's Counsel.
Sources: Texas Bond Review Board - Bond Finance Office.

the fees for revenue bonds ranged from $0.08 to $2.09 per $1,000.

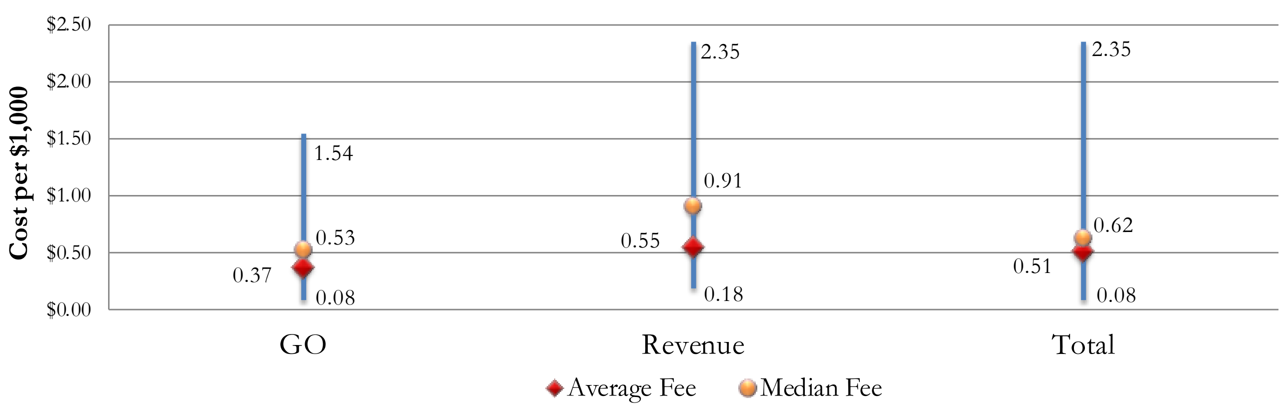
Figure 3.5 shows the cost per $1,000 for the twenty-seven transactions with a financial advisor fee. The total weighted average cost for financial advisor fees was $0.62 per $1,000, an increase of $0.16 per $1,000 compared to $0.46 per $1,000 for fiscal year 2018. GO bonds had a weighted average cost of $0.45 per $1,000 compared to $0.67 per $1,000 for revenue bonds. The difference in the range of fees for financial advisor was greater for revenue bonds than GO bonds. GO transactions had a minimum fee of $0.15 and a maximum fee of $1.02 per $1,000, and revenue bonds had a minimum fee of $0.14 and a maximum fee of $4.95 per $1,000.

Figure 3.6 shows the total underwriters' spread for all transactions and includes the following: takedown, management and structuring fees, underwriting risk, spread expenses, and underwriter's counsel. The total weighted average cost was $3.70 per $1,000, an increase of $0.33 per $1,000 compared to $3.37 per $1,000 for fiscal year 2018. GO bonds had an average weighted cost of $2.69, and revenue

Figure 3.7

Range of Total Ratings Fees for Fiscal Year 2019

(Excludes Private Placements, Conduits and Remarketings)



Note: Includes variable-rate demand bonds. Total ratings fee may include ratings fees from Moody's, S&P and Fitch.
Sources: Texas Bond Review Board - Bond Finance Office.

bonds had an average weighted cost of $3.99 per $1,000. The fees for GO bonds ranged from a minimum fee of $0.15 to a maximum fee of $4.28 per $1,000. Revenue bonds ranged from $3.11 to $7.46 per $1,000.

Figure 3.7 shows the cost per $1,000 for rating agency fees. The total weighted average cost was $0.51 per $1,000, an increase of $0.12 per $1,000 compared to $0.39 per $1,000 for fiscal year 2018. The average weighted cost for GO bonds was slightly lower at $0.37 per $1,000 compared to $0.40 per $1,000 for fiscal year 2018, while the average weighted cost for revenue bonds was higher at $0.55 per $1,000 compared to $0.39 per $1,000 for fiscal year 2018.

Chapter 4
Texas Private Activity Bond Allocation Program and Other Bonding Authority

Texas again experienced an increase in volume cap for the Program Year 2019 Private Activity Bond (PAB) Allocation Program. The 2019 volume cap was set at $3.01 billion, an increase of $41.7 million (1.4 percent) over the calendar year 2018 cap. The total size of the PAB program, including the 2019 volume cap and carryforward was $6.87 billion, a 9.4 percent increase from the 2018 total. As of November 15, 2019, $2.80 billion had been allocated and application requests totaled $6.20 billion, an increase of 16.6 percent of the total application requests from Program Year 2018.

Volume Cap

Texas is second only to California in population and resulting volume cap. Texas experienced an increase in volume cap for the 2019 PAB Allocation Program. Based on its population, the 2019 volume cap was set at $3.01 billion, an increase of $41.7 million (1.4 percent) over the calendar year 2018 cap of $2.97 billion.

The volume cap increase can be attributed not only to the growth of the state's population, but also to federal legislation that increased the per capita formula. On December 20, 2000, federal legislation was passed that accelerated the increase in private-activity volume cap, the first such increase since the Tax Reform Act of 1986. The cap phase-in began January 1, 2001, when the limit was increased from $50 per capita to $62.50 per capita. The second part of the plan occurred in January 2002, when the cap multiplier increased to $75 per capita or $225 million, whichever is greater. The multiplier was indexed to inflation beginning in 2003 resulting in increases in 2007, 2008, 2009, 2011, 2014, and 2018 to the current level of $105 per capita or $316.7 million, whichever is greater.

Including 2019 volume cap and carryforward, for Program Year 2019, the state had a total of $6.87 billion of volume cap available among the six subceilings of which $2.80 billion (40.7 percent) had been allocated as of November 15, 2019 (*Table 4.1*).

Table 4.1
STATE OF TEXAS
PRIVATE ACTIVITY BOND ALLOCATION PROGRAM
2019 AVAILABLE VOLUME CAP vs. ALLOCATION AMOUNTS
(as of November 15, 2019)

SUBCEILING	AVAILABLE* VOLUME CAP	PERCENT OF TOTAL	ISSUED 2019 ALLOCATION	ISSUED CARRYFORWARD ALLOCATION	ISSUED PERCENT OF TOTAL
Single Family Housing	$ 3,133,533,223	45.6%	$ 10,153,000	$ 1,818,210,609	26.6%
State-Voted Issues	441,095,498	6.4%	-	170,275,723	2.5%
Small Issue IDBs	60,273,875	0.9%	20,000,000	-	0.3%
Multifamily Housing	1,928,035,191	28.1%	142,937,999	519,500,001	9.6%
Student Loan Bonds	366,437,841	5.3%	-	19,967,572	0.3%
All Other Issues	943,954,396	13.7%	71,001,315	25,000,000	1.4%
TOTAL	**$ 6,873,330,024**	**100.0%**	**$ 244,092,314**	**$ 2,552,953,904**	**40.7%**

*Includes carryforward amounts. Carryforward is reserved volume cap from the prior 3 years.
Source: Texas Bond Review Board - Private Activity Bond Program.

Table 4.2

STATE OF TEXAS

PRIVATE ACTIVITY BOND ALLOCATION PROGRAM

2019 REQUESTED VOLUME CAP

(as of November 15, 2019)

SUBCEILINGS	AVAILABLE VOLUME CAP*	REQUESTED ALLOCATION*	REQUESTS AS A % OF AVAILABILITY
Mortgage Revenue Bonds	$ 3,133,533,223	$ 3,650,609,477	116.5%
State-Voted Issue Bonds	441,095,498	-	0.0%
Industrial Development Bonds	60,273,875	20,000,000	33.2%
Multifamily Rental Project Bonds	1,928,035,191	1,617,064,999	83.9%
Student Loan Bonds	366,437,841	30,000,000	8.2%
All Other Bonds Requiring Allocation	943,954,396	880,000,000	93.2%
TOTALS	**$ 6,873,330,024**	**$ 6,197,674,476**	**90.2%**

*Includes carryforward amounts. Carryforward is reserved volume cap from the prior 3 years.

Source: Texas Bond Review Board - Private Activity Bond Program.

Total bonding authority demand increased by $883.0 million (16.6 percent) during the 2019 Program Year compared to the 2018 Program Year. As of November 15, 2019, 90.2 percent had been requested in 2019 compared to 84.6 percent in 2018 (*Table 4.3*).

Additionally, after the August 15, 2018, collapse, the Bond Review Board (BRB) received $2.70 billion in requests; after the August 15, 2019 collapse, the BRB received $2.90 billion in requests. Applications received for Program Year 2019, including carryforward requests, totaled $6.20 billion or 90.2 percent of the total available allocation of $6.87 billion (*Table 4.2*), an increase of 16.6 percent from the $5.31 billion of the available allocation requested in 2018.

Current Allocation Trends

Excluding carryforward, as of November 15, 2019, $244.1 million (3.6 percent) of Program Year 2019 volume cap had been allocated. As of the same date in Program Years 2016, 2017, and 2018 $169.5 million (2.6 percent), $975.4 million (12.8 percent), and $226.0 million (3.6 percent), respectively, of total volume cap (excluding carryforward) had been allocated.

While most of the 2019 applications were for residential rental transactions and the amounts requested are limited by statute and scope, the number of applications decreased for 2019, but the amount of volume cap requested increased (*Table 4.3*). Many issuers have been waiting for the spread between tax-exempt rates and taxable rates to widen before seeking volume cap, or they applied for volume cap with the intention of converting it to carryforward. Larger transactions provide economies of scale that may still take advantage of tax-exempt rates.

As of November 15, 2019, no mortgage revenue bonds (MRBs) had closed utilizing Program Year 2019 volume cap; however, issuers had converted $10.2 million of Program Year 2019 volume cap to mortgage credit certificate (MCC) programs.

Table 4.3
STATE OF TEXAS
PRIVATE ACTIVITY BOND ALLOCATION PROGRAM
2014 TO 2019 ISSUED ALLOCATION
(as of November 15, 2019)

YEAR	AVAILABLE ALLOCATION*	REQUESTED ALLOCATION*	ISSUED VOLUME CAP ALLOCATION	ISSUED CARRYFORWARD ALLOCATION	NUMBER OF APPLICATIONS RECEIVED	ISSUED AS A % OF AVAILABILITY
2014	5,276,952,525	2,776,186,213	240,066,000	811,211,000	47	19.9%
2015	6,461,406,313	4,355,040,098	84,850,000	1,071,125,213	71	17.9%
2016	6,561,415,029	3,403,690,252	169,538,280	681,068,500	104	13.0%
2017	7,634,459,758	6,196,133,141	975,357,669	2,440,916,606	92	44.7%
2018	6,281,389,532	5,314,660,316	226,007,000	1,225,430,732	128	23.1%
2019	6,873,330,024	6,197,674,476	244,092,314	2,552,953,904	104	40.7%

*Includes carryforward amounts. Carryforward is reserved volume cap from the prior 3 years.
Source: Texas Bond Review Board - Private Activity Bond Program.

Using carryforward volume cap, Texas Department of Housing and Community Affairs and Texas State Affordable Housing Corporation used $800.0 million and approximately $700.3 million, respectively, to close MCC programs. Multifamily issuers closed twenty-nine projects as of November 15, 2019, using $519.5 million of carryforward and $142.9 million of volume cap compared to thirty projects closing in 2018.

At the beginning of Program Year 2019, the carryforward amount of $3.86 billion was 128.1 percent of the 2019 Program Year volume cap of $3.01 billion, and many issuers that applied for a reservation were forced to use carryforward volume cap (as required by IRS Code) before using 2019 volume cap.

To date, much more carryforward ($2.55 billion) was allocated than actual 2019 volume cap ($244.1 million) during the Program Year (*Figure 4.1*). Project requests after the August 15th collapse date were not subject to subceiling limits, and because closing dates generally extend into the next program year, issuers were able to convert their reservations into carryforward. This cycle of issuers not using current year volume cap will likely continue for several years as issuers with carryforward must close that volume cap before using current-year volume cap.

As of November 15, 2019, none of the state's 2019 PAB volume cap remained unencumbered. Any amounts returned will be converted to carryforward.

86th Legislature Changes

Senate Bill (SB) 1474 was a comprehensive modernization of the PAB program, along with additional cleanup language to assist in the administration of the program.

SB 1474 made the following changes both to the Program and to the responsibilities of the BRB:

- Subceiling 5 (student loan bonds) was eliminated. All student loan bond applications are now processed under the All Other subceiling.
- The volume cap previously assigned to subceiling 5 was redistributed to subceiling 1 (single-family issues), subceiling 2 (state-voted issues), and subceiling 4 (multifamily issues), these subceilings now receive 32.25 percent, 10.0 percent, and 26.25 percent of the total program volume cap, respectively.
- The project limit for single-family and multifamily issuers were increased to the greater of $50 million or 1.70 percent of the available state ceiling.

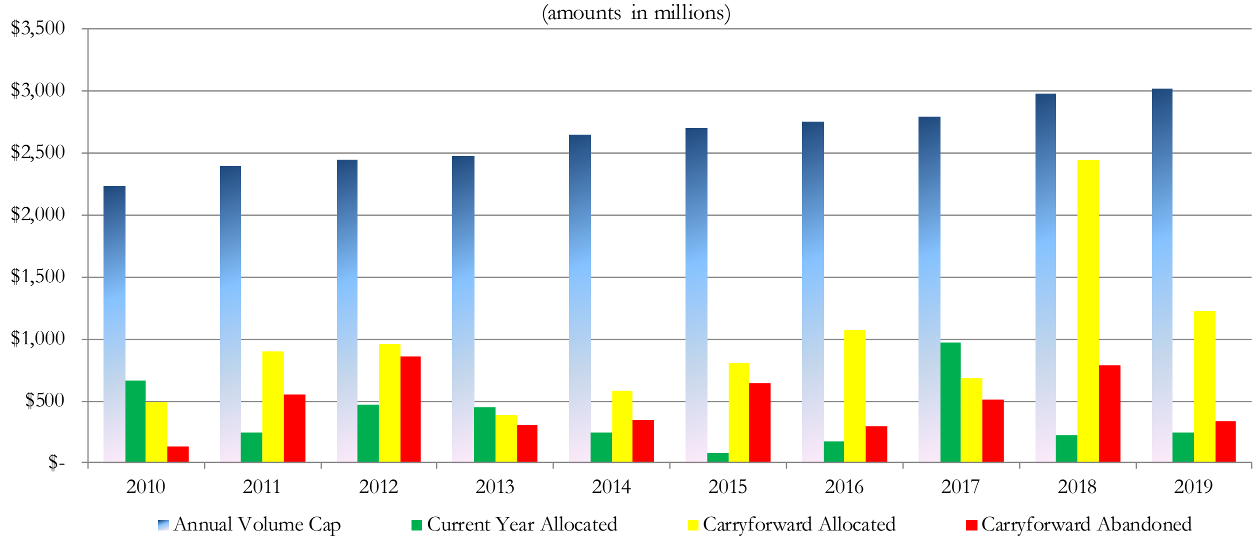
- The project limit for State-Voted issues, other than the Texas Higher Education Coordinating Board (THECB) was increased to the greater of $100 million or 3.40 percent of the available state ceiling.
- The project limit for the THECB under State-Voted issues was increased to the greater of $200 million or 6.8 percent of the available state ceiling.
- The project limit for the All Other issuers subceiling was increased to the greater of $100 million or 3.40 percent of the available state ceiling.
- A rural county was redefined as a county with a population less than 100,000, a 25,000 increase from the previous rural county definition.
- The requirement that no more than 50 percent of the set aside amounts for multifamily housing reside in a qualified census tract was removed.
- The subceiling 4 regional collapse was moved from May 1st to March 1st.
- The utilization percentage calculation will no longer be used for mortgage revenue bonds and mortgage credit certificate applications received after July 14th.
- The closing deadline for Single-Family issues, State-Voted issues, and student loan bonds was increased to 210 days.
- The closing deadline for multifamily issues was increased to 180 days.
- The closing deadline for Small Issue Industrial Development bonds and All Other issues was increased to 150 days.
- All debt issuers created on behalf of the state are now permitted to apply for unencumbered carryforward.
- Section 1372.074 Reassignment of Carryforward Designation was created. This will allow traditional carryforward to be transferred to a different project by the issuer once it had been reserved for one year. Additionally, it will allow any remaining traditional carryforward after the reservation closes to be used for different projects by the issuer.

Prior Legislative Changes

The 82nd Legislative Session (2011) passed House Bill (HB) 2911 simplifing the reservation process for Higher Education Authorities (HEAs) in subceiling 5. Prior to the change, HEAs were required to provide evidence of student loan need-based demand. HEAs that were able to show the greatest demand received weighted reservations and thus the largest allocations. HB 2911 redefined the assignment of student loan bond allocation to equal the total amount of the allocation for the student loan subceiling divided by the number of qualified HEAs thus removing the need-based provisions.

The 81st Legislative Session (2009) passed Senate Bill (SB) 2064 to provide issuers using PAB authority with increased flexibility during difficult market conditions such as those experienced in fiscal year 2009, and to respond to the announcement of new federal bond programs and new federal guidelines for the existing Program.

Figure 4.1
STATE OF TEXAS
PRIVATE ACTIVITY BOND ALLOCATION PROGRAM
Current Year vs. Carryforward Allocated
as of November 15, 2019
(amounts in millions)



*2010 Carryforward numbers also include HERA cap
Source: Texas Bond Review Board - Private Activity Bond Program.

SB 2064 made the following changes both to the Program and to the responsibilities of the BRB:

- If designated by the applicable state official, the BRB is now authorized to administer other bond authority programs created by federal legislation.
- The BRB now has specific authority to administer and create rules for any additional state ceiling that may be created by federal legislation.
- Certain facilities, including sewage facilities, solid waste disposal, and qualified hazardous waste facilities are now permitted to include multiple projects on one application but are still required to pay an application fee for each facility.
- Issuers subject to a utilization percentage will not be penalized if in a previous Program Year less than 50 percent of volume cap dedicated to single-family issuers was not allocated for such purposes;
- The last day to apply for a reservation and to receive a reservation was changed from December 1st to November 15th.
- Any unencumbered volume cap at the end of the program year may be granted to any state agency that requests it.

The 80th Legislative Session (2007) gave the Texas Economic Development Bank priority over all other issuers within subceiling 6 as well as all issuers with carryforward applications.

Hurricane Ike Bond Authority
In October 2008, the Heartland Disaster Tax Relief Act (HDTRA) of 2008 created $1.86 billion in tax-exempt bonding authority for thirty-four counties affected by Hurricane Ike. The authority to issue bonds for areas affected by Hurricane Ike expired at the end of 2012.

Hurricane Ike bonds were used for: 1) the acquisition, construction, renovation, and reconstruction of nonresidential real property; 2) the acquisition, construction, renovation, and reconstruction of qualified residential rental property; 3) financing the repair or reconstruction of public utility property; 4) rehabilitation projects at certain existing facilities; and 5) the issuance of qualified mortgage bonds.

Borrowers using Hurricane Ike bond proceeds must have suffered an actual business loss or have received a designation that the business being replaced suffered a loss attributable to Hurricane Ike.

HDTRA required the Governor of Texas to designate projects "on the basis of providing assistance to areas in the order in which assistance is most needed."

On April 10, 2009, the Governor issued Proclamation 41-3177 designating projects in Brazoria, Chambers, Galveston, Jefferson, and Orange counties as having priority for utilization of Hurricane Ike bonds. On the same date, Proclamation 41-3178 allocated up to $300.0 million in authority to Jefferson County Industrial Development Corporation for use by Jefferson Refinery LLC.

The 81st Texas Legislature passed legislation authorizing the BRB to administer the qualified Hurricane Ike disaster area bond program under the direction of the Governor. On December 7, 2009, Governor Perry issued Proclamation 41-3232 providing for administration of the qualified Hurricane Ike disaster area bond program and naming priorities for the designation of such bonds. In February 2012, the Governor issued Proclamation 41-3293, which removed the group priorities and allowed all issuers to apply for any remaining bonding authority. As of the expiration of the program (January 1, 2013), approximately $1.86 billion of the total authority was allocated (99.6 percent).

Other Bonding Authority

In February 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) created two new types of bonding authority: Build America Bonds (*see Chapter 2*) and Qualified School Construction Bonds (QSCB). In addition, ARRA expanded three existing authorities: Qualified Zone Academy Bonds (QZAB), Qualified Energy Conservation Bonds (QECB), and Clean Renewable Energy Bonds (CREBs). All of these programs have expired except for the QECB Program, which has no expiration date.

Texas was allocated $252.4 million in QECB authority to be used for qualified energy conservation purposes. Large cities and counties received an allocation based on population size. Other issuers seeking the remaining authority may request a reservation directly from the state.

As a result of Section 13404 of the Tax Cuts and Jobs Act of 2017, all new CREBs, including QECBs were eliminated. As of the elimination of the program effective January 1, 2018, all allocated issuers in Texas had $166.2 million in unused QECB authority. Texas had $8.9 million remaining in state authority.

Appendix A – Summary of State Bonds Issued During Fiscal Year 2019

This appendix details the issuance costs associated with each state bond transaction issued during fiscal year 2019 and is automatically generated based on information reported to the Bond Review Board (BRB) by each state debt issuer. Historically Underutilized Business (HUB) status and transaction costs are reported to the BRB by the issuing agencies and entities. For the purposes of this appendix, to identify the controlling ownership of firms based on race, gender, and ethnicity, the businesses are classified as Asian-Pacific American (AP), Black American (BA), Hispanic American (HA), Native American (NA), Woman-Owned (WO), Disabled-Veteran (DV), Veteran-Owned (VO), or not belonging to one of these categories. Although “HUB” is used in this appendix, it does not imply that the firms listed as such are certified with the Texas Comptroller of Public Accounts.

STATE BONDS ISSUED

Issuance Name	Par Amount	Closing Date
Stephen F. Austin State University Revenue Financing System Bonds Series 2019A	$94,290,000	2/6/2019
Stephen F. Austin State University Revenue Financing System Bonds Tax Series 2019B	$15,925,000	2/6/2019
Texas A&M University System Revenue Financing System Bonds Tax Series 2019A	$223,730,000	1/29/2019
Texas A&M University System Revenue Financing System Bonds Tax Series 2019B	$429,645,000	8/14/2019
Texas Department of Housing and Community Affairs Multifamily Forestwood Apartments Series 2018	$23,000,000	10/30/2018
Texas Department of Housing and Community Affairs Multifamily Lago de Plata Apartments (Series 2019)	$14,000,000	6/13/2019
Texas Department of Housing and Community Affairs Multifamily McMullen Square Apartments Series 2019	$10,000,000	6/20/2019
Texas Department of Housing and Community Affairs Multifamily Northgate Village Series 2019	$19,000,000	6/20/2019
Texas Department of Housing and Community Affairs Multifamily Park Yellowstone Series 2019	$15,380,000	1/31/2019
Texas Department of Housing and Community Affairs Multifamily Related RD Portfolio Series 2018	$20,000,000	12/20/2018
Texas Department of Housing and Community Affairs Single Family Mortgage Revenue Bonds Series 2018A	$143,995,000	9/12/2018
Texas Department of Housing and Community Affairs Single Family Mortgage Revenue Bonds Series 2019A	$165,325,000	8/27/2019
Texas Department of Housing and Community Affairs Single Family Residential Mortgage Revenue Bonds Series 2019A	$166,350,000	3/19/2019
Texas Higher Education Coordinating Board College Student Loan Bonds Series 2019	$159,965,000	2/20/2019
Texas Higher Education Coordinating Board College Student Loan Refunding Bonds Series 2018	$94,915,000	11/29/2018
Texas Higher Education Coordinating Board College Student Loan Refunding Bonds Series 2019	$45,965,000	6/26/2019
Texas Public Finance Authority Lease Revenue and Refunding Bonds (Texas Facilities Commission) Series 2019	$249,135,000	6/18/2019
Texas Public Finance Authority State of Texas General Obligation and Refunding Bonds, Taxable Series 2018	$298,175,000	9/11/2018
Texas Public Finance Authority State of Texas General Obligation Refunding Bonds, Series 2018A	$164,510,000	10/11/2018
Texas State Affordable Housing Corporation Multifamily Mortgage Revenue Note (Ventura at Tradewinds Apartments) Series 2019	$30,000,000	1/7/2019
Texas State Affordable Housing Corporation Multifamily Mortgage Revenue Note (Walnut Creek Apartments) Series 2018	$10,017,000	11/2/2018
Texas State Affordable Housing Corporation Single Family Mortgage Revenue Bonds (Texas Heroes Home Loan Program) Series 2019A	$40,000,000	5/9/2019
Texas Transportation Commission Private Activity Bond Surface Transportation Corporation Senior Lien Revenue Bonds (NTE Mobility Partners Segments 3 LLC Segment 3C Project) Series 2019	$653,865,000	8/8/2019
Texas Transportation Commission State Highway 249 System First Tier Toll Revenue Bonds Series 2019A and Tax Series 2019B	$249,251,954	2/26/2019
Texas Veterans Land Board Veterans Bonds Series 2019	$250,000,000	4/11/2019
Texas Water Development Board State Revolving Fund Revenue Bonds, New Series 2019	$221,005,000	4/24/2019
Texas Water Development Board State Water Implementation Revenue Fund For Texas Revenue Bonds, Series 2018B (Master Trust)	$1,672,210,000	10/11/2018
Texas Water Development Board State Water Implementation Revenue Fund For Texas Revenue Bonds, Series 2018C (Master Trust)	$35,590,000	10/11/2018
Texas Water Development Board Water Financial Assistance Bonds Series 2019A (EDAP)	$41,325,000	2/20/2019
Texas Water Development Board Water Financial Assistance Bonds Series 2019B (EDAP) (Taxable)	$8,821,000	2/20/2019

Issuance Name	Par Amount	Closing Date
Texas Water Development Board Water Financial Assistance Refunding Bonds Series 2019C	$50,135,000	6/20/2019
Texas Water Development Board Water Financial Assistance Refunding Bonds Series 2019D (State Participation Program)	$21,320,000	6/20/2019
Texas Water Development Board Water Financial Assistance Refunding Bonds Series 2019E (WIF)	$121,990,000	6/20/2019
Texas Water Development Board Water Financial Assistance Refunding Bonds Series 2019F (EDAP)	$7,355,000	6/20/2019
Texas Woman's University Revenue Financing System Refunding Bonds Series 2019	$7,885,000	8/6/2019
University of North Texas System Revenue Financing System Refunding and Improvement Bonds Taxable, Series 2018B	$22,685,000	9/11/2018
University of North Texas System Revenue Financing System Refunding and Improvement Bonds, Series 2018A	$149,425,000	9/11/2018
University of Texas System Revenue Financing System Bonds Series 2019B	$318,715,000	7/18/2019
University of Texas System Revenue Financing System Refunding Bonds, Series 2019A	$320,435,000	6/13/2019
Total	**$6,585,334,954**	

Issuer **Stephen F. Austin State University**

Issuance Revenue Financing System Bonds Series 2019A

Purpose Proceeds of the bonds will be used for acquiring, purchasing, constructing, improving, renovating, enlarging or equipping property and facilities, including roads and related infrastructure, for a fine arts expansion initiative, a welcome center and student support center, a basketball practice facility and a student residential facility.

Actual Par $94,290,000
Sale Type Negotiated
Sale Date 1/24/2019
Closing Date 2/6/2019

Series Name	TIC	NIC	Is Variable
RFS Bonds Ser 2019A	3.90%	4.03%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.10
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$67,242	0.71
Financial Advisor	Hilltop Securities, Inc.	NO	$75,539	0.80
Paying Agent/Registrar	US Bank, NA	NO	$3,500	0.04
	Total		**$155,781**	**1.65**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AA-	$70,000	0.74
Rating Fee	Moody's	A1	$72,500	0.77
		Total	**$142,500**	**1.51**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$69,973	0.74
Takedown	$347,775	3.69
Total	**$417,748**	**4.43**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Locke Lord, LLP	NO	$42,775	0.45	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
UBS Financial Services, Inc.	NO	40.00%			50.47%	$175,521
FTN Financial Capital Markets	NO	20.00%			19.96%	$69,417
Stephens, Inc.	NO	20.00%			16.11%	$56,032
Drexel Hamilton, LLC	NO	20.00%			13.46%	$46,804
		Total			**100%**	**$347,774**

Issuer **Stephen F. Austin State University**

Issuance Revenue Financing System Bonds Tax Series 2019B

Purpose Proceeds of the bonds will be used for acquiring, purchasing, constructing, improving, renovating, enlarging or equipping property and facilities, including roads and related infrastructure, for a dining facility at the University.

Actual Par $15,925,000
Sale Type Negotiated
Sale Date 1/24/2019
Closing Date 2/6/2019

Series Name	TIC	NIC	Is Variable
RFS Bonds Tax Ser 2019B	3.90%	3.92%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.60
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$30,361	1.91
Financial Advisor	Hilltop Securities, Inc.	NO	$12,762	0.80
Paying Agent/Registrar	US Bank, NA	NO	$3,500	0.22
	Total		**$56,123**	**3.52**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AA-	$10,000	0.63
Rating Fee	Moody's	A1	$10,000	0.63
		Total	**$20,000**	**1.26**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$11,818	0.74
Takedown	$55,775	3.50
Total	**$67,593**	**4.24**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Locke Lord, LLP	NO	$7,225	0.45	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
UBS Financial Services, Inc.	NO	40.00%			51.98%	$28,993
FTN Financial Capital Markets	NO	20.00%			19.04%	$10,618
Stephens, Inc.	NO	20.00%			14.55%	$8,113
Drexel Hamilton, LLC	NO	20.00%			14.43%	$8,051
		Total			**100%**	**$55,775**

Issuer **Texas A&M University System**

Issuance Revenue Financing System Bonds Tax Series 2019A

Purpose The proceeds of the Bonds will be used for purposes of (i) providing construction funds for projects for Participants within the A&M System, (ii) refunding a portion of the Board's outstanding Commercial Paper Notes ($175,215,000), and (iii) paying the cost of issuing the Bonds.

Actual Par $223,730,000
Sale Type Negotiated
Sale Date 1/8/2019
Closing Date 1/29/2019

Series Name	TIC	NIC	Is Variable
RFS Bonds Tax Ser 2019A	3.89%	3.92%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.04
Bond Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$80,104	0.36
Co-Bond Counsel	Kassahn & Ortiz, PC	**HA**	$26,701	0.12
Disclosure Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$30,000	0.13
Financial Advisor	Hilltop Securities, Inc.	NO	$112,365	0.50
Miscellaneous		NO	$4,371	0.02
Paying Agent/Registrar	Wilmington Trust, NA	NO	$4,000	0.02
Printing	Ipreo	NO	$3,260	0.01
	Total		**$270,301**	**1.21**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$80,000	0.36
Rating Fee	Moody's	Aaa	$115,000	0.51
Rating Fee	S&P	AAA	$90,000	0.40
		Total	**$285,000**	**1.27**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$80,388	0.36
Takedown	$727,311	3.25
Total	**$807,699**	**3.61**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Norton Rose Fulbright US, LLP	NO	$50,000	0.22	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Morgan Stanley	NO	40.00%			41.92%	$304,859
Citigroup Global Capital Markets, Inc.	NO	20.00%			19.02%	$138,318
George K Baum & Co.	NO	13.33%			13.71%	$99,712
Siebert Cisneros Shank & Co., LLC	**HA**	13.33%			12.68%	$92,212
Estrada Hinojosa & Co., Inc.	**HA**	13.33%			12.68%	$92,212
		Total			**100%**	**$727,313**

Issuer **Texas A&M University System**

Issuance Revenue Financing System Bonds Tax Series 2019B

Purpose The proceeds of the bonds will be used for purposes of providing construction funds for projects for participants within the A&M System, refunding a portion of the Board's outstanding Commercial Paper Notes ($159,118,000), refunding certain currently outstanding long-term Parity Obligations for debt service savings ($230,525,000) and paying cost of issuing the bonds.

Actual Par $429,645,000
Sale Type Negotiated
Sale Date 7/24/2019
Closing Date 8/14/2019

Series Name	TIC	NIC	Is Variable
RFS Bonds Tax Ser 2019B	3.24%	3.26%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.02
Bond Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$126,000	0.29
Disclosure Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$30,000	0.07
Escrow Agent	BOK Financial Securities, Inc.	NO	$2,500	0.01
Escrow Verification	Public Finance Partners LLC	NO	$2,000	0.00
Financial Advisor	Hilltop Securities, Inc.	NO	$215,823	0.50
Miscellaneous		NO	$300	0.00
Miscellaneous		NO	$3,740	0.01
Paying Agent/Registrar	BOK Financial Securities, Inc.	NO	$2,500	0.01
Printing	Ipreo	NO	$3,260	0.01
	Total		**$395,623**	**0.92**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$80,000	0.19
Rating Fee	Moody's	Aaa	$105,000	0.24
Rating Fee	S&P	AAA	$111,500	0.26
		Total	**$296,500**	**0.69**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$115,885	0.27
Takedown	$1,520,725	3.54
Total	**$1,636,610**	**3.81**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Norton Rose Fulbright US LLP	NO	$65,000	0.15	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Jefferies, LLC	NO	60.00%			61.16%	$930,130
Loop Capital Markets, LLC	**BA**	20.00%			19.42%	$295,298
FTN Financial Capital Markets	NO	20.00%			19.42%	$295,298
		Total			**100%**	**$1,520,726**

Issuer **Texas Department of Housing and Community Affairs Multifamily**

Issuance Forestwood Apartments Series 2018

Purpose The proceeds of the bonds will be used for the construction of the Forestwood Apartments, a new 220-unit multifamily residential rental development in Balch Springs, Dallas County, Texas.

Actual Par $23,000,000
Sale Type Private Placement
Sale Date 10/30/2018
Closing Date 10/30/2018

Series Name	TIC	NIC	Is Variable
Forestwood Apartments Ser 2018A	5.18%	5.18%	Yes
Forestwood Apartments Ser 2018B (Taxable)			Yes

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.41
Bond Counsel	Bracewell, LLP	NO	$130,000	5.65
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$6,500	0.28
Financial Advisor	George K Baum & Co.	NO	$35,000	1.52
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$5,400	0.23
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$5,500	0.24
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$44,467	1.93
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$57,648	2.51
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$115,000	5.00
Private Activity Fee	Bond Review Board	NO	$20,000	0.87
Trustee	BOKF, NA	NO	$4,500	0.20
Trustee Counsel	Naman Howell Smith & Lee, PLLC	NO	$6,000	0.26
	Total		**$439,515**	**19.11**

Issuer **Texas Department of Housing and Community Affairs Multifamily**

Issuance Lago de Plata Apartments (Series 2019)

Purpose The proceeds of the bonds will be used to acquire and rehabilitate the Lago de Plata Apartments, an existing 150-unit affordable multifamily residential rental development in Corsicana, Texas.

Actual Par $14,000,000
Sale Type Private Placement
Sale Date 6/13/2019
Closing Date 6/13/2019

Series Name	TIC	NIC	Is Variable
Lago de Plata Apartments (Series 2019)	4.90%	4.90%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.68
Bond Counsel	Bracewell, LLP	NO	$130,000	9.29
Disclosure Counsel	McCall, Parkhurst & Horton LLP	NO	$6,500	0.46
Financial Advisor	George K Baum & Co.	NO	$35,000	2.50
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$3,700	0.26
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$3,960	0.28
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$27,533	1.97
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$29,703	2.12
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$70,000	5.00
Private Activity Fee	Bond Review Board	NO	$8,500	0.61
Trustee	Wilmington Trust, NA	NO	$6,000	0.43
Trustee Counsel	Winstead PC	NO	$6,000	0.43
	Total		**$336,396**	**24.03**

Issuer **Texas Department of Housing and Community Affairs Multifamily**

Issuance McMullen Square Apartments Series 2019

Purpose The proceeds of the bonds will be used for the acquisition and rehabilitation of the McMullen Square Apartments, an existing 100-unit multifamily residential rental development in San Antonio, Bexar County, Texas.

Actual Par $10,000,000
Sale Type Private Placement
Sale Date 6/20/2019
Closing Date 6/20/2019

Series Name	TIC	NIC	Is Variable
McMullen Square Apartments Series 2019	4.29%	4.49%	Yes

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.95
Bond Counsel	Bracewell, LLP	NO	$165,000	16.50
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$6,500	0.65
Financial Advisor	George K Baum & Co.	NO	$35,000	3.50
Issuer Counsel	Texas Department of Housing & Community Affairs	NO	$19,180	1.92
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$2,500	0.25
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$3,000	0.30
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$19,639	1.96
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$50,000	5.00
Private Activity Fee	Bond Review Board	NO	$21,600	2.16
Trustee	Wilmington Trust, NA	NO	$11,500	1.15
Trustee Counsel	Locke Lord, LLP	NO	$8,500	0.85
	Total		**$351,919**	**35.19**

Issuer	**Texas Department of Housing and Community Affairs Multifamily**
Issuance	Northgate Village Series 2019
Purpose	The bonds are being issued to finance the cost of the acquisition, rehabilitation and equipping of a 168-unit residential rental housing development known as Northgate Village Apartments in Dallas, Texas.

Actual Par	$19,000,000
Sale Type	Negotiated
Sale Date	6/12/2019
Closing Date	6/20/2019

Series Name	TIC	NIC	Is Variable
Northgate Village Series 2019	3.04%	3.01%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.50
Bond Counsel	Bracewell, LLP	NO	$145,000	7.63
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$6,500	0.34
Financial Advisor	George K Baum & Co.	NO	$35,000	1.84
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$4,200	0.22
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$4,360	0.23
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$37,314	1.96
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$46,458	2.45
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$95,000	5.00
Printing	ImageMaster, LLC	NO	$2,000	0.11
Private Activity Fee	Bond Review Board	NO	$10,000	0.53
Trustee	Bank of New York Mellon Trust Co.	NO	$5,500	0.29
	Total		**$400,832**	**21.10**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$14,000	0.74
		Total	**$14,000**	**0.74**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$125,000	6.58
Total	**$125,000**	**6.58**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Norris George & Ostrow, PLLC	NO	$40,000	2.11	No

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
RBC Capital Markets, LLC	NO	100.00%	100.00%	$125,000	100.00%	
		Total	**100%**	**$125,000**	**100%**	

Issuer **Texas Department of Housing and Community Affairs Multifamily**

Issuance Park Yellowstone Series 2019

Purpose Proceeds of the Bonds will be loaned to Yellowstone Boulevard LLC, a Texas limited liability company, to enable the Borrower to pay a portion of the cost of acquiring, rehabilitating and equipping a 210-unit multifamily residential rental facility located in Houston, Texas.

Actual Par $15,380,000
Sale Type Negotiated
Sale Date 1/25/2019
Closing Date 1/31/2019

Series Name	TIC	NIC	Is Variable
Park Yellowstone Ser 2019	2.11%	2.11%	No
Park Yellowstone Ser 2019 M-Tems	3.48%	3.50%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.62
Bond Counsel	Bracewell, LLP	NO	$175,000	11.38
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$6,500	0.42
Financial Advisor	George K Baum & Co.	NO	$35,000	2.28
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$5,200	0.34
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$5,250	0.34
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$35,949	2.34
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$38,889	2.53
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$76,900	5.00
Private Activity Fee	Bond Review Board	NO	$18,000	1.17
Trustee	US Bank, NA	NO	$8,000	0.52
Trustee Counsel	Haynes & Boone, LLP	NO	$15,000	0.98
	Total		**$429,188**	**27.91**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	S&P	AA+	$17,500	1.14
		Total	**$17,500**	**1.14**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$158,800	10.33
Total	**$158,800**	**10.33**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Tiber Hudson, LLC	NO	$80,000	5.20	No

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Stifel Nicolaus & Company, Inc.	NO	100.00%	100.00%	$158,800	100.00%	
		Total	**100%**	**$158,800**	**100%**	

Issuer **Texas Department of Housing and Community Affairs Multifamily**

Issuance Related RD Portfolio Series 2018

Purpose The bonds will be issued for the purpose of providing financing to the borrowers for a portion of the costs of acquiring, rehabilitating, equipping and otherwise improving nine separate multifamily housing facilities.

Actual Par $20,000,000
Sale Type Negotiated
Sale Date 12/11/2018
Closing Date 12/20/2018

Series Name	TIC	NIC	Is Variable
Related RD Portfolio Ser 2018	2.54%	2.53%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.48
Bond Counsel	Bracewell, LLP	NO	$175,000	8.75
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$6,500	0.33
Financial Advisor	George K Baum & Co.	NO	$65,000	3.25
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$7,680	0.38
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$9,600	0.48
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$38,889	1.94
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$50,586	2.53
Issuer Fees	Texas Department of Housing & Community Affairs	NO	$100,000	5.00
Printing	ImageMaster, LLC	NO	$1,250	0.06
Private Activity Fee	Bond Review Board	NO	$20,000	1.00
Trustee	Wilmington Trust, NA	NO	$7,000	0.35
Trustee Counsel	Naman Howell Smith & Lee, PLLC	NO	$6,000	0.30
	Total		**$497,005**	**24.85**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	S&P	AA+	$5,000	0.25
		Total	**$5,000**	**0.25**

Fee Name	Actual Fee	$ Per 1000
Takedown	$109,500	5.48
Total	**$109,500**	**5.48**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Norris George & Ostrow, PLLC	NO	$45,000	2.25	No

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
RBC Capital Markets, LLC	NO	100.00%			100.00%	$109,500
		Total			**100%**	**$109,500**

Issuer **Texas Department of Housing and Community Affairs Single Family**

Issuance Single Family Mortgage Revenue Bonds Series 2018A

Purpose The bonds are being issued for the primary purpose of providing funds for the purchase of mortgage-backed, pass-through certificates.

Actual Par $143,995,000
Sale Type Negotiated
Sale Date 8/2/2018
Closing Date 9/12/2018

Series Name	TIC	NIC	Is Variable
SF MRB Series 2018A	3.99%	4.11%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.07
Bond Counsel	Bracewell, LLP	NO	$205,353	1.43
Co-Disclosure Counsel	Mahomes Bolden, PC	**BA**	$13,750	0.10
Co-Financial Advisor	Kipling Jones & Co., Ltd.	**BA**	$28,799	0.20
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$41,784	0.29
Financial Advisor	George K Baum & Co.	NO	$143,995	1.00
Financial Advisor	George K Baum & Co.	NO	$215,993	1.50
Miscellaneous	Causey Demgen & Moore, PC	NO	$7,000	0.05
Printing	ImageMaster, LLC	NO	$1,250	0.01
Private Activity Fee		NO	$38,000	0.26
Trustee	The Bank of New York Trust Co., NA	NO	$4,500	0.03
Trustee Counsel	McGuire Craddock & Strother, PC	NO	$15,000	0.10
	Total		**$724,923**	**5.03**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aa1	$70,000	0.49
Rating Fee	S&P	AA+	$70,000	0.49
		Total	**$140,000**	**0.97**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$143,995	1.00
Spread Expenses	$74,632	0.52
Takedown	$854,880	5.94
Total	**$1,073,507**	**7.46**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Chapman & Cutler, LLP	NO	$50,000	0.35	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
RBC Capital Markets, LLC	NO	50.00%	70.00%	$100,797	64.21%	$548,922
JP Morgan	NO	20.00%	0.00%	$0	19.32%	$165,182
Jefferies, LLC	NO	30.00%	30.00%	$43,199	16.47%	$140,776
		Total	**100%**	**$143,996**	**100%**	**$854,880**

Issuer **Texas Department of Housing and Community Affairs Single Family**

Issuance Single Family Mortgage Revenue Bonds Series 2019A

Purpose The Series 2019A bonds are being issued for the purpose of providing funds for the purchase of mortgage-backed, pass-through certificates.

Actual Par $165,325,000
Sale Type Negotiated
Sale Date 7/17/2019
Closing Date 8/27/2019

Series Name	TIC	NIC	Is Variable
SF MRB Series 2019A	3.27%	3.41%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.06
Bond Counsel	Bracewell, LLP	NO	$147,018	0.89
Co-Disclosure Counsel	Mahomes Bolden, PC	**BA**	$13,750	0.08
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$41,250	0.25
Financial Advisor	George K Baum & Co.	NO	$165,325	1.00
Financial Advisor	George K Baum & Co.	NO	$247,988	1.50
Miscellaneous	Causey Demgen & Moore, PC	NO	$7,000	0.04
Printing	ImageMaster, LLC	NO	$1,250	0.01
Private Activity Fee		NO	$43,750	0.26
Trustee	Bank of New York Trust Co.	NO	$5,500	0.03
Trustee Counsel	McGuire Craddock & Strother, PC	NO	$15,000	0.09
	Total		**$697,330**	**4.22**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$81,000	0.49
Rating Fee	S&P	AA+	$71,000	0.43
		Total	**$152,000**	**0.92**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$165,325	1.00
Spread Expenses	$71,067	0.43
Takedown	$976,108	5.90
Total	**$1,212,499**	**7.33**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Chapman & Cutler, LLP	NO	$50,000	0.30	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
JP Morgan	NO	50.00%	100.00%	$165,325	67.07%	$654,636
RBC Capital Markets, LLC	NO	12.50%			12.40%	$121,045
Piper Jaffray & Co.	NO	12.50%			7.57%	$73,891
Jefferies, LLC	NO	12.50%			6.97%	$68,065
Ramirez & Co., Inc.	**HA**	12.50%			5.99%	$58,470

Total	**100%**	**$165,325**	**100%**	**$976,108**

Issuer **Texas Department of Housing and Community Affairs Single Family**

Issuance Residential Mortgage Revenue Bonds Series 2019A

Purpose The bonds are being issued for the primary purpose of providing funds for the purchase of mortgage-backed, pass-through certificates.

Actual Par $166,350,000
Sale Type Negotiated
Sale Date 2/6/2019
Closing Date 3/19/2019

Series Name	TIC	NIC	Is Variable
Residential Mortgage Rev Bonds Series 2019A	3.86%	3.97%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.06
Bond Counsel	Bracewell, LLP	NO	$265,075	1.59
Co-Disclosure Counsel	Mahomes Bolden, PC	**BA**	$13,750	0.08
Disclosure Counsel	McCall, Parkhurst & Horton LLP	NO	$41,721	0.25
Financial Advisor	George K Baum & Co.	NO	$166,350	1.00
Financial Advisor	George K Baum & Co.	NO	$249,525	1.50
Miscellaneous	Causey Demgen & Moore, PC	NO	$7,000	0.04
Printing	ImageMaster, LLC	NO	$1,250	0.01
Private Activity Fee		NO	$44,250	0.27
Trustee	Bank of New York Trust Co.	NO	$6,500	0.04
Trustee Counsel	McGuire Craddock & Strother, PC	NO	$15,000	0.09
		Total	**$819,921**	**4.93**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$81,000	0.49
Rating Fee	S&P	AA+	$70,000	0.42
		Total	**$151,000**	**0.91**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$166,350	1.00
Spread Expenses	$76,599	0.46
Takedown	$992,164	5.96
Total	**$1,235,112**	**7.42**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Chapman & Cutler, LLP	NO	$50,000	0.30	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Jefferies, LLC	NO	50.00%	100.00%	$166,350	63.63%	$631,283
JP Morgan	NO	12.50%			10.51%	$104,300
Piper Jaffray & Co.	NO	12.50%			9.92%	$98,384
RBC Capital Markets, LLC	NO	12.50%			8.49%	$84,244
Ramirez & Co., Inc.	**HA**	12.50%			7.45%	$73,953

Total	**100%**	**$166,350**	**100%**	**$992,164**

Issuer **Texas Higher Education Coordinating Board**

Issuance College Student Loan Bonds Series 2019

Purpose Proceeds from the sale of the bonds will be used to fund an ongoing student loan program which provides low interest loans to eligible students at institutions of higher education in the State.

Actual Par $159,965,000
Sale Type Competitive
Sale Date 2/12/2019
Closing Date 2/20/2019

Series Name	TIC	NIC	Is Variable
College Student Loan Bonds Ser 2019	3.35%	3.45%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.06
Bond Application Report Fee	Bond Review Board	NO	$1,000	0.01
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$67,840	0.42
Co-Bond Counsel	Mahomes Bolden, PC	**BA**	$20,724	0.13
Co-Financial Advisor	YaCari Consultants, LLC	**BA**	$17,596	0.11
Financial Advisor	Hilltop Securities, Inc.	NO	$70,385	0.44
Paying Agent/Registrar	Wells Fargo Bank, NA	NO	$1,000	0.01
Printing	ImageMaster, LLC	NO	$2,590	0.02
Printing	McCall Parkhurst & Horton, LLP	NO	$9,500	0.06
TEFRA Notice		NO	$11,562	0.07
	Total		**$211,697**	**1.32**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$25,000	0.16
Rating Fee	S&P	AAA	$0	0.00
		Total	**$25,000**	**0.16**

Fee Name	Actual Fee	$ Per 1000
Takedown	$507,373	3.17
Total	**$507,373**	**3.17**

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Bank of America Merrill Lynch	NO	100.00%			100.00%	$507,373
		Total			**100%**	**$507,373**

Issuer **Texas Higher Education Coordinating Board**

Issuance College Student Loan Refunding Bonds Series 2018

Purpose Proceeds from the sale of the bonds will be used to currently refund certain of the Board's outstanding College Student Loan Bonds. Series 2007A and Series 2008A

Actual Par $94,915,000
Sale Type Competitive
Sale Date 11/14/2018
Closing Date 11/29/2018

Series Name	TIC	NIC	Is Variable
College Student Loan Ref Bonds Ser 2018	2.68%	2.85%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.10
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$65,598	0.69
Co-Bond Counsel	Mahomes Bolden Warren Sigmon, PC	**BA**	$16,180	0.17
Co-Financial Advisor	YaCari Consultants, LLC	**BA**	$13,098	0.14
Escrow Agent	Wells Fargo Bank, NA	NO	$2,000	0.02
Financial Advisor	Hilltop Securities, Inc.	NO	$55,701	0.59
Paying Agent/Registrar	Wells Fargo Bank, NA	NO	$1,600	0.02
Printing	ImageMaster, LLC	NO	$2,069	0.02
Printing	McCall Parkhurst & Horton, LLP	NO	$9,500	0.10
	Total		**$175,246**	**1.85**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$25,000	0.26
Rating Fee	S&P	AAA	$30,000	0.32
		Total	**$55,000**	**0.58**

Fee Name	Actual Fee	$ Per 1000
Takedown	$240,894	2.54
Total	**$240,894**	**2.54**

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
JP Morgan Securities	NO	100.00%			100.00%	$240,894
		Total			**100%**	**$240,894**

Issuer **Texas Higher Education Coordinating Board**

Issuance College Student Loan Refunding Bonds Series 2019

Purpose Proceeds from the sale of the bonds will be used to currently refund certain of the Board's outstanding College Student Loan Bonds.

Actual Par $45,965,000
Sale Type Competitive
Sale Date 6/26/2019
Closing Date 6/26/2019

Series Name	TIC	NIC	Is Variable
College Student Loan Ref Bonds Ser 2019	2.12%	2.40%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.21
Bond Application Report Fee	Bond Review Board	NO	$500	0.01
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$37,836	0.82
Co-Bond Counsel	Mahomes Bolden PC	**BA**	$11,444	0.25
Escrow Agent	Wells Fargo Bank, NA	NO	$2,500	0.05
Financial Advisor	Hilltop Securities, Inc.	NO	$31,855	0.69
Paying Agent/Registrar	Wells Fargo Bank, NA	NO	$1,000	0.02
Printing	ImageMaster, LLC	NO	$2,152	0.05
Printing	McCall Parkhurst & Horton, LLP	NO	$9,500	0.21
Private Activity Fee	Bond Review Board	NO	$12,500	0.27
	Total		**$118,787**	**2.58**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$25,000	0.54
Rating Fee	S&P	AAA	$32,500	0.71
		Total	**$57,500**	**1.25**

Fee Name	Actual Fee	$ Per 1000
Takedown	$156,855	3.41
Total	**$156,855**	**3.41**

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
UMB Bank, NA	NO	100.00%			100.00%	$156,855
		Total			**100%**	**$156,855**

Issuer **Texas Public Finance Authority**

Issuance Lease Revenue and Refunding Bonds (Texas Facilities Commission) Series 2019

Purpose The bonds are being issued to refund certain outstanding commercial paper notes ($164,000,000) of the State of Texas issued by the Authority for the Texas Facilities Commission, finance certain costs of the TFC project and pay the costs of issuing the bonds.

Actual Par $249,135,000
Sale Type Negotiated
Sale Date 6/5/2019
Closing Date 6/18/2019

Series Name	TIC	NIC	Is Variable
Lease Rev and Ref Bonds (Texas Facilities Commission) Ser 2019	2.59%	2.85%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.04
Bond Counsel	Norton Rose Fulbright US LLP	NO	$124,504	0.50
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$60,000	0.24
Escrow Agent	TTSTC	NO	$1,500	0.01
Financial Advisor	Hilltop Securities, Inc.	NO	$72,772	0.29
Miscellaneous		NO	$9,147	0.04
Printing	Financial Printing Resource, Inc.	NO	$500	0.00
	Total		**$277,923**	**1.12**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aa1	$32,000	0.13
Rating Fee	S&P	AA+	$33,150	0.13
		Total	**$65,150**	**0.26**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$37,500	0.15
Spread Expenses	$75,197	0.30
Takedown	$794,694	3.19
Total	**$907,391**	**3.64**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$37,500	0.15	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Morgan Stanley	NO	52.00%	100.00%	$37,500	49.65%	$394,544
Piper Jaffray & Co.	NO	16.00%			23.34%	$185,506
Ramirez & Co., Inc.	**HA**	16.00%			16.17%	$128,530
SAMCO Capital Markets, Inc.	NO	16.00%			10.84%	$86,114
		Total	**100%**	**$37,500**	**100%**	**$794,694**

Issuer **Texas Public Finance Authority**

Issuance State of Texas General Obligation and Refunding Bonds, Taxable Series 2018

Purpose Proceeds of the bonds will be used (i) by the Cancer Prevention and Research Institute of Texas (CPRIT) to make grants for cancer research and prevention and pay for the operation of CPRIT, and (ii) to refund certain outstanding general obligation commercial paper notes of the State in the amount of $222,200,000.

Actual Par $298,175,000
Sale Type Negotiated
Sale Date 8/28/2018
Closing Date 9/11/2018

Series Name	TIC	NIC	Is Variable
State of Texas GO & Ref Bonds, Taxable Ser 2018	3.71%	3.73%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.03
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$50,621	0.17
Disclosure Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$45,000	0.15
Escrow Agent	TTSTC	NO	$500	0.00
Financial Advisor	FTN Financial	NO	$45,875	0.15
Miscellaneous		NO	$4,312	0.01
Printing	Financial Printing Resource, Inc.	NO	$424	0.00
	Total		**$156,232**	**0.52**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$36,000	0.12
Rating Fee	S&P	AAA	$30,012	0.10
		Total	**$66,012**	**0.22**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$53,664	0.18
Spread Expenses	$75,894	0.25
Takedown	$990,248	3.32
Total	**$1,119,806**	**3.76**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Norton Rose Fulbright US, LLP	NO	$35,000	0.12	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Piper Jaffray & Co.	NO	45.00%	91.88%	$49,306	44.47%	$440,348
Citigroup	NO	25.00%	0.00%		22.98%	$227,522
Morgan Stanley	NO	10.00%	2.54%	$1,362	12.66%	$125,400
Siebert Cisneros Shank & Co., LLC	**BA**	10.00%	2.54%	$1,362	10.03%	$99,345
Loop Capital Markets, LLC	**BA**	10.00%	3.05%	$1,635	9.86%	$97,633
		Total	**100%**	**$53,665**	**100%**	**$990,248**

Issuer **Texas Public Finance Authority**

Issuance State of Texas General Obligation Refunding Bonds, Series 2018A

Purpose Proceeds of the bonds will be used to refund outstanding general obligation taxable Series 2009B Build America Bonds issued by the Authority to achieve present value savings and to pay the costs of issuance.

Actual Par $164,510,000
Sale Type Negotiated
Sale Date 10/2/2018
Closing Date 10/11/2018

Series Name	TIC	NIC	Is Variable
State of Texas GO Ref Bonds, Ser 2018A	2.52%	2.74%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.06
Bond Counsel	Bracewell, LLP	NO	$98,000	0.60
Disclosure Counsel	McCall Parkhurst & Horton, LLP	NO	$43,129	0.26
Escrow Agent	TTSTC	NO	$1,000	0.01
Escrow Verification	Grant Thornton, LLP	NO	$800	0.00
Financial Advisor	FTN Financial	NO	$51,593	0.31
Miscellaneous		NO	$2,006	0.01
Printing	Financial Printing Resource, Inc.	NO	$744	0.00
	Total		**$206,772**	**1.26**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$29,750	0.18
Rating Fee	S&P	AAA	$30,000	0.18
		Total	**$59,750**	**0.36**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$35,000	0.21
Spread Expenses	$62,209	0.38
Takedown	$523,581	3.18
Total	**$620,790**	**3.77**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$45,000	0.27	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Raymond James	NO	50.00%	100.00%	$35,000	55.16%	$288,828
Barclays Capital, Inc.	NO	12.50%			16.21%	$84,863
Mesirow Financial, Inc.	NO	12.50%			12.24%	$64,079
Estrada Hinojosa & Co., Inc.	**HA**	12.50%			8.37%	$43,829
Academy Securities, Inc.	**DV**	12.50%			8.02%	$41,982
		Total	**100%**	**$35,000**	**100%**	**$523,581**

Issuer **Texas State Affordable Housing Corporation Multifamily**

Issuance Mortgage Revenue Note (Ventura at Tradewinds Apartments) Series 2019

Purpose The proceeds of the Note will be used for the new construction of a qualified residential rental project to be known as the Ventura at Tradewinds Apartments, a multifamily community of 204 units to be located in Midland, Texas.

Actual Par $30,000,000
Sale Type Private Placement
Sale Date 12/28/2018
Closing Date 1/7/2019

Series Name	TIC	NIC	Is Variable
Mortgage Rev Note (Ventura at Tradewinds Apartments) Ser 2019			No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.32
Bond Counsel	Norton Rose Fulbright US, LLP	NO	$140,000	4.67
Co-Bond Counsel	Mahomes Bolden, PC	**BA**	$41,000	1.37
Financial Advisor	Hilltop Securities, Inc.	NO	$70,000	2.33
Issuer Fees	Texas State Affordable Housing Corp.	NO	$1,500	0.05
Issuer Fees	Texas State Affordable Housing Corp.	NO	$9,180	0.31
Issuer Fees	Texas State Affordable Housing Corp.	NO	$30,000	1.00
Miscellaneous	Dougherty & Co., LLC	NO	$50,000	1.67
Miscellaneous	Kutak Rock, LLP	NO	$55,000	1.83
Private Activity Fee	Bond Review Board	NO	$12,500	0.42
Trustee	Wilmington Trust, NA	NO	$6,000	0.20
Trustee Counsel	Naman Howell Smith & Lee, PLLC	NO	$6,000	0.20
	Total		**$430,680**	**14.36**

Issuer **Texas State Affordable Housing Corporation Multifamily**

Issuance Multifamily Mortgage Revenue Note (Walnut Creek Apartments) Series 2018

Purpose The proceeds of the Note will be used for the acquisition and rehabilitation of Walnut Creek Apartments, an existing two story, 98-unit affordable multifamily housing development serving the general population located at 6409 Springdale Road in Austin, Texas 78741, in Travis County.

Actual Par $10,017,000
Sale Type Private Placement
Sale Date 10/26/2018
Closing Date 11/2/2018

Series Name	TIC	NIC	Is Variable
MF Mortgage Rev Note (Walnut Creek Apartments) Ser 2018	5.00%	4.95%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.95
Bond Counsel	Norton Rose Fulbright US, LLP	NO	$125,000	12.48
Co-Bond Counsel	Mahomes Bolden, PC	**BA**	$15,000	1.50
Financial Advisor	Hilltop Securities, Inc.	NO	$50,000	4.99
Issuer Fees	Texas State Affordable Housing Corp.	NO	$1,500	0.15
Issuer Fees	Texas State Affordable Housing Corp.	NO	$4,410	0.44
Issuer Fees	Texas State Affordable Housing Corp.	NO	$10,017	1.00
Private Activity Fee	Bond Review Board	NO	$8,750	0.87
Trustee	Wilmington Trust, NA	NO	$6,000	0.60
Trustee Counsel	Naman Howell Smith & Lee, PLLC	NO	$6,000	0.60
	Total		**$236,177**	**23.58**

Issuer **Texas State Affordable Housing Corporation Single Family**

Issuance Single Family Mortgage Revenue Bonds (Texas Heroes Home Loan Program) Series 2019A

Purpose The bonds will be issued to make funds available to finance quialifying mortgage loans for single family residences located in the State of Texas.

Actual Par $40,000,000
Sale Type Negotiated
Sale Date 4/3/2019
Closing Date 5/9/2019

Series Name	TIC	NIC	Is Variable
SF MRB (Texas Heroes Home Loan Program) Series 2019A	3.64%	3.76%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.24
Bond Counsel	Norton Rose Fulbright US LLP	NO	$105,000	2.63
Disclosure Counsel	Greenberg Traurig, LLP	NO	$60,000	1.50
Escrow Verification	Causey Demgen & Moore, PC	NO	$7,000	0.18
Financial Advisor	Hilltop Securities, Inc.	NO	$90,000	2.25
Issuer Fees	Texas State Affordable Housing Corp.	NO	$220,000	5.50
Miscellaneous	Causey Demgen & Moore, PC	NO	$7,000	0.18
Printing	Financial Press	NO	$1,250	0.03
Private Activity Fee	Bond Review Board	NO	$10,500	0.26
Trustee	Wells Fargo Bank, NA	NO	$15,667	0.39
Trustee Counsel	Akerman	NO	$4,000	0.10
	Total		**$529,917**	**13.25**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aa1	$35,000	0.88
		Total	**$35,000**	**0.88**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$10,000	0.25
Spread Expenses	$27,300	0.68
Takedown	$245,650	6.14
Total	**$282,950**	**7.07**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Chapman & Cutler, LLP	NO	$15,000	0.38	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Raymond James	NO	100.00%	3.53%	$10,000	86.82%	$245,650
		Total	4%	**$10,000**	87%	**$245,650**

Issuer **Texas Transportation Commission Private Activity Bond Surface Transportation Corporation**

Issuance Senior Lien Revenue Bonds (NTE Mobility Partners Segments 3 LLC Segment 3C Project) Series 2019

Purpose Bond proceeds will be used to finance a portion of the Segment 3C Project costs, pay costs of issuance and make a deposit to the 2019 Trustee PABs Interest Reserve Sub-Account.

Actual Par $653,865,000
Sale Type Negotiated
Sale Date 7/30/2019
Closing Date 8/8/2019

Series Name	TIC	NIC	Is Variable
Sr Lien Rev Bonds (NTE Mobility Partners Segments 3 LLC Segment 3C Project)	4.21%	4.58%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.01
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$619,012	0.95
Miscellaneous		NO	$100,000	0.15
Printing	ImageMaster, LLC	NO	$9,642	0.01
Trustee Counsel	Holland & Knight, LLC	NO	$15,000	0.02
	Total		**$753,154**	**1.15**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	BBB-	$352,730	0.54
Rating Fee	Moody's	Baa3	$485,865	0.74
		Total	**$838,595**	**1.28**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$91,994	0.14
Takedown	$2,942,393	4.50
Total	**$3,034,387**	**4.64**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Baker & Mckenzie	NO	$427,358	0.65	No

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Barclays Capital, Inc.	NO	50.00%			50.00%	$1,471,196
Bank of America Merrill Lynch	NO	50.00%			50.00%	$1,471,196
		Total			**100%**	**$2,942,392**

Issuer **Texas Transportation Commission**

Issuance State Highway 249 System First Tier Toll Revenue Bonds Series 2019A and Tax Series 2019B

Purpose A portion of the proceeds of the Series 2019A Bonds, together with other funding sources, will be used to fund (i) the cost of the design and construction of Segment 1 of the northerly extension of the existing State Highway 249, (ii) capitalized interest on the Series 2019A Bonds and (iii) paying a portion of the costs of issuance of the Series 2019A Bonds. The proceeds of the Series 2019B Bonds will be used to provide funds for (i) funding a $10,000,000 deposit into the Rate Stabilization Fund, (ii) funding the Series 2019B First Tier Reserve Account, (iii) capitalized interest on the Series 2019B Bonds in an amount permitted by law and (iv) paying a portion of the costs of issuance of the Series 2019B Bonds.

Actual Par $249,251,954
Sale Type Negotiated
Sale Date 2/14/2019
Closing Date 2/26/2019

Series Name	TIC	NIC	Is Variable
State Highway 249 System First Tier Toll Rev Bonds Ser 2019A	4.73%	4.79%	No
State Highway 249 System First Tier Toll Rev Bonds Tax Ser 2019B			No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$19,000	0.08
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$390,748	1.57
Contingency		NO	$2,969	0.01
Disclosure Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$120,000	0.48
Financial Advisor	Estrada Hinojosa & Co., Inc.	**HA**	$282,237	1.13
Printing	ImageMaster, LLC	NO	$8,918	0.04
Trustee	US Bank, NA	NO	$5,500	0.02
Trustee Counsel	McGuire Craddock & Strother, PC	NO	$37,018	0.15
		Total	**$866,390**	**3.48**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Baa3	$155,000	0.62
		Total	**$155,000**	**0.62**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$169,205	0.68
Takedown	$1,361,725	5.46
Total	**$1,530,930**	**6.14**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Co-Underwriters Counsel	Mahomes Bolden, PC	**BA**	$33,000	0.13	Yes
Underwriter Counsel	Locke Lord, LLP	NO	$77,000	0.31	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Bank of America Merrill Lynch	NO	65.00%			66.53%	$906,021
JP Morgan Securities	NO	8.75%			8.34%	$113,530
Raymond James	NO	8.75%			8.28%	$112,815
Blaylock Van, LLC	**BA**	8.75%			8.28%	$112,815

Barclays Capital, Inc.	NO	8.75%			8.17%	$111,243
Drexel Hamilton, LLC	**DV**				0.37%	$5,000
Stephens, Inc.	NO				0.02%	$300
		Total			**100%**	**$1,361,724**

Issuer **Texas Veterans Land Board**

Issuance Veterans Bonds Series 2019

Purpose Proceeds of the Bonds will be deposited in the Veterans' Housing Assistane Fund II, a fund administered by the Veterans' Land Board of the State of Texas, and made available to make Home Loans to eligible Texas veterans.

Actual Par $250,000,000
Sale Type Negotiated
Sale Date 4/10/2019
Closing Date 4/11/2019

Series Name	TIC	NIC	Is Variable
Veterans Bonds Series 2019			Yes

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.04
Bond Counsel	Bracewell LLP	NO	$125,000	0.50
Co-Bond Counsel	Lannen & Oliver, PC	**BA**	$30,351	0.12
Financial Advisor	George K Baum & Co.	NO	$87,500	0.35
Liquidity Providers Counsel	Chapman & Cutler, LLP	NO	$25,000	0.10
Printing	Island Printing	NO	$990	0.00
	Total		**$278,341**	**1.11**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aaa	$19,500	0.08
		Total	**$19,500**	**0.08**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$37,000	0.15
Total	**$37,000**	**0.15**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Co-Underwriters Counsel	Mahomes Bolden, PC	**BA**	$5,000	0.02	Yes
Underwriter Counsel	Norton Rose Fulbright US LLP	NO	$25,000	0.10	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
JP Morgan	NO	75.00%			75.00%	
Academy Securities, Inc.	**DV**	25.00%			25.00%	
		Total			**100%**	

Issuer **Texas Water Development Board**

Issuance State Revolving Fund Revenue Bonds, New Series 2019

Purpose Proceeds from the sale of the Series 2019 Bonds will be used to provide funds to the CWSRF and the DWSRF to finance the acquisition of Political Subdivision Bonds, and meet State Match requirements to pay the cost of issuance of the Series 2019 Bonds.

Actual Par $221,005,000
Sale Type Negotiated
Sale Date 3/13/2019
Closing Date 4/24/2019

Series Name	TIC	NIC	Is Variable
State Revolving Fund Revenue Bonds, New Series 2019	2.93%	3.31%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.04
Bond Counsel	McCall, Parkhurst & Horton LLP	NO	$153,751	0.70
Disclosure Counsel	Bracewell, LLP	NO	$35,000	0.16
Financial Advisor	Hilltop Securities, Inc.	NO	$191,032	0.86
Paying Agent/Registrar	BNY Mellon Capital Markets, LLC	NO	$579	0.00
Printing	Hilltop Securities, Inc.	NO	$7,500	0.03
Travel		NO	$4,932	0.02
	Total		**$402,294**	**1.82**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$72,000	0.33
Rating Fee	S&P	AAA	$111,150	0.50
		Total	**$183,150**	**0.83**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$92,810	0.42
Takedown	$652,178	2.95
Total	**$744,988**	**3.37**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$52,500	0.24	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Bank of America Merrill Lynch	NO	50.00%			56.60%	$369,148
RBC Capital Markets, LLC	NO	12.50%			12.47%	$81,309
Wells Fargo Securities	NO	12.50%			11.96%	$78,011
FTN Financial Capital Markets	NO	12.50%			10.01%	$65,316
BOK Financial Securities, Inc.	NO	12.50%			8.95%	$58,395
		Total			**100%**	**$652,179**

Issuer **Texas Water Development Board**

Issuance State Water Implementation Revenue Fund For Texas Revenue Bonds, Series 2018B (Master Trust)

Purpose The proceeds from the sale of the bonds will be used to provide funds to finance projects to implement the State Water Plan.

Actual Par $1,672,210,000
Sale Type Negotiated
Sale Date 9/18/2018
Closing Date 10/11/2018

Series Name	TIC	NIC	Is Variable
State Water Implementation Revenue Fund For Texas Rev Bonds, Ser 2018B (Mast	3.90%	4.14%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.01
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$153,013	0.09
Disclosure Counsel	Bracewell, LLP	NO	$34,330	0.02
Financial Advisor	Hilltop Securities, Inc.	NO	$252,994	0.15
Miscellaneous		NO	$7,969	0.00
Printing	Hilltop Securities, Inc.	NO	$7,356	0.00
Trustee	The Bank of New York Mellon Trust Co., NA	NO	$52,667	0.03
	Total		**$517,829**	**0.31**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$132,415	0.08
Rating Fee	S&P	AAA	$195,091	0.12
		Total	**$327,506**	**0.20**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$327,116	0.20
Takedown	$4,878,572	2.92
Total	**$5,205,688**	**3.11**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$58,750	0.04	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Citigroup	NO	49.95%			49.89%	$2,434,069
Morgan Stanley	NO	3.85%			4.43%	$216,092
Bank of America Merrill Lynch	NO	3.85%			4.00%	$194,994
JP Morgan Securities	NO	3.85%			3.95%	$192,825
Wells Fargo Bank, NA	NO	3.85%			3.87%	$188,644
Raymond James	NO	3.85%			3.80%	$185,590
BOK Financial Securities, Inc.	NO	3.85%			3.77%	$183,846
UMB Bank, NA	NO	3.85%			3.76%	$183,216
Piper Jaffray & Co.	NO	3.85%			3.76%	$183,216
Loop Capital Markets, LLC	**BA**	3.85%			3.76%	$183,216

Jefferies, LLC	NO	3.85%			3.76%	$183,216
FTN Financial Capital Markets	NO	3.85%			3.76%	$183,216
Estrada Hinojosa & Co., Inc.	**HA**	3.85%			3.76%	$183,216
Barclays Capital, Inc.	NO	3.85%			3.76%	$183,216
		Total			**100%**	**$4,878,572**

Issuer **Texas Water Development Board**

Issuance State Water Implementation Revenue Fund For Texas Revenue Bonds, Series 2018C (Master Trust)

Purpose The proceeds from the sale of the bonds will be used to provide funds to finance projects to implement the State Water Plan.

Actual Par $35,590,000
Sale Type Negotiated
Sale Date 9/18/2018
Closing Date 10/11/2018

Series Name	TIC	NIC	Is Variable
State Water Implementation Revenue Fund For Texas Rev Bonds, Ser 2018C (Mast	4.15%	4.17%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.27
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$2,987	0.08
Disclosure Counsel	Bracewell, LLP	NO	$670	0.02
Financial Advisor	Hilltop Securities, Inc.	NO	$4,939	0.14
Miscellaneous		NO	$156	0.00
Printing	Hilltop Securities, Inc.	NO	$144	0.00
Trustee	The Bank of New York Mellon Trust Co., NA	NO	$9,399	0.26
	Total		**$27,795**	**0.78**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$2,585	0.07
Rating Fee	S&P	AAA	$3,809	0.11
		Total	**$6,394**	**0.18**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$7,745	0.22
Takedown	$137,195	3.85
Total	**$144,940**	**4.07**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$1,250	0.04	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Citigroup	NO	49.95%			49.28%	$67,610
FTN Financial Capital Markets	NO	3.85%			6.77%	$9,284
Wells Fargo Bank, NA	NO	3.85%			5.15%	$7,064
Raymond James	NO	3.85%			4.54%	$6,224
Morgan Stanley	NO	3.85%			3.89%	$5,334
JP Morgan Securities	NO	3.85%			3.65%	$5,009
UMB Bank, NA	NO	3.85%			3.34%	$4,584
Piper Jaffray & Co.	NO	3.85%			3.34%	$4,584
Loop Capital Markets, LLC	**BA**	3.85%			3.34%	$4,584
Jefferies, LLC	NO	3.85%			3.34%	$4,584

Estrada Hinojosa & Co., Inc.	**HA**	3.85%			3.34%	$4,584
Barclays Capital, Inc.	NO	3.85%			3.34%	$4,584
BOK Financial Securities, Inc.	NO	3.85%			3.34%	$4,584
Bank of America Merrill Lynch	NO	3.85%			3.34%	$4,584
		Total			**100%**	**$137,197**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Bonds Series 2019A (EDAP)

Purpose The bonds are being issued for the purpose of providing funds for the Economically Distressed Areas Program Account for EDAP Projects.

Actual Par $41,325,000
Sale Type Competitive
Sale Date 1/28/2019
Closing Date 2/20/2019

Series Name	TIC	NIC	Is Variable
WFA Bonds Ser 2019A (EDAP)	2.93%	3.05%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.23
Bond Counsel	Escamilla & Poneck, LLP	**HA**	$46,088	1.12
Disclosure Counsel	Bracewell, LLP	NO	$28,749	0.70
Financial Advisor	Hilltop Securities, Inc.	NO	$42,338	1.02
Paying Agent/Registrar	Bank of New York Mellon Trust Co.	NO	$711	0.02
Printing	Hilltop Securities, Inc.	NO	$6,161	0.15
Printing	ImageMaster, LLC	NO	$2,303	0.06
	Total		**$135,850**	**3.29**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$17,249	0.42
Rating Fee	Moody's	Aaa	$20,535	0.50
Rating Fee	S&P	AAA	$24,642	0.60
		Total	**$62,426**	**1.51**

Fee Name	Actual Fee	$ Per 1000
Takedown	$176,830	4.28
Total	**$176,830**	**4.28**

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Citigroup Global Capital Markets, Inc.	NO	100.00%			100.00%	$176,830
		Total			**100%**	**$176,830**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Bonds Series 2019B (EDAP) (Taxable)

Purpose The bonds are being issued for the purpose of providing funds for the Economically Distressed Areas Program Account for EDAP Projects.

Actual Par $8,821,000
Sale Type Competitive
Sale Date 1/28/2019
Closing Date 2/20/2019

Series Name	TIC	NIC	Is Variable
WFA Bonds Ser 2019B (EDAP) (Taxable)	2.76%	2.78%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$8,821	1.00
Bond Counsel	Escamilla & Poneck, LLP	**HA**	$10,021	1.14
Disclosure Counsel	Bracewell, LLP	NO	$6,251	0.71
Financial Advisor	Hilltop Securities, Inc.	NO	$8,782	1.00
Paying Agent/Registrar	The Bank of New York Mellon Trust Co., NA	NO	$711	0.08
Printing	Hilltop Securities, Inc.	NO	$1,340	0.15
Printing	ImageMaster, LLC	NO	$501	0.06
	Total		**$36,427**	**4.13**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$3,751	0.43
Rating Fee	Moody's	Aaa	$4,465	0.51
Rating Fee	S&P	AAA	$5,358	0.61
		Total	**$13,574**	**1.54**

Fee Name	Actual Fee	$ Per 1000
Takedown	$9,273	1.05
Total	**$9,273**	**1.05**

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Morgan Stanley	NO	100.00%			100.00%	$9,273
		Total			**100%**	**$9,273**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Refunding Bonds Series 2019C

Purpose The Bonds are being issued for the purpose of conserving and developing the water resources of the State by providing funds for the refunding of the Refunded Bonds.

Actual Par $50,135,000
Sale Type Negotiated
Sale Date 5/15/2019
Closing Date 6/20/2019

Series Name	TIC	NIC	Is Variable
WFA Ref Bonds, Ser 2019C-1	1.83%	1.85%	No
WFA Ref Bonds, Ser 2019C-2			Yes

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.19
Bond Counsel	Norton Rose Fulbright US LLP	NO	$39,003	0.78
Disclosure Counsel	Bracewell, LLP	NO	$8,740	0.17
Escrow Agent	Bank of New York	NO	$187	0.00
Financial Advisor	Hilltop Securities, Inc.	NO	$35,205	0.70
Miscellaneous		NO	$1,834	0.04
Paying Agent/Registrar	Bank of New York	NO	$2,148	0.04
Printing	Hilltop Securities, Inc.	NO	$314	0.01
Printing	Hilltop Securities, Inc.	NO	$2,032	0.04
	Total		**$98,963**	**1.97**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$9,477	0.19
Rating Fee	Moody's	Aaa	$8,989	0.18
Rating Fee	S&P	AAA	$8,115	0.16
		Total	**$26,581**	**0.53**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$19,301	0.39
Takedown	$106,572	2.13
Total	**$125,873**	**2.51**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$13,108	0.26	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Wells Fargo Bank, NA	NO	50.00%			49.20%	$52,435
JP Morgan	NO	12.50%			16.51%	$17,600
Mesirow Financial, Inc.	NO	12.50%			13.49%	$14,374
Ramirez & Co., Inc.	**HA**	12.50%			10.68%	$11,388
Hutchinson Shockey Erley & Co.	NO	12.50%			10.11%	$10,776
		Total			**100%**	**$106,573**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Refunding Bonds Series 2019D (State Participation Program)

Purpose The Bonds are being issued for the purpose of conserving and developing the water resources of the State by providing funds for the refunding of the Refunded Bonds.

Actual Par $21,320,000
Sale Type Negotiated
Sale Date 5/15/2019
Closing Date 6/20/2019

Series Name	TIC	NIC	Is Variable
WFA Ref Bonds Ser 2019D (State Participation Program)	2.11%	2.34%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.45
Bond Counsel	Norton Rose Fulbright US LLP	NO	$16,573	0.78
Disclosure Counsel	Bracewell, LLP	NO	$3,714	0.17
Escrow Agent	Bank of New York	NO	$80	0.00
Financial Advisor	Hilltop Securities, Inc.	NO	$14,959	0.70
Miscellaneous		NO	$779	0.04
Paying Agent/Registrar	Bank of New York	NO	$764	0.04
Printing	Hilltop Securities, Inc.	NO	$134	0.01
Printing	Hilltop Securities, Inc.	NO	$863	0.04
	Total		**$47,366**	**2.22**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$4,027	0.19
Rating Fee	Moody's	Aaa	$3,820	0.18
Rating Fee	S&P	AAA	$3,448	0.16
		Total	**$11,295**	**0.53**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$8,208	0.39
Takedown	$55,495	2.60
Total	**$63,703**	**2.99**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$5,574	0.26	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Wells Fargo Bank, NA	NO	50.00%			73.77%	$40,938
JP Morgan	NO	12.50%			9.87%	$5,477
Mesirow Financial, Inc.	NO	12.50%			6.51%	$3,611
Ramirez & Co., Inc.	**HA**	12.50%			5.02%	$2,785
Hutchinson Shockey Erley & Co.	NO	12.50%			4.84%	$2,685
		Total			**100%**	**$55,496**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Refunding Bonds Series 2019E (WIF)

Purpose The Bonds are being issued for the purpose of conserving and developing the water resources of the State by providing funds for the refunding of the Refunded Bonds.

Actual Par $121,990,000
Sale Type Negotiated
Sale Date 5/15/2019
Closing Date 6/20/2019

Series Name	TIC	NIC	Is Variable
WFA Ref Bonds Ser 2019E-1 (WIF)	2.11%	2.13%	No
WFA Ref Bonds Ser 2019E-2 (WIF)			Yes

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.08
Bond Counsel	Norton Rose Fulbright US LLP	NO	$94,907	0.78
Disclosure Counsel	Bracewell, LLP	NO	$21,266	0.17
Escrow Agent	Bank of New York	NO	$456	0.00
Financial Advisor	Hilltop Securities, Inc.	NO	$85,665	0.70
Miscellaneous		NO	$4,462	0.04
Paying Agent/Registrar	Bank of New York	NO	$2,148	0.02
Printing	Hilltop Securities, Inc.	NO	$765	0.01
Printing	Hilltop Securities, Inc.	NO	$4,945	0.04
	Total		**$224,114**	**1.84**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$23,061	0.19
Rating Fee	Moody's	Aaa	$21,874	0.18
Rating Fee	S&P	AAA	$19,747	0.16
		Total	**$64,682**	**0.53**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$46,964	0.39
Takedown	$272,603	2.23
Total	**$319,567**	**2.62**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$31,895	0.26	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Wells Fargo Bank, NA	NO	50.00%			49.38%	$134,602
JP Morgan	NO	12.50%			17.01%	$46,375
Mesirow Financial, Inc.	NO	12.50%			13.54%	$36,906
Ramirez & Co., Inc.	**HA**	12.50%			10.20%	$27,793
Hutchinson Shockey Erley & Co.	NO	12.50%			9.88%	$26,927
		Total			**100%**	**$272,603**

Issuer **Texas Water Development Board**

Issuance Water Financial Assistance Refunding Bonds Series 2019F (EDAP)

Purpose The Bonds are being issued for the purpose of conserving and developing the water resources of the State by providing funds for the refunding of the Refunded Bonds.

Actual Par $7,355,000
Sale Type Negotiated
Sale Date 5/15/2019
Closing Date 6/20/2019

Series Name	TIC	NIC	Is Variable
WFA Ref Bonds Ser 2019F (EDAP)	1.65%	1.78%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$7,355	1.00
Bond Counsel	Norton Rose Fulbright US LLP	NO	$5,717	0.78
Disclosure Counsel	Bracewell, LLP	NO	$1,281	0.17
Escrow Agent	Bank of New York	NO	$27	0.00
Financial Advisor	Hilltop Securities, Inc.	NO	$5,160	0.70
Miscellaneous		NO	$269	0.04
Paying Agent/Registrar	Bank of New York	NO	$764	0.10
Printing	Hilltop Securities, Inc.	NO	$46	0.01
Printing	Hilltop Securities, Inc.	NO	$298	0.04
	Total		**$20,917**	**2.84**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$1,389	0.19
Rating Fee	Moody's	Aaa	$1,318	0.18
Rating Fee	S&P	AAA	$1,190	0.16
		Total	**$3,897**	**0.53**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$2,832	0.39
Takedown	$16,465	2.24
Total	**$19,297**	**2.62**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$1,923	0.26	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Wells Fargo Bank, NA	NO	50.00%			53.07%	$8,739
JP Morgan	NO	12.50%			19.98%	$3,290
Mesirow Financial, Inc.	NO	12.50%			10.95%	$1,802
Ramirez & Co., Inc.	**HA**	12.50%			8.14%	$1,341
Hutchinson Shockey Erley & Co.	NO	12.50%			7.86%	$1,294
		Total			**100%**	**$16,466**

Issuer **Texas Woman's University**

Issuance Revenue Financing System Refunding Bonds Series 2019

Purpose The proceeds from the sale of the Bonds will be used for the following purposes: (i) currently refund certain outstanding obligations of the Board to realize a net present value debt service savings and (ii) pay costs of issuance of the Bonds.

Actual Par $7,885,000
Sale Type Negotiated
Sale Date 7/9/2019
Closing Date 8/6/2019

Series Name	TIC	NIC	Is Variable
RFS Ref Bonds Ser 2019	1.86%	2.07%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$7,885	1.00
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$16,443	2.09
Escrow Agent	Bank of New York Mellon Trust Co.	NO	$300	0.04
Financial Advisor	RBC Capital Markets	NO	$38,993	4.95
Miscellaneous		NO	$4,356	0.55
Paying Agent/Registrar	Bank of Oklahoma, NA	NO	$400	0.05
Printing	MuniHub	NO	$750	0.10
	Total		**$69,127**	**8.77**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Moody's	Aa3	$18,500	2.35
		Total	**$18,500**	**2.35**

Fee Name	Actual Fee	$ Per 1000
Management Fee	$7,885	1.00
Structuring Fee	$16,572	2.10
Takedown	$31,569	4.00
Total	**$56,026**	**7.11**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel		NO	$12,000	1.52	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Hilltop Securities Inc	NO	100.00%	100.00%	$7,885	100.00%	$31,569
		Total	**100%**	**$7,885**	**100%**	**$31,569**

Issuer **University of North Texas System**

Issuance Revenue Financing System Refunding and Improvement Bonds Taxable, Series 2018B

Purpose The proceeds of the Series 2018B Bonds will be used for the purposes of 1) acquiring, purchasing, constructing, improving, renovating, enlarging or equipping property, buildings, structures, facilities, roads, or related infrastructure throughout the University System; 2) refunding a portion of the Board's outstanding Series A and Series B Commercial Paper Notes; and 3) paying certain costs of issuing the Series 2018B Bonds.

Actual Par $22,685,000
Sale Type Negotiated
Sale Date 8/15/2018
Closing Date 9/11/2018

Series Name	TIC	NIC	Is Variable
RFS Refunding and Improvement Bonds Taxable, Series 2018B	3.28%	3.28%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.42
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$15,593	0.69
Financial Advisor	Hilltop Securities, Inc.	NO	$14,182	0.63
Miscellaneous		NO	$15,554	0.69
Paying Agent/Registrar	BOKF, NA	NO	$400	0.02
Printing	MuniHub	NO	$613	0.03
	Total		**$55,842**	**2.46**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AA	$13,181	0.58
Rating Fee	Moody's	Aa2	$14,169	0.62
		Total	**$27,350**	**1.21**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$14,801	0.65
Takedown	$63,013	2.78
Total	**$77,814**	**3.43**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Co-Underwriters Counsel	Mahomes Bolden, PC	**BA**	$3,403	0.15	Yes
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$6,806	0.30	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
JP Morgan Securities	NO	40.00%			43.61%	$27,478
Raymond James	NO	15.00%			16.21%	$10,215
Blaylock Van, LLC	**BA**	15.00%			16.21%	$10,215
Wells Fargo Securities	NO	15.00%			12.59%	$7,933
Goldman Sachs & Co.	NO	15.00%			11.38%	$7,172
		Total			**100%**	**$63,013**

Issuer **University of North Texas System**

Issuance Revenue Financing System Refunding and Improvement Bonds, Series 2018A

Purpose The proceeds from the sale of the Series 2018A Bonds will be used for the purpose of 1) acquiring, purchasing, constructing, improving, renovating, enlarging or equipping property, buildings, structures, facilities, roads, or related infrastruture throughout the University System; 2) refunding a portion of the Board's outstanding Series A and Series B Commercial Paper Notes; and 3) paying certain costs of issuing the Series 2018A Bonds.

Actual Par $149,425,000
Sale Type Negotiated
Sale Date 8/15/2018
Closing Date 9/11/2018

Series Name	TIC	NIC	Is Variable
Revenue Financing System Refunding and Improvement Bonds, Series 2018A	3.76%	4.00%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.06
Bond Counsel	McCall Parkhurst & Horton, LLP	NO	$81,263	0.54
Financial Advisor	Hilltop Securities, Inc.	NO	$93,418	0.63
Miscellaneous		NO	$40,982	0.27
Paying Agent/Registrar	BOKF, NA	NO	$400	0.00
Printing	MuniHub	NO	$4,037	0.03
	Total		**$229,600**	**1.54**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AA	$86,819	0.58
Rating Fee	Moody's	Aa2	$93,331	0.62
		Total	**$180,150**	**1.21**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$88,277	0.59
Takedown	$558,644	3.74
Total	**$646,921**	**4.33**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Co-Underwriters Counsel	Mahomes Bolden, PC	**BA**	$22,414	0.15	Yes
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$44,828	0.30	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
JP Morgan Securities	NO	40.00%			49.10%	$274,497
Wells Fargo Securities	NO	13.33%			14.99%	$83,556
Goldman Sachs & Co.	NO	20.00%			13.73%	$76,904
Raymond James	NO	13.33%			12.13%	$67,499
Blaylock Van, LLC	**BA**	13.33%			10.06%	$56,189
		Total			**100%**	**$558,645**

Issuer **University of Texas System**

Issuance Revenue Financing System Bonds Series 2019B

Purpose Proceeds from the sale of the bonds will be used for the purpose of refunding a portion of the Board's Revenue Financing System Commercial Paper Notes, Series A ($449,478,000) and paying the costs of issuance of the Bonds.

Actual Par $318,715,000
Sale Type Negotiated
Sale Date 6/27/2019
Closing Date 7/18/2019

Series Name	TIC	NIC	Is Variable
RFS Bonds Ser 2019B	2.71%	3.40%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.03
Bond Counsel	McCall, Parkhurst & Horton LLP	NO	$154,099	0.48
Disclosure Counsel	McCall, Parkhurst & Horton LLP	NO	$17,500	0.05
Escrow Agent	US Bank, NA	NO	$500	0.00
Escrow Verification	Causey Demgen & Moore, PC	NO	$2,000	0.01
Paying Agent/Registrar	UMB Financial Corp.	NO	$3,500	0.01
Printing	ImageMaster, LLC	NO	$2,007	0.01
Travel		NO	$1,472	0.00
	Total		**$190,578**	**0.60**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$40,000	0.13
Rating Fee	Moody's	Aaa	$65,000	0.20
Rating Fee	S&P	AAA	$63,628	0.20
		Total	**$168,628**	**0.53**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$75,778	0.24
Takedown	$926,145	2.91
Total	**$1,001,923**	**3.14**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$37,500	0.12	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Citigroup	NO	50.00%			50.26%	$465,478
Bank of America Securities, LLC	NO	22.00%			23.88%	$221,140
Siebert Cisneros Shank & Co., LLC	**BA**	4.00%			6.50%	$60,220
Ramirez & Co., Inc.	**HA**	4.00%			5.24%	$48,503
Raymond James	NO	4.00%			4.01%	$37,122
Jefferies, LLC	NO	4.00%			3.90%	$36,092
Mesirow Financial, Inc.	NO	4.00%			2.76%	$25,521
FTN Financial Capital Markets	NO	4.00%			2.65%	$24,570

Stephens, Inc.	NO	4.00%			0.81%	$7,500
		Total			**100%**	**$926,145**

Issuer **University of Texas System**

Issuance Revenue Financing System Refunding Bonds, Series 2019A

Purpose Proceeds from the sale of the bonds will be used for the purpose of refunding certain long-term parity debt for savings and paying the costs of issuance.

Actual Par $320,435,000
Sale Type Negotiated
Sale Date 5/8/2019
Closing Date 6/13/2019

Series Name	TIC	NIC	Is Variable
RFS Ref Bonds, Series 2019A	2.80%	3.19%	No

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000
Attorney General		NO	$9,500	0.03
Bond Counsel	McCall, Parkhurst & Horton LLP	NO	$141,286	0.44
Disclosure Counsel	McCall, Parkhurst & Horton LLP	NO	$35,000	0.11
Escrow Agent	UMB Financial Corp.	NO	$500	0.00
Miscellaneous	Causey Demgen & Moore, PC	NO	$2,000	0.01
Miscellaneous	Wells Fargo Bank, NA	NO	$500	0.00
Paying Agent/Registrar	US Bank, NA	NO	$3,400	0.01
Printing	ImageMaster, LLC	NO	$2,009	0.01
Travel		NO	$1,230	0.00
		Total	**$195,425**	**0.61**

Fee Name	Rating Agency	Assigned Rating	Actual Fee	$ Per 1000
Rating Fee	Fitch	AAA	$0	0.00
Rating Fee	Moody's	Aaa	$65,000	0.20
Rating Fee	S&P	AAA	$64,087	0.20
		Total	**$129,087**	**0.40**

Fee Name	Actual Fee	$ Per 1000
Spread Expenses	$94,389	0.29
Takedown	$1,030,939	3.22
Total	**$1,125,328**	**3.51**

Fee Name	Firm Name	HUB	Actual Fee	$ Per 1000	UW Paid
Underwriter Counsel	Orrick Herrington & Sutcliffe, LLP	NO	$37,500	0.12	Yes

Firm Name	HUB	% of Risk	Mgmt Fee %	Mgmt Fee $	Take Down %	Take Down $
Morgan Stanley	NO	50.00%			54.82%	$565,174
Goldman Sachs & Co.	NO	20.00%			20.79%	$214,334
Piper Jaffray & Co.	NO	5.00%			5.72%	$58,950
UBS Financial Services, Inc.	NO	5.00%			5.47%	$56,438
RBC Capital Markets, LLC	NO	5.00%			5.12%	$52,787
Loop Capital Markets, LLC	NO	5.00%			4.37%	$45,088
Fidelity Investments	NO	5.00%			3.42%	$35,288

Estrada Hinojosa & Co., Inc.	**HA**	5.00%			0.28%	$2,879
		Total			**100%**	**$1,030,939**

Appendix B
State Commercial Paper and Variable-Rate Note Programs

Several state agencies and institutions of higher education have established commercial paper and/or variable-rate debt financing programs that provide financing for equipment or capital projects or provide loans to eligible entities.

As of August 31, 2019, a total of $6.58 billion was authorized for state commercial paper or variable-rate note programs. Of this amount, $2.27 billion was outstanding as of the end of fiscal year 2019 (*Table B1*), approximately $130.8 million more than the amount outstanding at fiscal year-end 2018.

A summary of each commercial paper or variable-rate debt program is provided below.

Texas Department of Agriculture

In 1991, the Texas Agricultural Finance Authority (TAFA), a public authority within the Texas Department of Agriculture, was authorized to establish a taxable commercial paper note program. TAFA issues commercial paper to purchase and guarantee loans made to businesses involved in the production, processing, marketing, and exporting of Texas agricultural products. The commercial paper notes are a general obligation of the state; however, the program is designed to be self-supporting.

During fiscal year 1995, TAFA established a second general obligation taxable commercial paper note program to make funds available for the Farm and Ranch Finance Program. The program was established to provide loans and other financial assistance through local lending institutions to eligible borrowers for the purchase of farm or ranch land.

Texas Department of Housing and Community Affairs

The Texas Department of Housing and Community Affairs (TDHCA) established a single-family mortgage revenue commercial paper program in 1994. The program enables TDHCA to capture mortgage payments and prepayments and recycle them into mortgage loans. By issuing commercial paper notes to satisfy the mandatory redemption provisions of outstanding single-family mortgage revenue bonds instead of using the payments and prepayments to redeem bonds, TDHCA is able to preserve the private activity volume cap and generate new mortgage loans.

While still legislatively authorized, the program was terminated in July 2009. TDHCA has no plans to use the authority, and reauthorization from the Bond Review Board (BRB) would be required to reestablish the program.

Texas Department of Transportation

In July 2005, the Texas Transportation Commission (the Commission), the governing body of the Texas Department of Transportation, authorized a commercial paper program to issue up to $500.0 million in commercial paper to carry out transportation functions.

In June 2013, the Commission suspended the commercial paper program and created the State Highway Fund Revenue Flexible Rate Revolving Notes Program. The State Highway Fund Revenue Flexible Rate Revolving Notes, Series B was terminated on October 1, 2018. The Series B Note was part of TxDOT's cash management program that was used to manage fluctuations in the balance of the State Highway Fund; however, it was no longer needed.

Texas Economic Development and Tourism Office

In 1992, the Department of Commerce, subsequently the Texas Economic Development and Tourism Office (the Office) was granted $300.0 million of authority to issue commercial paper to fund loans to Texas businesses under three programs. Under the first program marketed as the Texas Leverage Fund, the Office approves loans to local industrial development corporations. Revenues from an optional local half-cent sales tax for economic development secure these loans. The second program provides

Table B1

TEXAS COMMERCIAL PAPER AND VARIABLE-RATE NOTE PROGRAMS

as of August 31, 2019

ISSUER	TYPE OF PROGRAM	AMOUNT AUTHORIZED	AMOUNT ISSUED FISCAL YEAR 2019	AMOUNT OUTSTANDING
Texas Department of Agriculture [1]				
TAFA	Commercial Paper - Series A	$ 50,000,000	$ -	$ -
Farm and Ranch Loans	Commercial Paper - Series B	25,000,000	-	-
Texas Dept. of Housing & Community Affairs	Commercial Paper	-	-	-
Texas Department of Transportation				
State Highway Fund	Flexible-Rate Notes - Series B	-	-	-
Texas Economic Dev & Tourism Office [2]	Commercial Paper	25,000,000	-	-
Texas Public Finance Authority				
Revenue	Commercial Paper - 2003	150,000,000	1,240,000	24,390,000
Revenue	Commercial Paper - 2016A	767,670,000	102,000,000	-
General Obligation [3]	Commercial Paper - 2002A	850,000,000	-	-
General Obligation	Commercial Paper - 2002B	175,000,000	-	-
General Obligation [4]	Commercial Paper - 2008	1,000,000,000	11,850,000	45,200,000
General Obligation - Cancer Prevention	Commercial Paper - Series A	450,000,000	131,725,000	131,725,000
and Research Institute of Texas	Commercial Paper - Series B		-	-
Texas State University System	Commercial Paper	240,000,000	96,200,000	124,980,000
Texas Tech University System				
Revenue Financing System	Commercial Paper	150,000,000	19,500,000	50,795,000
The Texas A&M University System				
Permanent University Fund	Flexible-Rate Notes	-	-	-
Permanent University Fund	Commercial Paper	125,000,000	97,350,000	125,000,000
Revenue Financing System	Commercial Paper	300,000,000	270,000,000	136,985,000
The University of Texas System				
Permanent University Fund [5]	Commercial Paper - Series A	750,000,000	145,000,000	595,000,000
Permanent University Fund [5]	Commercial Paper - Series B		-	95,000,000
Revenue Financing System [5]	Commercial Paper - Series A	1,250,000,000	219,132,000	729,042,000
Revenue Financing System [5]	Commercial Paper - Series B		-	71,480,000
University of Houston System				
Revenue Financing System	Commercial Paper - Series A-1	125,000,000	22,000,000	27,894,000
Revenue Financing System	Commercial Paper - Series A-2		5,000,000	67,078,000
University of North Texas System				
Revenue Financing System	Commercial Paper - Series A	75,000,000	9,200,000	11,280,000
Revenue Financing System	Commercial Paper - Series B	75,000,000	37,900,000	37,900,000
Total		**$ 6,582,670,000**	**$ 1,168,097,000**	**$ 2,273,749,000**

Source: Texas Bond Review Board - Bond Finance Office.

[1] Represents the maximum amount authorized by the Bond Review Board; however, the Texas Agricultural Finance Authority (Department of Agriculture) has approved a $100 million program amount.

[2] Represents the maximum amount authorized by the Bond Review Board; however, the program has a $300 million program amount. Statutory changes are needed to continue the program.

[3] Constitution authorizes $850,000,000 and requires Legislative appropriation for amounts for specific projects. The Legislature appropriated funds from FY 2002-2011.

[4] Constitution authorizes $1,000,000,000 and requires Legislative appropriation for amounts for specific projects. The Legislature appropriated funds from FY 2008-2015.

[5] Represents cumulative total amount for Series A (tax-exempt) & B (taxable) with no limitation on the amount issued in each series, provided that the total outstanding amount will not exceed the maximum authorization.

for the purchase of small business loans which are fully guaranteed by the U.S. Small Business Administration. A third program may make loans directly to businesses from program reserves. The program is designed to be self-supporting, and the commercial paper is taxable. The maximum authority approved by the Bond Review Board is $25.0 million for the Texas Leverage Fund.

Texas Public Finance Authority

In 1992, the Texas Public Finance Authority (TPFA) established a Master Lease Purchase Program (MLPP) that is funded through commercial paper. The commercial paper issued to date has primarily been used to finance the purchase of equipment with shorter useful lives such as computers and telecommunications equipment. TPFA also has the authority to use the commercial paper to provide interim financing for capital projects undertaken on behalf of state agencies. The MLPP commercial paper is a special revenue obligation of the state, payable only from legislative appropriations to the participating agencies for lease payments.

During fiscal year 1993, TPFA established a variable-rate financing program that is secured by the state's general obligation pledge. The proceeds are used to provide interim financing for capital projects that are authorized by the legislature and financed through general obligation bonds. In 2002, TPFA established a commercial paper program that is also secured by the state's general obligation pledge to provide financial assistance to border counties for roadways in colonias.

In 2008, TPFA established another commercial paper program that is also secured by the state's general obligation pledge to: (i) provide interim financing for maintenance, improvement, repair, construction, and equipment-acquisition projects for state agencies, (ii) refund and refinance the Notes and (iii) pay the costs of issuance of the Notes.

In the November 2007 general election, Texas voters authorized TPFA to issue $3.00 billion of general obligation debt over ten years to finance cancer research. During fiscal year 2009, TPFA established a commercial paper program that is also secured by the state's general obligation pledge to provide financing of certain projects for the Cancer Prevention and Research Institute of Texas. The first issuance occurred in September 2009.

In the General Appropriations Act, the 84th Legislature authorized the issuance of $767.7 million of revenue bonds and appropriated those bond proceeds to the Texas Facilities Commission for phase one of the North Austin and Capitol Complex projects. In May of 2016, TPFA established a commercial paper program to provide interim financing for this project. The 86th Legislature authorized the issuance of $475.2 million of additional revenue bonds and appropriated those bond proceeds to the Texas Facilities Commission for phase two of the North Austin and Capitol Complex projects.

Texas State University System

On May 22, 2014, the Texas State University System adopted the Eighteenth Supplemental Resolution to the Master Resolution Establishing the Texas State University System Revenue Financing System (RFS) Commercial Paper Program, Series A. The aggregate principal amount of commercial paper outstanding authorized by the resolution may not exceed $240.0 million.

Texas Tech University System

In November 1997, the Board of Regents of Texas Tech University System (the "TTU System") authorized a RFS commercial paper program to provide interim financing for capital projects, including construction, acquisition, renovation, and equipment for facilities of the TTU System. The commercial paper is secured by a pledge of all legally available revenues of the TTU System, including pledged tuition fees, general fees, and other revenue sources and has a maximum authorization amount limited to $150,000,000.

The Texas A&M University System

The Texas A&M University System (the A&M System) has authorized three variable-rate financing programs: a flexible-rate note program and a commercial paper program, both secured by the Permanent University Fund (PUF), as well as a commercial paper program secured by the A&M System revenues. The A&M System's PUF flexible-rate note program and the PUF commercial paper program were established in 1988 and 2008, respectively, to provide interim financing and equipping of facilities for eligible construction projects. The A&M System's total outstanding PUF commercial paper notes and flexible-rate notes may not exceed $125.0 million in principal amount at any time. The Board of Regents adopted a resolution to discontinue the authorization for the PUF flexible rate notes program on September 3, 2015.

The A&M System's RFS Commercial Paper Program was established in 1992 to provide interim financing for capital projects, including construction, acquisition, and renovation or equipping of facilities throughout the A&M System. Outstanding RFS commercial paper may not exceed $300.0 million in principal amount at any time and is secured by a pledge of all legally available revenues to the A&M System, including pledged tuition revenue and fees, general fees, and other revenue sources. The A&M System has a self-liquidity facility for this program.

The University of Texas System

The University of Texas System (the "UT System") has two primary interim financing programs: a RFS commercial paper note program and a PUF commercial paper note program, both of which feature taxable and tax-exempt commercial paper options.

The UT System's RFS commercial paper note program was established in 1990 to provide interim financing for capital projects, including construction, acquisition, and renovation or equipping of facilities. RFS commercial paper notes are secured by a pledge of all legally available revenues of the UT System, including pledged tuition fees, general fees, and other revenue sources. The UT System's aggregate amount of outstanding RFS commercial paper notes may not exceed $1.25 billion in principal amount at any time.

The UT System's PUF commercial paper note program was established in 2008 to replace a previously authorized $400 million PUF flexible-rate note program. The UT System expects to utilize the PUF commercial paper note program as its primary short-term financing vehicle for PUF-related projects. PUF commercial paper notes provide interim financing for eligible capital projects, including construction, acquisition, and renovation or equipping of facilities. PUF commercial paper notes are secured by the UT System's share of distributions from the total return on all PUF investments. The UT System's outstanding PUF commercial paper notes may not exceed $750.0 million in principal amount at any time.

University of Houston System

In August 2006, the Board of Regents of the University of Houston System (the UH System) authorized a RFS commercial paper program. The program was established to provide interim financing for capital projects, including construction, acquisition, renovation, and equipment for facilities of the UH System. The commercial paper is secured by a pledge of all legally available revenues of the UH System, including pledged tuition fees, general fees, and other revenue sources and has a maximum authorization amount limited to $125,000,000.

University of North Texas System

In May 2004, the Board of Regents of the University of North Texas System (the UNT System) authorized a RFS commercial paper program in an initial amount not to exceed $50.0 million. The program was established to provide interim financing for capital projects, including construction, acquisition, renovation, and equipment for facilities of the UNT System. The commercial paper is secured by a pledge of all legally available revenues of the UNT System, including pledged tuition fees, general fees, and other revenue sources. In fiscal year 2008, the commercial paper program was increased to an amount not to exceed $100.0 million of which $25.0 million may be issued as taxable notes. In fiscal year 2017, the commercial paper program was again increased to an amount not to exceed $150.0 million with a maximum authorized amount limited to $75.0 million for each of its Series A and Series B notes, respectively.

Other State Issuers of Variable-Rate Debt

Several other state issuers have the authority to issue debt in variable-rate form. State issuers may utilize variable-rate debt in order to diversify their debt portfolio and to take advantage of lower short-term interest rates as available.

The Veterans Land Board is one example of a state issuer that has issued variable-rate housing assistance bonds to diversify its debt portfolio. Similarly, the Texas Water Development Board is authorized to issue subordinate-lien variable-rate demand revenue bonds as part of the State Revolving Fund program.

Comptroller of Public Accounts Liquidity Facility Provider Duties

The 73rd Legislature passed legislation that authorized the Comptroller of Public Accounts to enter into agreements to provide liquidity for obligations issued for governmental purposes by an agency of the state. Pursuant to Section 404.027 of the Texas Government Code, the Comptroller may enter into agreements to provide liquidity for agency obligations issued for governmental purposes if it does not conflict with the Treasury's liquidity needs. Eligible obligations include commercial paper, variable-rate demand obligations, and bonds. At fiscal year-end 2019, the Comptroller of Public Accounts provided daily liquidity commitments totaling $642.1 million out of a total of $921.3 million in such commitments for state obligations.

Appendix C
State Issuers' Use of Swaps

Interest rate swaps are part of a larger class of financial instruments called derivatives whose value is based on the performance of an underlying financial asset, index, or other investment. While a variety of derivative products are available, Texas issuers most often use interest rate swaps. Swaps are primarily used as tools for financial management to reduce interest expense and hedge against interest rate, tax, basis, and other risks described below. Swaps can also increase financial flexibility and are used to achieve objectives consistent with the issuer's overall program goals and financial policies.

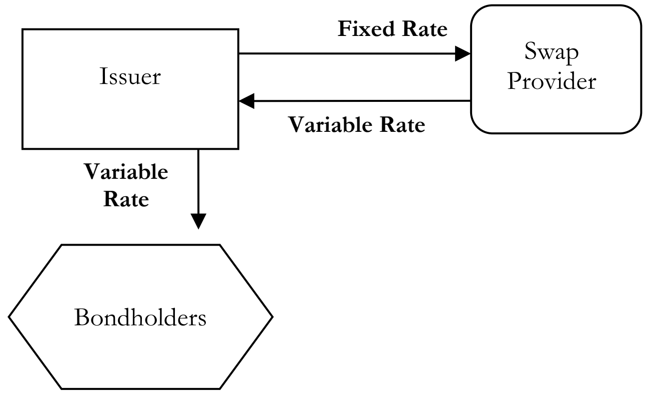
Swaps Used by State Issuers

An interest rate swap is created when a debt issuer and a financial institution, each referred to as a counterparty, enter into a contract to exchange interest payments. The types of swaps most often utilized by Texas issuers are pay-fixed, receive-variable and pay-variable, receive-variable (basis) interest rate swaps. As of August 31, 2019, pay-fixed, receive-variable swaps comprised approximately 80.6 percent ($4.32 billion) of the state's $5.36 billion in total notional amount of swaps outstanding. The balance were basis swaps. See *Table C1* for the total number of swaps outstanding by issuer at August 31, 2019.

Pay-fixed, receive-variable swap (synthetic fixed-rate swap)

By accepting certain risks with pay-fixed, receive-variable swaps, issuers may be able to lower their borrowing costs compared to issuing traditional, fixed-rate bonds. Under this arrangement, which creates *synthetic fixed-rate debt,* the issuer agrees to make fixed-rate payments to the swap counterparty and the swap counterparty agrees to pay the issuer variable, index-based rate payments that are expected to be comparable to the rates payable on the variable-rate debt associated with the swap agreement. This swap program is illustrated below.

Synthetic Fixed-Rate Swap



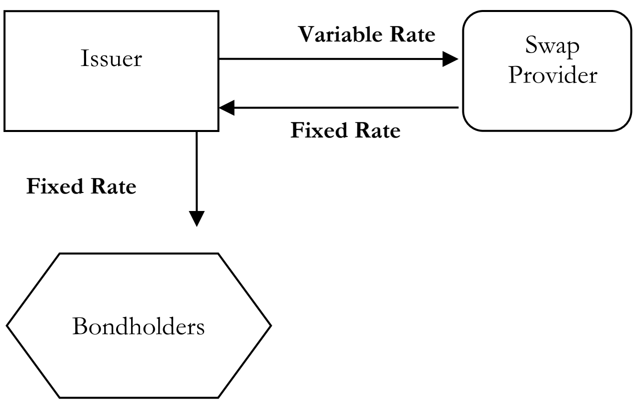
To structure such a transaction, issuers must analyze the impact of issuing either natural or synthetic fixed-rate debt. If the spread between the two is sufficient to compensate the issuer for accepting certain risks associated with synthetic fixed-rate debt, the issuer will execute the swap and issue the associated variable-rate debt. The issuer remains obligated to make debt-service payments to the variable-rate bond holders, even if the variable-rate payment received from the swap counterparty does not cover the variable-rate payment due on the associated bonds (see discussion on Basis Risk).

The variable rates received under most of the state's pay-fixed, receive-variable interest rate swaps are based on the London Interbank Offered Rates (LIBOR) taxable rate index. Certain other of the state's pay-fixed, receive-variable interest rate swaps are based on the tax-exempt Securities Industries and Financial Market Association (SIFMA) Swap Index, formerly known as the BMA Swap Index produced by Municipal Market Data (MMD).

During fiscal year 2009 two pay-fixed, receive-variable swap contracts, associated with the Veterans Land Board (VLB) Veterans' Housing Assistance Program, Fund II Series 2004A and 2005B Bonds were terminated as a result of the bankruptcy of Lehman Brothers and are now classified as variable-rate debt. During fiscal year 2019, VLB added a pay-fixed, receive-variable swap to its Series 2019 bonds with an initial notional amount of $250.0 million.

Pay-variable, receive-fixed swap (synthetic floating-rate swap)
Conversely, *synthetic floating-rate debt* is created when the issuer sells fixed-rate debt and enters into a fixed-to-floating rate swap. The issuer agrees to pay variable-rate payments to the counterparty and in exchange receives a fixed-rate payment from the swap counterparty. As with synthetic fixed-rate debt, the rate to be paid is tied to an underlying reference index such as the *taxable* LIBOR or the *tax-exempt* SIFMA Index. This swap program is illustrated below.

Synthetic Floating-Rate Swap



During fiscal year 2011, VLB exercised its option to terminate its only synthetic floating rate swap due to the contract's favorable fair market value. As of August 31, 2019, no synthetic floating-rate swaps were outstanding.

Pay-variable, receive-variable swap (basis swap)
The pay-variable, receive-variable swaps (called *basis* swaps) are LIBOR-to-SIFMA basis swaps that effectively convert the variable rate on the associated taxable variable-rate bond issues from a *taxable* LIBOR-based rate to a *tax-exempt* SIFMA-based rate.

On January 31, 2013, Texas Department of Transportation terminated its three basis swap agreements with JP Morgan, Goldman Sachs, and Morgan Stanley.

As of August 31, 2019, basis swaps comprised approximately 19.4 percent ($1.04 billion) of the state's total notional amount of swaps outstanding. During fiscal year 2017, the University of Texas System added a municipal market data (MMD) basis swap to its Series 2016A bonds, which will provide a fixed spread on the notional amount outstanding of $255.8 million.

Risk Analysis
State issuers considering entering into an interest-rate swap agreement must assess the risks associated with the transaction. Some issuers include contractual limitations or options that assist in reducing those risks. For example, the VLB has the option to terminate its swap agreements at any time. Generally, the risks associated with interest rate swaps fall into the following categories:

Termination Risk – the risk that an interest rate swap could be terminated prior to its scheduled termination date as a result of any of several events relating to either the issuer or its counterparty. The issuer or the counterparty may terminate a swap if the other party fails to perform under the terms of the swap agreement. If a swap has a negative fair value, the issuer would owe the respective counterparty a termination payment equal to the swap's fair value at the time of termination (see discussion on Fair Value).

Credit Risk – the risk that either the counterparty or the issuer will not fulfill its obligations specified by the terms of the swap agreement. State issuers mitigate this risk by entering into transactions with highly rated counterparties. The issuers also mitigate concentrations of credit risk by diversifying their swap portfolios among different counterparties. Credit risk also includes the risk of the occurrence of an event that would modify the credit rating of an issuer or its counterparty.

Basis Risk – the risk of a shortfall between the interest payment received and the interest payment paid on the related debt issue. An issuer mitigates this risk by: 1) matching the swap's notional amount and amortization schedule to the associated bond issue's principal amount and amortization schedule and 2) selecting a variable-rate leg for the swap that is reasonably expected to match the interest rate on the associated variable-rate bonds over the life of the bond issue.

Rollover Risk – the risk associated with the counterparty's option to terminate the swap. If the swap is terminated by the counterparty, the associated variable-rate bonds would no longer have a synthetic fixed rate and would be subject to interest-rate risk to the extent the variable-rate bonds were not hedged with another swap or with variable-rate assets on the issuer's balance sheet.

Tax Risk – the risk associated with potential changes in the taxation of the issuer's tax-exempt, variable-rate bonds as a result of changes in marginal income tax rates and other changes in the federal and state tax systems.

Fair Value – the value of a swap estimated by using market-standard practice that includes a calculation of future net settlement payments required by the swap based on market expectations implied by the current yield curve for interest rate transactions. For a swap with embedded options, additional calculations are made to determine the value of the options.

When the fair value of a swap is positive, the counterparty is liable to the issuer for the fair value in the event of termination of the swap. In this instance, the issuer is exposed to counterparty credit risk; however, issuer swap agreements contain varying collateral agreements and insurance policies with counterparties to mitigate credit risk.

Due to the general reduction in interest rates over the last several years, the net fair value of the state's outstanding swaps was negative on August 31, 2019, indicating that Texas swap issuers would be liable for payments to the counterparty for the fair values of the swaps in the unlikely event of termination. However, it is important to note that issuers have achieved significant savings in interest costs by use of interest rate swaps. (See *Table C2* for the terms, counterparty credit ratings, and fair values for the state's swaps outstanding by issuer on August 31, 2019.)

Additional Derivative Products

In addition to interest rate swaps, additional derivative products used by Texas issuers include the following:

Options on Swaps – sale or purchase of options to commence or cancel interest rate swaps. Several of the VLB swaps contain embedded options called barrier options that provide for the VLB to be "knocked out" of the swaps by the respective counterparties for varying periods of time upon the breach of certain predetermined barriers. In each of these cases, the respective counterparties paid the VLB an up-front premium for the option.

Interest Rate Caps – financial contracts called caps, collars, or floors limit or bound exposure to interest rate volatility.

Rate Locks – rate locks are often based on interest rate swaps and may be used to hedge against a rise in interest rates for an upcoming fixed-rate bond issue.

Management Policy

State issuers with swap transactions outstanding or those issuers contemplating entering into swap agreements have adopted derivative or swap-management policies outlining the objectives, management, oversight, monitoring, selection, and restrictions for their derivative or swap agreements.

With the passage of Senate Bill 1332 during the 80th Legislature, the Bond Review Board's (BRB) statutes were modified to add a definition of interest rate management (derivative) agreements and to require the BRB to develop a related policy. In fiscal year 2009, the BRB engaged a swap advisor to assist with the development of a state interest rate management policy and analysis of interest rate management agreements. This policy can be found on the agency's website.

In fiscal year 2010 the BRB amended its administrative rules to require issuers that enter into derivative agreements to submit additional information for staff review, including a copy of all schedules to the Master Agreement and/or the Credit Support Annex and transaction confirmations. Additionally, issuers must notify the BRB within 10 days of material adverse changes involving the parties to derivative agreements.

Table C1

NOTIONAL AMOUNTS - INTEREST RATE SWAPS

As of August 31, 2019 (Unaudited)

(amounts in thousands)

	Original Notional Amount	Current Notional Amount	Current Fair Value	Total # of Swaps
Veterans Land Board				
Pay-Fixed, Receive-Variable Total	$3,717,025	$2,619,570	-$275,886	54
Pay-Variable, Receive-Variable Total	40,000	25,960	-97	1
TOTAL VLB	**$3,717,065**	**$2,645,530**	**-$275,984**	**55**
Texas Department of Housing and Community Affairs				
Pay-Fixed, Receive-Variable Total	$331,005	$71,270	-$6,297	4
TOTAL TDHCA	**$331,005**	**$71,270**	**-$6,297**	**4**
The University of Texas System				
Pay-Fixed, Receive-Variable Total	$1,931,851	$1,626,205	-$351,085	9
Pay-Variable, Receive-Variable Total	1,037,508	1,015,465	29,455	8
TOTAL UTS	**$2,969,359**	**$2,641,670**	**-$321,630**	**17**
Totals				
Pay-Fixed, Receive-Variable	$5,979,881	$4,317,045	-$357,658	67
Pay-Variable, Receive-Variable (basis swaps)	1,037,548	1,041,425	29,454	9
TOTAL INTEREST RATE SWAPS	**$7,017,429**	**$5,358,470**	**-$328,204**	**76**

Source: Texas Bond Review Board - Bond Finance Office.

Table C2

VETERANS LAND BOARD - INTEREST RATE SWAPS

As of August 31, 2019 (Unaudited)

(amounts in thousands)

PAY-FIXED, RECEIVE VARIABLE (Synthetic Fixed Rate) Bond Issue	**Original Notional Amount**	**Current Notional Amount**	**Effective Date**	**Swap Termination Date**	**Fixed-Rate Paid**	**Variable-Rate Received**	**Counterparty Credit Ratings**	**Current Fair Value**
Vet Hsg Fund II Bds Ser 2001A-2	20,000	20,000	03/22/2001	12/01/2029	4.30%	68% of 1M LIBOR	BBB+/A3	-4,017
Vet Hsg Fund II Bds Ser 2001C-2	25,000	23,465	12/18/2001	12/01/2033	4.37%	68% of 1M LIBOR	AA-/Aa2	-7,236
Vet Land Bds Ser 2002	20,000	12,580	02/21/2002	12/01/2032	4.14%	68% of 1M LIBOR	BBB+/A3	-2,794
Vet Hsg Fund II Bds Ser 2002A-2	38,300	23,045	07/10/2002	06/01/2033	3.87%	68% of 1M LIBOR	A+/Aa2	-5,931
Vet Hsg Fund II Bds Ser 2003A	50,000	19,650	03/04/2003	06/01/2034	3.30%	68% of 1M LIBOR	A+/Aa2	-3,002
Vet Hsg Fund II Bds Ser 2003B	50,000	20,835	10/22/2003	06/01/2034	3.40%	64.5% of 1M LIBOR	AA-/Aa2	-3,159
Vet Hsg Fund II Bds Ser 2004B	50,000	23,195	09/15/2004	12/01/2034	3.68%	68% of 1M LIBOR	A+/Aa2	-4,312
Vet Hsg Fund II Bds Ser 2005A	50,000	22,835	02/24/2005	06/01/2035	3.28%	68% of 1M LIBOR	AA-/Aa2	-3,678
Vet Hsg Fund II Bds Ser 2006A	50,000	25,545	06/01/2006	12/01/2036	3.52%	68% of 1M LIBOR	AA/Aa3	-5,033
Vet Hsg Fund II Bds Ser 2006D	50,000	26,785	09/20/2006	12/01/2036	3.69%	68% of 1M LIBOR	A+/Aa3	-5,651
Vet Hsg Fund II Bds Ser 2007A	54,160	27,135	02/22/2007	06/01/2037	3.65%	68% of 1M LIBOR	AA-/Aa2	-5,896
Vet Hsg Fund II Bds Ser 2007B	50,000	28,340	06/26/2007	06/01/2038	3.71%	68% of 1M LIBOR	A+/Aa2	-6,160
Vet Hsg Fund II Bds Ser 2008A	50,000	28,580	03/26/2008	12/01/2038	3.19%	68% of 1M LIBOR	AA/Aa3	-5,299
Vet Hsg Fund II Bds Ser 2008B	50,000	29,675	09/11/2008	12/01/2038	3.23%	68% of 1M LIBOR	AA-/Aa2	-5,758
Vet Hsg Ser 2010C	74,995	52,010	08/20/2010	12/01/2040	2.31%	68% of 3M LIBOR	BBB+/A3	-5,867
Vet Hsg Ser 2011A	74,995	51,610	03/09/2011	06/01/2041	2.68%	68% of 3M LIBOR	BBB+/A3	-7,443
Vet Hsg Ser 2011B	74,995	52,655	08/25/2011	12/01/2041	2.37%	68% of 3M LIBOR	BBB+/A3	-6,285
Vet Hsg Ser 2011C	74,995	53,630	12/15/2011	06/01/2042	1.92%	68% of 3M LIBOR	AA-/Aa2	-4,317
Vet Hsg Ser 2012A	74,995	53,420	05/23/2012	12/01/2042	1.69%	68% of 3M LIBOR	AA-/Aa2	-3,171
Vet Hsg Ser 2012B	100,000	70,400	11/01/2012	12/01/2042	1.45%	68% of 3M LIBOR	AA-/Aa2	-2,627
Vet Hsg Ser 2013A	99,995	75,810	03/20/2013	06/01/2043	1.70%	68% of 3M LIBOR	AA-/Aa2	-4,790
Vet Hsg Ser 2013B	149,995	114,935	08/22/2013	12/01/2043	2.15%	68% of 1M LIBOR	AA-/Aa2	-12,325
Vet Hsg Tax Ref Bds Ser 2013C	39,560	27,925	12/01/2006	12/01/2026	5.46%	100% of 1M LIBOR	A+/Aa2	-4,689
Vet Hsg Tax Ref Bds Ser 2013C	50,000	24,360	12/01/2007	06/01/2029	4.66%	100% of 1M LIBOR	A+/Aa2	-6,628
Vet Hsg Tax Ref Bds Ser 2013C	16,950	5,015	12/01/2009	12/01/2021	6.22%	100% of 6M LIBOR	A+/Aa2	-310
Vet Hsg Tax Ref Bds Ser 2013C	65,845	48,400	12/01/2009	06/01/2031	5.45%	100% of 6M LIBOR	A+/Aa2	-12,330
Vet Hsg Ser 2014A	150,000	119,005	03/03/2014	06/01/2044	2.18%	68% of 1M LIBOR	A+/Aa2	-13,287
Vet Hsg Fund I Tax Ref Bds Ser 2014B-1	47,865	11,400	12/01/2003	06/01/2021	5.19%	100% of 6M LIBOR	AA-/Aa2	-362
Vet Hsg Fund I Tax Ref Bds Ser 2014B-1	50,000	11,170	06/01/2004	12/01/2024	5.45%	100% of 6M LIBOR	A+/Aa2	-1,319
Vet Hsg Fund II Tax Ref Bds Ser 2014B-1 & B-2	43,870	4,630	12/01/2004	06/01/2020	5.35%	100% of 1M LIBOR	A+/Aa2	-68
Vet Hsg Fund I Tax Ref Bds Ser 2014B-1	19,860	7,400	12/01/2005	12/01/2023	4.93%	100% of 1M LIBOR	A+/Aa2	-650
Vet Hsg Fd I / II Tax Ref Bds Ser 2014B-1 & C-2D	24,885	14,720	12/01/2005	06/01/2026	5.15%	100% of 1M LIBOR	A+/Aa2	-2,037
Vet Land Tax Ref Bds Ser 2014B-3	39,960	10,340	12/01/2000	12/01/2020	6.11%	100% of 6M LIBOR	AA-/Aa2	-413
Vet Land Tax Ref Bds Ser 2014B-3	22,795	13,220	12/01/2005	12/01/2026	6.52%	100% of 6M LIBOR	A+/Aa2	-2,505
Vet Hsg Fund I Tax Ref Bds Ser 2014C-1	22,605	9,120	12/01/2002	06/01/2023	4.91%	100% of 6M LIBOR	AA-/Aa2	-664
Vet Hsg Fund I Tax Ref Bds Ser 2014C-1	21,795	18,000	08/01/2012	12/01/2033	3.76%	68% of 1M LIBOR	AA/Aa3	-4,270
Vet Hsg Fund II Tax Ref Bds Ser 2014C-2	38,570	27,010	06/01/2006	12/01/2026	5.83%	100% of 1M LIBOR	A+/Aa2	-4,760
Vet Hsg Fund II Tax Ref Bds Ser 2014C-2	22,325	12,935	06/01/2006	12/01/2027	5.79%	100% of 6M LIBOR	A+/Aa2	-2,434
Vet Hsg Fund II Tax Ref Bds Ser 2014C-2	66,720	51,215	06/01/2010	12/01/2031	5.40%	100% of 1M LIBOR	A+/Aa2	-14,395
Vet Hsg Fund II Tax Ref Bds Ser 2014C-2	49,995	23,325	12/01/2010	06/01/2032	2.79%	100% of 1M LIBOR	AA-/Aa2	-1,979
Vet Land Tax Ref Bds Ser 2014C-3	50,000	17,705	06/01/2006	12/01/2027	6.54%	100% of 6M LIBOR	A+/Aa2	-4,083
Vet Land Tax Ref Bds Ser 2014C-3	16,480	12,005	12/01/2010	12/01/2030	5.21%	100% of 1M LIBOR	A+/Aa2	-2,878
Vet Land Tax Ref Bds Ser 2014C-4	27,685	13,830	12/01/2002	12/01/2021	4.94%	100% of 6M LIBOR	BBB+/A3	-827
Vet Land Tax Ref Bds Ser 2014C-4	50,000	10,195	12/01/2003	12/01/2023	5.12%	100% of 1M LIBOR	A+/Aa2	-913
Vet Land Tax Ref Bds Ser 2014C-4	24,755	12,410	12/01/2004	12/01/2024	5.46%	100% of 6M LIBOR	BBB+/A3	-1,453
Vet Land Tax Ref Bds Ser 2014C-4	31,030	14,010	06/01/2006	12/01/2026	4.61%	100% of 6M LIBOR	AA-/Aa2	-1,727
Vet Land Tax Ref Bds Ser 2014C-4	41,050	23,435	12/01/2006	12/01/2027	6.51%	100% of 1M LIBOR	A+/Aa2	-5,513
Vet Hsg Ser 2014D	100,000	81,005	09/10/2014	06/01/2045	1.94%	68% of 1M LIBOR	AA-/Aa2	-7,296
Vet Hsg Ser 2015A	125,000	102,185	02/11/2015	06/01/2045	1.51%	68% of 1M LIBOR	BBB+/A3	-5,276
Vet Hsg Ser 2015B	125,000	107,595	07/22/2015	06/01/2046	1.77%	68% of 1M LIBOR	A+/Aa2	-8,311
Vet Hsg Ser 2016	250,000	206,560	12/01/2016	12/01/2046	1.56%	68% of 1M LIBOR	A+/Aa2	-9,175
Vet Hsg Ser 2017	250,000	226,500	08/01/2017	12/01/2047	1.18%	68% of 1M LIBOR + 0.085%	A+/Aa3	-2,439
Vet Hsg Ser 2018	250,000	247,535	04/01/2019	12/01/2049	2.07%	72% of 1M LIBOR	AA-/Aa2	-21,074
Vet Hsg Ser 2019	250,000	249,275	12/01/2019	06/01/2050	1.85%	65% of USD Fed Funds + 0.24%	A+/Aa3	-17,068
Pay-Fixed, Receive-Variable Total	**$3,717,025**	**$2,619,570**						**-$275,886**

PAY-VARIABLE, RECEIVE-VARIABLE (Basis Swap) Bond Issue	**Original Notional Amount**	**Current Notional Amount**	**Effective Date**	**Swap Termination Date**	**Variable-Rate Paid**	**Variable-Rate Received**	**Counterparty Credit Ratings**	**Current Fair Value**
Vet Land Tax Ref Bds Ser 2014C-3	$40,000	$25,960	08/05/2002	12/01/2032	131.25% of SIFMA	100.00% of 1M LIBOR	BBB+/A3	-97
Pay-Variable, Receive-Variable Total	**$40,000**	**$25,960**						**-$97**
TOTAL VLB INTEREST RATE SWAPS	**$3,717,065,000**	**$2,645,530,000**						**-$275,984**

Source: Texas Bond Review Board - Bond Finance Office.

Table C2 (continued)

TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS - INTEREST RATE SWAPS
As of August 31, 2019 (Unaudited)
(amounts in thousands)

PAY-FIXED, RECEIVE VARIABLE (Synthetic Fixed Rate) Bond Issue	**Original Notional Amount**	**Current Notional Amount**	**Effective Date**	**Swap Termination Date**	**Fixed-Rate Paid**	**Variable-Rate Received**	**Counterparty Credit Ratings**	**Current Fair Value**
TDHCA SF Variable Rate Ref MRB Ser 2004B	$53,000	$18,730	09/01/2004	09/01/2034	3.67%	65.5% of LIBOR + .20%	AA-/Aa2/AA	-950
TDHCA SF Variable Rate MRB Ser 2004D	35,000	13,290	01/01/2005	03/01/2035	3.08%	*	A+/A1/A+	-511
TDHCA SF Variable Rate Ref MRB Ser 2005A	100,000	19,095	08/01/2005	09/01/2036	4.01%	*	A+/Aa2/AA	-2,568
TDHCA SF Variable Rate Ref MRB Ser 2007A	143,005	20,155	06/05/2007	09/01/2038	4.01%	*	A+/Aa2/AA	-2,269
TOTAL TDHCA INTEREST RATE SWAPS	**$331,005**	**$71,270**						**-$6,297**

* Lesser of (a) or (b) where (a) equals the greater of (i) 65% of LIBOR or (ii) 56% of LIBOR + .45% and b) equals 1M LIBOR.

Note: TDHCA is not a party to the Multifamily swap agreements and therefore is not required to report market value on financial statements.

Source: Texas Bond Review Board - Bond Finance Office.

THE UNIVERSITY OF TEXAS SYSTEM - INTEREST RATE SWAPS
As of August 31, 2019 (Unaudited)
(amounts in thousands)

PAY-FIXED, RECEIVE VARIABLE (Synthetic Fixed Rate) Bond Issue	**Original Notional Amount**	**Current Notional Amount**	**Effective Date**	**Swap Termination Date**	**Fixed-Rate Paid**	**Variable-Rate Received**	**Counterparty Credit Ratings**	**Current Fair Value**
UT RFS Refunding Bonds, Series 2007B-1	$172,730	$162,470	12/20/2007	08/01/2034	3.81%	SIFMA	Aa2/A+	-38,611
UT RFS Refunding Bonds, Series 2007B-2	172,730	162,470	12/20/2007	08/01/2034	3.81%	SIFMA	Aa2/A+	-38,583
UT RFS Bonds, Series 2008B-1	155,000	111,180	03/18/2008	08/01/2036	3.90%	SIFMA	Aa2/A+	-31,578
UT RFS Bonds, Series 2008B-2	375,485	226,765	03/18/2008	08/01/2039	3.61%	SIFMA	Aa2/A+	-53,191
UT RFS Bonds, Series 2008B-3	155,000	111,180	03/18/2008	08/01/2036	3.90%	SIFMA	A3/BBB+	-31,578
UT PUF Bonds, Series 2008A-1	200,453	176,070	11/03/2008	07/01/2038	3.70%	SIFMA	Aa2/A+	-58,815
UT PUF Bonds, Series 2008A-2	200,453	176,070	11/03/2008	07/01/2038	3.66%	SIFMA	Aa3/A+	-58,051
UT RFS Bonds, Series 2016G	250,000	250,000	12/01/2016	08/01/2045	2.00%	100% of 1M LIBOR	Aa3/A+	-31,691
UT RFS Bonds, Series 2020A	250,000	250,000	11/01/2020	08/01/2049	1.58%	100% of 1M LIBOR	Aa3/A+	-8,988
Pay-Fixed, Receive-Variable Total	**$1,931,851**	**$1,626,205**						**-$351,085**

PAY-VARIABLE, RECEIVE-VARIABLE (Basis Swap) Bond Issue	**Original Notional Amount**	**Current Notional Amount**	**Effective Date**	**Swap Termination Date**	**Variable-Rate Paid**	**Variable-Rate Received**	**Counterparty Credit Ratings**	**Current Fair Value**
UT PUF Bonds, Series 2008A-3	$198,113	$176,070	11/1/2011	07/01/2038	SIFMA	93.40% of 3M LIBOR	Aa2/A+	4,461
UT RFS Bonds, Series 2008B-4	90,270	90,270	08/01/2009	08/01/2039	SIFMA	102.5% of 3M LIBOR	Aa2/AA-	4,603
UT RFS Bonds, Series 2008B-5	92,045	92,045	08/01/2009	08/01/2030	SIFMA	96% of 3M LIBOR	Aa2/AA-	2,243
UT RFS Bonds, Series 2008B-6	117,190	117,190	08/01/2009	08/01/2035	SIFMA	103% of 3M LIBOR	Aa2/AA-	5,161
UT PUF Bonds, Series 2006B	284,065	284,065	01/01/2009	07/01/2035	SIFMA	82.04% of 1M LIBOR	Aa2/A+	-17
UT RFS Bonds, Series 2016A-1*	255,825	255,825	04/15/2017	08/15/2046	2.43%	2.90%	A3/BBB+	599
UT RFS Bonds, Series 2016A-2*	0	0	06/15/2017	08/15/2046	2.62%	3.17%	A3/BBB+	6,087
UT RFS Bonds, Series 2016A-3*	0	0	12/15/2017	08/15/2046	2.31%	3.01%	A3/BBB+	6,318
Pay-Variable, Receive-Variable Total	**$1,037,508**	**$1,015,465**						**$29,455**
TOTAL UTS INTEREST RATE SWAPS	**$2,969,359**	**$2,641,670**						**-$321,630**

* MMD Basis Swap - For the 2016A-1, 2016A-2, and 2016A-3 swaps, UTS receives fixed spread on $255.825 million of fixed-rate bonds outstanding.

Source: Texas Bond Review Board - Bond Finance Office.

Table C3

ESTIMATED DEBT-SERVICE REQUIREMENTS OF DEBT OUTSTANDING WITH SWAPS AND NET INTEREST RATE SWAP PAYMENTS [EXCLUDES PAY-VARIABLE, RECEIVE-VARIABLE (BASIS) SWAPS]

As of August 31, 2019 (Unaudited)

(amounts in thousands)

Texas Department of Housing and Community Affairs

Fiscal Year	Variable-Rate Bonds*		Interest Rate	
Ending 8/31/19	Principal	Interest	Swaps, Net	Total
2020	$0	$1,104	$1,388	$2,492
2021	0	1,023	1,388	2,411
2022	0	1,025	1,388	2,413
2023	0	1,025	1,388	2,413
2024	0	1,028	1,388	2,416
2025-2029	1,810	5,124	6,942	13,876
2030-2034	32,725	4,166	5,653	42,544
2035-2039	37,915	1,098	1,618	40,631
Total Debt Service and Net Interest Rate Swap Payments	**$72,450**	**$15,593**	**$21,153**	**$109,196**

*Does not include multifamily bonds outstanding.

Source: Texas Department of Housing and Community Affairs

The University of Texas System

Fiscal Year	Variable-Rate Bonds		Interest Rate	
Ending 8/31/19	Principal	Interest (1)	Swaps, Net (2)	Total
2020	$27,065	$19,992	$26,695	$73,752
2021	28,055	19,642	26,054	73,750
2022	46,425	19,279	25,388	91,092
2023	48,185	18,671	24,273	91,129
2024	49,785	18,039	23,115	90,940
2025-2029	287,690	79,576	96,076	463,342
2030-2034	297,240	59,857	59,755	416,852
2035-2039	341,760	39,147	21,498	402,405
2040-2044	0	26,500	-1,400	25,100
2045-2049	250,000	5,300	-280	255,020
Total Debt Service and Net Interest Rate Swap Payments	**$1,376,205**	**$306,004**	**$301,174**	**$1,983,382**

(1) As required by GASB Statement No. 38, annual debt-service requirements are computed using the System's interest rates in effect on August 31, 2019 on its Series 2008A Bonds, Series 2007B Bonds, Series 2008B Bonds, and Series 2016G Bonds.

(2) Reflects net payments on pay-fixed, receive-variable interest rate swaps based on interest rates in effect at August 31, 2019, applied on the respective notional amounts of the swaps through their respective termination dates.

Source: The University of Texas System

Veterans Land Board

Fiscal Year	Variable-Rate Bonds		Interest Rate	
Ending 8/31/19	Principal	Interest	Swaps, Net	Total
2020	$183,475	$41,063	$26,515	$251,053
2021	190,575	39,339	24,225	254,139
2022	191,035	35,915	21,824	248,774
2023	178,560	32,647	19,604	230,811
2024	169,765	29,562	17,453	216,780
2025-2029	716,705	106,112	56,859	879,676
2030-2034	493,675	54,844	22,507	571,026
2035-2039	291,650	24,754	6,694	323,098
2040-2044	169,840	7,410	1,346	178,596
2045-2049	33,555	435	-143	33,847
2050-2054	735	5	1	741
Total Debt Service and Net Interest Rate Swap Payments	**$2,619,570**	**$372,086**	**$196,885**	**$3,188,541**

Source: Veterans Land Board

Table C4

ESTIMATED DEBT-SERVICE REQUIREMENTS OF DEBT OUTSTANDING WITH SWAPS AND NET INTEREST RATE SWAP PAYMENTS

[PAY-VARIABLE, RECEIVE-VARIABLE (BASIS) SWAPS ONLY]

As of August 31, 2019 (Unaudited)

(amounts in thousands)

The University of Texas System

Fiscal Year	Variable Rate Bonds (1)		Interest Rate	
Ending 8/31/19	**Principal**	**Interest (2)**	**Swaps, Net (3)**	**Total**
2020	$3,225	$6,141	-$3,589	$5,777
2021	3,340	6,099	-3,568	5,871
2022	3,463	6,055	-3,546	5,972
2023	3,590	6,009	-3,523	6,076
2024	3,720	5,962	-3,499	6,182
2025-2029	91,713	28,070	-16,581	103,202
2030-2034	138,008	20,185	-12,096	146,096
2035-2039	228,518	8,348	-4,869	231,997
Total Debt Service and Net Interest Rate Swap Payments	**$475,575**	**$86,868**	**-$51,270**	**$511,174**

(1) Includes principal and interest due on certain related bonds, which are also included in Table C3.

(2) As required by GASB Statement No. 38, annual debt-service requirements are computed using the System's interest rates in effect on August 31, 2019 on its Series 2008A Bonds and Series 2008B Bonds.

(3) Reflects net payments on pay-variable, receive-variable interest rate swaps based on interest rates in effect at August 31, 2019, applied on the respective notional amounts of the swaps through their respective termination dates.

Source: The University of Texas System

The University of Texas System

PUF Bonds, Series 2006B

Fiscal Year	Fixed Rate Bonds (1)		Interest Rate	
Ending 8/31/19	**Principal**	**Interest**	**Swaps, Net (2)**	**Total**
2020	$24,740	$14,852	-$1,087	$38,504
2021	25,980	13,615	-992	38,602
2022	27,335	12,251	-893	38,693
2023	25,660	10,816	-788	35,687
2024	0	9,468	-690	8,778
2025-2029	97,320	40,928	-2,983	135,265
2030-2034	59,155	14,137	-1,030	72,261
2035-2039	23,875	1,253	-91	25,037
Total Debt Service and Net Interest Rate Swap Payments	**$284,065**	**$117,319**	**-$8,556**	**$392,828**

(1) Reflects scheduled principal and interest of Permanent University Fund Bonds, Series 2006B.

(2) Reflects net payments on pay-variable, receive-variable interest rate swaps based on interest rates in effect at August 31, 2019, applied on the respective notional amounts of the swaps through their respective termination dates.

Source: The University of Texas System

Table C4 (continued)

ESTIMATED DEBT-SERVICE REQUIREMENTS OF DEBT OUTSTANDING WITH SWAPS AND NET INTEREST RATE SWAP PAYMENTS

[PAY-VARIABLE, RECEIVE-VARIABLE (BASIS) SWAPS ONLY]

As of August 31, 2019 (Unaudited)

(amounts in thousands)

The University of Texas System

RFS 2016A MMD Basis Swap

Fiscal Year	Fixed Rate Bonds		Interest Rate	
Ending 8/31/19	Principal	Interest	Swaps, Net	Total
2020	$0	$9,854	-$4,413	$5,441
2021	0	9,854	-4,413	5,441
2022	0	9,854	-4,413	5,441
2023	0	9,854	-4,413	5,441
2024	0	9,854	-22,065	-12,211
2025-2029	0	49,272	-22,065	27,207
2030-2034	0	49,272	-22,065	27,207
2035-2039	0	49,272	-22,065	27,207
2040-2044	0	49,272	-22,065	27,207
2045-2049	255,825	19,709	-8,826	266,708
Total Debt Service and Net Interest Rate Swap Payments	**$255,825**	**$266,068**	**-$136,802**	**$385,091**

Source: The University of Texas System

Veterans Land Board

Fiscal Year	Variable-Rate Bonds		Interest Rate	
Ending 8/31/19	Principal	Interest	Swaps, Net	Total
2020	$1,365	$690	-$258	$1,797
2021	1,445	652	-244	1,853
2022	1,535	611	-229	1,917
2023	1,635	568	-213	1,990
2024	1,735	522	-195	2,062
2025-2029	10,435	1,812	-679	11,568
2030-2034	7,810	362	-136	8,036
Total Debt Service and Net Interest Rate Swap Payments	**$25,960**	**$5,217**	**-$1,954**	**$29,223**

Source: Veterans Land Board

Appendix D
Debt Issuance Costs

Issuance costs are composed of the professional fees and expenses paid to service providers and underwriters to market bonds to investors. Professional services commonly used in the marketing of all types of municipal securities are listed below:[1]

• Underwriter – The underwriter or underwriting syndicate acts as a dealer that purchases a new issue of municipal securities from the issuer for resale to investors. The underwriter may acquire the securities either by negotiation with the issuer or by award on the basis of competitive bidding.

The largest portion of the costs associated with the issuance of bonds is the fee paid to the underwriter (or underwriting syndicate), known as the "underwriting spread." The spread is the underwriter's compensation for purchasing the bonds from the issuer and reselling them in the bond market. It consists of four components:

- Takedown – Represents the discount that the members of the syndicate receive when they purchase the bonds from the issuer;
- Management fee – Compensation to the underwriters for creating and implementing the financing package;
- Underwriting fee – A risk premium to compensate the underwriters for market risk of the underwriting; and
- Expenses – Costs associated with the marketing of the bonds such as CUSIP, travel, printing, and underwriter's legal fees.

• Bond Counsel – Bond counsel is retained by the issuer to provide legal advice and a legal opinion that: 1) the issuer is authorized to issue the proposed securities; 2) the issuer has met all legal requirements necessary for issuance; and 3) if appropriate, the interest on the proposed securities is exempt from federal income taxation and, where applicable, from state and local taxation. Bond counsel prepares and/or reviews documentation and advises the issuer regarding: 1) authorizing resolutions or ordinances; 2) trust indentures; 3) official statements; 4) validation proceedings; 5) disclosure requirements; and 6) litigation.

• Financial Advisor – The financial advisor advises the issuer on matters pertinent to a proposed issue such as structure, timing, marketing, pricing, terms, and bond ratings. A financial advisor may also be employed to provide advice on subjects unrelated to a new issue of securities such as advising on cash flow and investment matters as well as the issuer's overall debt-management policies.

• Disclosure Counsel – An attorney or law firm retained by the issuer to provide advice on issuer disclosure obligations and to prepare the official statement and/or continuing disclosure agreement.

• Credit Rating Agencies – Credit rating agencies provide public or private ratings on the credit quality of securities issues to help investors assess the probability of timely repayment of principal and interest on municipal securities. Ratings are initially released before issuance and are reviewed periodically after issuance and may be amended to reflect changes in the issuer's creditworthiness.

• Paying Agent/Registrar – The paying agent is responsible for transmitting payments of principal and interest from the issuer to the security holders and maintaining records of the owners of registered bonds on behalf of the issuer.

• Printer – The printer produces the official statement, notice of sale, and any bonds required to be transferred between the issuer and purchasers of the bonds.

Choosing the Method of Sale: Negotiated versus Competitive

Selecting the method of sale is one of the most important decisions an issuer of securities must make. Both negotiated and competitive sales have distinct advantages and disadvantages described below.

[1] Definitions adapted from the Municipal Securities Rulemaking Board's *Glossary of Municipal Securities Terms.*

In a negotiated sale, an underwriter is chosen in advance of the sale and agrees to buy the bonds at a mutually-agreed future date for resale. As part of the preparation for the underwriting at that future date, the underwriter actively markets the bonds to potential buyers to ensure a successful resale at the time of the underwriting. In more complicated financings, pre-sale marketing can be crucial to obtaining the lowest possible interest cost. In addition, the negotiated method of sale offers issuers greater timing and structural flexibility than competitive sales, as well as more influence in directing bond distribution to selected underwriting firms and investors.

Disadvantages of negotiated sales are a lack of competition in pricing and the possible appearance of favoritism. These factors can result in wider fluctuations in underwriting spreads for negotiated transactions than for comparable competitive transactions.

Conditions that suggest a negotiated sale are market volatility and securities for which market demand is difficult to ascertain. Often called "story bonds," these include securities issued by an infrequent issuer or an issuer with weak or declining credit rating(s) or securities that contain innovative structuring, derivatives, or other complexities.

In a competitive sale, sealed or electronic bids from several underwriters are opened on a predetermined sale date and time. The bonds are then awarded to the underwriter submitting the lowest bid that meets the terms and conditions of the sale. Generally, underwriters that bid competitively perform less pre-sale marketing because they will not know if they have been awarded the underwriting contract until the day the bids are opened.

Advantages of the competitive bid include: 1) bids are developed in a competitive environment where market forces determine the price; 2) spreads are typically lower; and 3) the winning bid is developed in an open process among underwriters. Disadvantages of the competitive sale include: 1) limited flexibility in timing the sale and structuring the transaction; 2) limited pre-sale marketing; 3) minimum control over the distribution of bonds; and 4) the likelihood that underwriters' bids will include a risk premium to compensate for uncertainty regarding market demand.

Conditions that suggest a competitive sale are a stable, predictable market in which market demand for the securities can be relatively easily determined. Stable market conditions lessen the underwriters' risk of holding unsold balances.

Market demand is generally easier to assess for securities that: 1) are issued by well-known, highly-rated issuers that regularly access the debt market; 2) are conventionally structured, such as serial and term coupon bonds; and 3) have a strong source of repayment and thus a high credit rating. These conditions will generally lead to aggressive bidding, resulting in lower costs of issuance since the underwriters will be able to more easily assess market demand without extensive pre-marketing activities.

In determining the method of sale, factors such as size, complexity, market conditions, and time frame most influence the issuer's decision. Issuers should focus primarily on how their bonds are being priced in the market and focus secondarily on the underwriting spread. For example, reducing the takedown (selling) component of the underwriters' spread to reduce costs may result in reducing the sales effort needed to successfully place the issue, which in turn could result in a lower price (higher yield) for the issue in aftermarket trading.

COLLEGE STUDENT LOAN BONDS

Statutory/Constitutional Authority: Article III, Sections 50b, 50b-1, 50b-2, 50b-3, 50b-4, 50b-5, 50b-6, and 50b-7 of the Texas Constitution, adopted in 1965, 1969, 1989, 1991, 1995, 1999, 2007 and 2011, respectively, authorize the issuance of general obligation bonds by the Texas Higher Education Coordinating Board (THECB). Sections 50b, 50b-1, 50b-2, 50b-3, were subsequently repealed in 1999. Section 50b-7 authorizes the THECB to issue College Student Loan Bonds in an aggregate principal amount of outstanding bonds that at all times may not exceed $1.86 billion.

Chapter 52 of the Texas Education Code (the Act) authorizes the administration of various student loan programs and the related issuance of private activity bonds. Pursuant to the Act, the THECB administers the State of Texas College Student Loan Bonds Interest and Sinking Fund, which was established by the Act as a fund in the State Treasury. Money received by the Board in each fiscal year as repayment of student loans granted under the Act and interest thereon must first be deposited in the Interest and Sinking Fund in an amount sufficient to pay the interest on and principal of previously issued bonds, and any additional bonds coming due during the ensuing fiscal year.

The THECB is required to obtain the approval of the Attorney General's Office and the Bond Review Board prior to issuance and to register its bonds with the Comptroller of Public Accounts.

Purpose: Proceeds from the sale of bonds are used to make College Access Loans (CAL) to eligible students attending public or private colleges and universities in Texas. The CAL loan is an alternative educational loan that may be used to cover the amount of the student's cost of attendance that is not covered by other resources.

CAL loans are extended under this program by authority of the Act and the administrative rules of the THECB, found at Title 19 Texas Administrative Code, Chapter 22, Subchapter C.

Security: The first monies coming into the Comptroller of Public Accounts - Treasury Operations, not otherwise dedicated by the Constitution, are pledged to pay debt service on the general obligation bonds.

Dedicated/Project Revenue: Principal and interest repayments on the loans are pledged to pay debt service on the bonds issued by the Coordinating Board and related administrative costs. No draw on general revenue is anticipated.

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COLLEGE AND UNIVERSITY REVENUE BONDS

Statutory Authority: Section 55.13 of the Texas Education Code authorizes the governing boards of institutions of higher education to issue revenue bonds to provide funds to acquire, construct, improve, enlarge, and equip property, buildings, structures, or facilities.

The Texas Public Finance Authority (TPFA) acts as the exclusive issuer of revenue debt for Midwestern State University and Texas Southern University. Stephen F. Austin State University, Texas State Technical College System as well as general academic teaching institutions as defined by Section 61.003 of the Texas Education Code have the option to use TPFA as the issuer.

The governing boards are required to obtain the approval of the Bond Review Board unless exempted under Sec. 1231.041 of the Texas Government Code. Approval by the Attorney General's Office prior to issuance is required on all transactions, and college and university revenue bond issuers are required to register their bonds with the Comptroller of Public Accounts.

Purpose: Proceeds are used to acquire, purchase, construct, improve, enlarge, and/or equip property, buildings, structures, activities, services, operations, or other facilities.

Security: The revenue bonds issued by the institutions' governing boards are secured by the income of the institutions and are not an obligation of the state of Texas. Neither the state's full faith and credit nor its taxing power is pledged toward payment of the bonds.

Dedicated/Project Revenue: Debt service is payable from the institution's pledged revenues. Pledged revenues include the pledged tuition and any or all of the revenues, funds, and balances lawfully available to the governing boards and derived from or attributable to any member of the Revenue Financing System.

Contact:
Individual colleges and universities.

FARM AND RANCH LOAN BONDS

Statutory/Constitutional Authority: Article III, Section 49-f, of the Texas Constitution, adopted in 1985, authorizes the issuance of general obligation bonds by the Veterans Land Board. The program was transferred in 1993 from the Veterans Land Board to the Texas Agricultural Finance Authority with the passage of HB 1684 by the 73rd Legislature. In 1995, a constitutional amendment was approved that expanded the use of existing bond authority and allows no more than $200 million of the authority to be used for the purposes defined in Article III, Section 49-i, of the Texas Constitution and for other rural economic development programs. In 1997, HB 2499, 75th Legislature increased the maximum loan amount available through the program to $250,000. In 2001, SB 716, 77th Legislature authorized the Authority to provide a guarantee to a local lender for an eligible applicant.

Purpose: Proceeds from the sale of the general obligation bonds may be used to make loans of up to $250,000 to each eligible Texan for the purchase of farms and ranches.

Security: The bonds are general obligations of the state of Texas. The first monies coming into the Comptroller of Public Accounts - Treasury Operations, not otherwise dedicated by the Constitution, are pledged to pay debt service on the bonds.

Dedicated/Project Revenue: Principal and interest payments on the farm and ranch loans are pledged to pay debt service on the bonds issued by the Texas Agricultural Finance Authority. The program is designed to be self-supporting; therefore, no draw on general revenue is anticipated.

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HIGHER EDUCATION CONSTITUTIONAL BONDS

Statutory/Constitutional Authority: Article VII, Section 17, of the Texas Constitution, adopted in 1985, authorizes the issuance of constitutional appropriation bonds (generally referred to as Higher Education Fund or HEF bonds) by institutions of higher education not eligible to issue bonds payable from and secured by the income of the Permanent University Fund (PUF). Legislative approval of bond issues is not required; however, approval of the Bond Review Board and the Attorney General is required and the bonds must be registered with the Comptroller of Public Accounts.

Purpose: Proceeds from the sale of bonds are used by qualified institutions for library materials, land acquisition, new construction, major repairs and renovations or equipment.

Security: The first $175 million coming into the Comptroller of Public Accounts - Treasury Operations, not otherwise dedicated by the Constitution, goes to qualified institutions of higher education to fund certain land acquisition, construction and repair projects. In 2005, the 79th Legislature increased the total allocation to qualified institutions to $262.5 million beginning in fiscal year 2008. In 2015, the 84th Legislature increased the total allocation to $393.8 million beginning in fiscal year 2017. Fifty percent of this amount may be pledged to pay debt service on any bonds or notes issued. While not explicitly a general obligation or full-faith and credit bond, the stated pledge has the same effect.

Dedicated/Project Revenue: Debt service is payable solely from state General Revenue Fund appropriations to institutions of higher education.

Contact:
Individual colleges and universities.

PERMANENT UNIVERSITY FUND BONDS

Statutory/Constitutional Authority: Article VII, Section 18, of the Texas Constitution, initially adopted in 1947, as amended in November 1984, authorizes the Boards of Regents of The University of Texas and The Texas A&M University Systems to issue revenue bonds payable from and secured by the income of the Permanent University Fund (PUF). The constitutional amendment approved by voters on November 2, 1999, allows for distributions from the PUF to be based on the "total return" on all PUF investment assets, including current income as well as capital gains. Neither legislative approval nor Bond Review Board approval is required. Approval of the Attorney General is required and the bonds must be registered with the Comptroller of Public Accounts.

Purpose: Proceeds are used for acquiring land either with or without permanent improvements, constructing and equipping buildings or other permanent improvements, major repair and rehabilitation of buildings and other permanent improvements, acquiring capital equipment and library books and library materials and refunding PUF bonds or PUF notes.

Security: Bonds are equally and ratably secured by and payable from a first lien on and pledge of the interest of the UT System or the A&M System in the Available University Fund. The total amount of PUF bonds is subject to the constitutional limitation in that the aggregate amount of bonds payable from the Available University Fund cannot, at the time of issuance, exceed 30 percent of the cost value of investments and other assets of the PUF, exclusive of real estate.

The PUF bonds do not constitute general obligations of the UT Board or A&M Board, the Systems, the state of Texas or any political subdivision of the state of Texas. Neither the UT Board nor the A&M Board have taxing power, and neither the credit nor the taxing power of the state of Texas or any political subdivision thereof is pledged as security for the bonds.

Dedicated/Project Revenue: Bonds are repaid from the Available University Fund, which consists of distributions from the "total return" on all investment assets of the PUF, including the net income attributable to the surface of PUF land, in amounts determined by the UT Board.

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TEXAS AGRICULTURAL FINANCE AUTHORITY BONDS

Statutory/Constitutional Authority: The Texas Public Finance Authority (the "Authority") is authorized to issue general obligation and revenue bonds on behalf of the Texas Agricultural Finance Authority ("TAFA") pursuant to Agriculture Code Section 58.041. This authority was transferred from TAFA to the Authority effective September 1, 2009. The issuance of general obligation debt for TAFA programs is authorized by the Texas Constitution, Article III, Sections 49-f and 49-i.

Purpose: Chapter 58 of the Texas Agriculture Code created TAFA under the Texas Agricultural Finance Act and authorizes TAFA to establish programs to support agricultural business in Texas. Under the Agricultural Finance Act, TAFA is authorized to use bond proceeds for loans and other financing assistance for the purchase of farm and ranch land. In addition, proceeds may be used to establish a Texas Agricultural Fund for rural economic development programs and to establish a Rural Microenterprise Development Fund to fund programs that foster and stimulate the creation and expansion of small businesses in rural areas. TAFA may use the proceeds to provide loan guarantees, insurance, coinsurance, loans, and indirect loans or purchases or acceptances of assignments of loans or other obligations.

Security: In addition to general obligation bonds, TAFA may issue up to $500 million in revenue bonds for the purpose of providing money to carry out its programs. Before authorizing the issuance of any general obligation bonds for programs funded by the Texas Agricultural Development Fund or the Rural Microenterprise Development Fund, the TAFA board must determine that the issuance of revenue bonds is not an economically advisable alternative. TAFA's revenue bonds are secured by pledged revenues and liens on TAFA's property, revenues, income, or other resources of the authority, including mortgages or other interests in property financed with bond proceeds.

Dedicated/Project Revenue: Debt service on revenue debt issued by TAFA is not an obligation of the state and is payable solely from any loan repayments and other pledged revenue and assets of TAFA. Debt service on general obligation debt is payable from pledged repayments on loans made under a financial assistance program funded by bond proceeds, or state general revenue if income is insufficient to make debt-service payments.

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Statutory Authority: The Texas Low-Level Radioactive Waste Disposal Authority (the "Disposal Authority") was created in 1981 (Texas Health and Safety Code, Chapter 402), and authorized to issue revenue bonds in 1987 to finance certain costs related to the creation of a radioactive waste disposal site. The Authority was required to obtain the approval of the Attorney General's Office and the Bond Review Board prior to issuance and to register its bonds with the Comptroller of Public Accounts. In 1997, HB 1077, 75th Legislature authorized the Texas Public Finance Authority to issue the bonds on behalf of the Texas Low-Level Radioactive Waste Disposal Authority.

The 76th Legislature abolished the Disposal Authority effective September 1, 1999 and transferred all of its duties, responsibilities, and resources to the Texas Natural Resource Conservation Commission ("the Commission") that has since been renamed the Texas Commission on Environmental Quality (TCEQ).

TCEQ has not requested TPFA to issue debt

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TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS BONDS

Statutory Authority: The Texas Department of Housing and Community Affairs (the "Department") was created pursuant to Chapter 762, 1991 Tex. Sess. Law Serv. 2672, the Act, codified as Chapter 2306, Texas Government Code. The Department is the successor agency to the Texas Housing Agency (THA) and the Texas Department of Community Affairs, both of which were abolished by the Act with their functions and obligations transferred to the Department.

Pursuant to the Act, the Department may issue bonds, notes, or other obligations to finance or refinance residential housing and to refund bonds previously issued by the THA, the Department or certain other quasi-governmental issuers. The Act specifically provides that the revenue bonds of the THA become revenue bonds of the Department. Legislative approval of bond issues is not required; however, the Department is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

Purpose: Proceeds from the sale of bonds are used to provide assistance to individuals and families of low, very low, and moderate income and persons with special needs to obtain decent, safe, and sanitary housing.

Security: Any bonds issued are obligations of the Department and are payable solely from the revenues and funds pledged for the payment thereof. The Department's bonds are not an obligation of the state of Texas, and neither the state's full faith and credit nor its taxing power is pledged toward payment of the Department's bonds.

Dedicated/Project Revenue: Revenue received by the Department from the repayment of loans and investment of bond proceeds is pledged to the payment of principal and interest on bonds issued.

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TEXAS DEPARTMENT OF TRANSPORTATION BONDS

Statutory/Constitutional Authority: The Texas Transportation Commission ("Commission"), the governing body of the Texas Department of Transportation ("TxDOT") is authorized to issue both revenue and general obligation bonds.

In 1997, the Texas Turnpike Authority ("TTA") was established by SB 370, 75th Legislature (Texas Transportation Code, Chapter 361). Effective November 6, 2001, SB 342, 77th Legislature abolished the TTA board and assigned all duties, including authority to issue bonds for toll projects to the Commission, which provides for all the management of the TTA's affairs as a division of TxDOT. The Commission's authority to issue toll revenue bonds is provided by Subchapter C of Chapter 228, Texas Transportation Code.

In 2001, voters approved Article III, Section 49-k of the Texas Constitution, and Subchapter M of Chapter 201, Texas Transportation Code, which established the Texas Mobility Fund within the state treasury and authorized the Commission to issue general obligation bonds payable from the revenues of the fund.

In 2003, voters approved Proposition 14 which added Article III, Section 49-n of the Texas Constitution which, along with the enabling legislation, Section 222.003, Texas Transportation Code, authorized the issuance of $3 billion in securities payable from the revenues of the State Highway Fund. In 2005, the program capacity was increased to $6 billion with a maximum annual issuance of $1.5 billion.

In 2007, voters approved Proposition 12 which added Article III, Section 49-p to the Texas Constitution. In 2009, HB 1, 81st Legislature, 1st Called Session ratified Section 222.004 to the Texas Transportation Code which authorized the issuance of $5 billion in highway improvement general obligation bonds.

Purpose: Proceeds from the sale of toll revenue bonds may be used to pay for all or part of the cost of a toll project provided that they are only used to pay costs of the project for which they are issued. In 2002, the Commission issued the Central Texas Turnpike System Revenue Obligations to finance a portion of the planning, design, engineering, and construction of the initial phase of the Central Texas Turnpike System (SH 130 Segments 1 through 4, SH 45 North, and Loop 1).

Revenues and obligations secured by the Texas Mobility Fund may be used for acquisition, construction, maintenance, reconstruction, and expansion of state highways and the participation by the state in the costs of constructing publicly owned toll roads and other public transportation projects.

State Highway Fund Revenue bonds (Proposition 14 Bonds) may be used to finance state highway improvement projects that are eligible for funding with constitutionally dedicated revenues. Of the $6 billion currently authorized, $1.2 billion must be used to fund projects that improve highway safety.

Highway improvement general obligation bonds (Proposition 12 Bonds) may be used to pay all or part of the costs of highway improvement projects.

Security: Project revenue bonds issued pursuant to Chapter 228, Texas Transportation Code (including Central Texas Turnpike System bonds) are not an obligation of the Commission, TxDOT, nor the state and are payable solely from the revenues of the project for which the securities are issued or other eligible sources.

Obligations of the Texas Mobility Fund (the "Fund") are secured by and payable from a pledge of revenues dedicated to and on deposit in the Fund. Pledged revenues of the Fund primarily consist of driver's license fees, driver record information fees, motor vehicle inspection fees, and certificate of title fees. Bonds secured by the Fund may also carry the state's full faith and credit, pledging the state's taxing power toward payment of the bonds if the dedicated revenues in the Fund are insufficient for repayment of the bonds.

State Highway Fund Revenue bonds are payable from a lien on pledged revenues consisting primarily of certain fees and reimbursements deposited to the credit of the State Highway Fund. Major sources of revenue for the State Highway Fund consist of state motor fuels tax receipts, state motor vehicle registration fees, and federal reimbursements.

Highway improvement general obligation bonds carry the state's full faith and credit, pledging the state's taxing power toward payment of the bonds.

Dedicated/Project Revenue: Project revenue bonds are repaid from revenue of the project for which the bonds were issued. Debt service on Texas Mobility Fund bonds and State Highway Fund Revenue bonds is payable from the revenues dedicated to each fund except that Texas Mobility Fund bonds also carry the state's general obligation pledge. Highway improvement general obligation bonds issued pursuant to Section 222.004, Texas Transportation Code are payable from the state's general revenues, including Proposition 7 deposits to the State Highway Fund. In 2015, voters approved Proposition 7 which added Article VIII, Section 7-c to the Texas Constitution and directs the Comptroller of Public Accounts to deposit in the State Highway Fund $2.5 billion of the net revenue from the state sales and use tax that exceeds the first $28 billion of that revenue coming into the state treasury in that fiscal year, beginning in FY 2018.

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TEXAS PRIVATE ACTIVITY BOND SURFACE TRANSPORTATION CORPORATION BONDS

Statutory Authority: The Texas Transportation Commission ("Commission") is authorized pursuant to the authority in the Texas Transportation Code, Chapter 431, Subchapters A through C ("Chapter 431"), to create transportation corporations to assist and act on behalf of the Commission to promote and develop new and expanded public transportation facilities and systems. Such transportation corporations are authorized to issue bonds for the same purpose for which they were created, including issuance of private activity bonds for public transportation facilities and systems to be developed pursuant to comprehensive development agreements entered into by the Texas Department of Transportation ("TxDOT") as authorized by Subchapter E of Chapter 223, Texas Transportation Code. Pursuant to Chapter 431, the Commission created the Texas Private Activity Bond Surface Transportation Corporation ("Corporation") as a conduit issuer of private activity bonds in 2008.

Purpose: Proceeds from the sale of the Corporation's revenue bonds may be used to carry out the purposes for which the Corporation was created, including the development and expansion of public transportation projects, provided that obligations are only used to pay costs of the project for which they are issued.

Security: Bonds issued are payable solely from the revenues, funds, and other sources pledged for the payment thereof. The Corporation's bonds are not obligations of the state, and neither the state's full faith and credit nor its taxing power is pledged toward the payment of the Corporation's bonds.

Dedicated/Project Revenue: Revenue received by the Corporation from the repayment of loans and investment of bond proceeds is pledged to the payment of principal and interest on the bonds issued.

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GRAND PARKWAY TRANSPORTATION CORPORATION BONDS

Statutory Authority: The Texas Transportation Commission ("Commission") is authorized pursuant to the authority in the Texas Transportation Code, Chapter 431, Subchapters A through C ("Chapter 431"), to create transportation corporations to assist and act on behalf of the Commission to promote and develop new and expanded public transportation facilities and systems. Such transportation corporations are authorized to issue bonds for the same purpose for which they were created, including issuance of bonds for public transportation facilities and systems to be developed pursuant to comprehensive development agreements entered into by the Texas Department of Transportation ("TxDOT") as authorized by Subchapter E of Chapter 223, Texas Transportation Code. Pursuant to Chapter 431, the Commission created the Grand Parkway Transportation Corporation ("Corporation") in 2012 to develop, finance, refinance, design, construct, reconstruct, expand, operate, or maintain some or all of the segments of the State Highway 99 (Grand Parkway) toll project that are to be developed by TxDOT.

Purpose: Proceeds from the sale of the Corporation's toll revenue bonds may be used to carry out the purposes for which the Corporation was created, in particular developing, financing, refinancing, designing, constructing, reconstructing, expanding, operating, or maintaining some or all of the segments of the Grand Parkway toll project to be developed by TxDOT.

Security: Bonds issued are secured by the Trust Estate created and pledged pursuant to the Master Trust Agreement, as supplemented, which includes the toll revenues, funds, and other sources pledged as part of the Trust Estate. The Corporation and TxDOT have entered into a Toll Equity Loan Agreement, as amended, ("TELA") that makes support available for eligible costs of the Grand Parkway through advances by TxDOT if toll revenues and certain fund balances are insufficient to pay certain expenses, including debt service on TELA supported bonds. The Corporation's bonds are not obligations of the state, and neither the state's full faith and credit nor its taxing power is pledged toward the payment of the Corporation's bonds.

Dedicated/Project Revenue: Corporation bonds are supported by the Trust Estate pursuant to the Master Trust Agreement, as supplemented, including tolls and other revenues of the Grand Parkway System (currently comprised of Segment D in Harris County and Segments E, F-1, F-2 and G in Harris and Montgomery Counties) and certain other funds held by the trustee under the Master Trust Agreement. The Corporation is in the process of issuing additional obligations for paying the costs of extending, expanding and improving the Grand Parkway System, including the H and I Project.

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TEXAS ECONOMIC DEVELOPMENT AND TOURISM BONDS

Statutory/Constitutional Authority: In 1989, specific authority was provided by Section 71, Article XVI of the Texas Constitution to fund the Product Development and Small Business Incubator (PDSBI) program. As the successor office to the Texas Department of Economic Development, the Texas Economic Development and Tourism Office (the "Office") within the Office of the Governor was created by SB 275, 78th Legislature, which authorizes the Office to issue both general obligation and revenue bonds. This legislation also provided the statutory authority for the Texas Economic Development Bank to issue bonds to fund the PDSBI Program.

Purpose: Proceeds from the sale of bonds are used to fund the PDSBI program. The money from these funds provides financial assistance to promote domestic business development through loans to finance the commercialization of new and improved products and processes and foster the development of small businesses in the state.

Security:
The full faith and credit of the state is pledged for the payment of the bonds.

Dedicated/Project Revenue: Revenue of the Office, primarily from the repayment of loans and the disposition of debt instruments, is pledged to the payment of principal and interest on bonds issued.

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TEXAS MILITARY FACILITIES COMMISSION BONDS

Statutory Authority: The Texas Military Facilities Commission (the "Commission") was created in 1997 by SB 352, 75th Legislature, as the successor agency to the National Guard Armory Board, which was created as a state agency in 1935 (Texas Government Code, Chapter 435) and authorized to issue long-term debt. Legislative approval of bond issues is not required; however, the Commission is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

In 1991, SB 3, 72nd Legislature, authorized the Texas Public Finance Authority (the "Authority") to issue bonds on behalf of the Texas Military Facilities Commission (Texas Government Code, Section 435.041).

SB 1724, Acts of the 80th Legislature (2007) abolished the Commission and transferred all its duties, responsibilities, property, and assets to the Adjutant General's Department. To preserve the pledged revenue stream and meet the state's obligations under the bonds, the Commission's title to facilities, the rental, and other income of which is pledged to the bonds, was transferred to the Texas Public Finance Authority effective September 1, 2007. The Authority will continue leasing the facilities to the Adjutant General's Department, which is obligated to continue making rental payments until the bonds are retired after which the Authority will transfer title to the facilities to the Adjutant General.

Name changed from Adjutant General's Department to Texas Military Department and recodified under Texas Government Code, Section 437 by SB 1536, 83rd Leg., R.S.

Purpose: Proceeds from the sale of bonds are used to acquire land, to construct, remodel, repair, or equip buildings for the Texas National Guard.

Security: Any bonds issued are obligations of the Authority and are payable from "rents, issues, and profits" of the facilities leased to the Texas Military Department. The bonds are not general obligations of the state of Texas and neither the state's full faith and credit nor its taxing power is pledged toward payment of the bonds.

Dedicated/Project Revenue: The rent payments used to retire the bonds are paid by the Texas Military Department primarily with general revenue funds appropriated by the legislature. Independent project revenue, in the form of other income from properties owned by the Texas Military Department, is also used to pay a small portion of debt service.

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TEXAS PARKS AND WILDLIFE DEPARTMENT BONDS

Statutory/Constitutional Authority: Article III, Section 49-e, of the Texas Constitution, adopted in 1967, authorized the Texas Parks and Wildlife Department (the "Department") to issue general obligation bonds to acquire and develop state parks. In 1991, SB 3, 72nd Legislature, authorized the Texas Public Finance Authority (the "Authority") to issue bonds on behalf of the Department. In 1997, HB 3189, 75th Legislature, codified in the Texas Parks and Wildlife Code, Section 13.0045, authorized the Authority to issue revenue bonds or other revenue obligations not to exceed $60.0 million in the aggregate on behalf of the Department for construction and renovation projects for parks and wildlife facilities.

Purpose: Proceeds from the sale of general obligation bonds are used to purchase and develop state park lands. Proceeds from the sale of revenue bonds are used to finance the repair, renovation, improvement, and equipping of parks and wildlife facilities.

Security: General obligation debt issued on behalf of the Department is payable from revenues and income of the Department. In the event that such income is insufficient to repay the debt, the first monies coming into the Comptroller of Public Accounts - Treasury Operations, not otherwise dedicated by the Constitution, are pledged to pay debt service on the bonds.

Revenue obligations issued on behalf of the Department are to be repaid from rent payments made by the Department to the Authority. The Department may receive legislative appropriations of general revenue for its required rental payments.

Dedicated/Project Revenue: Debt service on general obligation park development bonds is payable from entrance fees to state parks. Additionally, sporting goods sales tax revenue may also be used to pay debt service on general obligation park development bonds.

The Department's lease obligations to the Authority for revenue bonds are repaid from the Department's general revenue appropriation for lease payments.

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TEXAS PUBLIC FINANCE AUTHORITY BONDS

Statutory/Constitutional Authority: The Texas Public Finance Authority (the "Authority") is authorized to issue both revenue and general obligation bonds.

The Authority was initially created by the legislature in 1983, by Texas Revised Civil Statutes Ann., Article 601d (now Chapter 1232, Texas Government Code) and was authorized to issue revenue bonds to finance state office buildings.

Article III, Section 49-h, of the Texas Constitution, adopted in 1987, authorized the Authority to issue general obligation bonds for correctional and mental health facilities.

In 1989, the Authority was authorized to establish a Master Lease Purchase Program. This program was created to finance the purchase of equipment on behalf of various state agencies at tax-exempt interest rates.

In 1991, the Authority was given the responsibility of issuing revenue bonds for the Texas Workers' Compensation Fund under Subchapter G, Chapter 5, of the Texas Insurance Code.

The 73rd Legislature authorized the Authority, effective January 1, 1992, to issue bonds on behalf of the Texas Military Facilities Commission, Texas National Research Laboratory Commission, Texas Parks and Wildlife Department, and the Texas State Technical College. In 1993, the Authority was authorized to issue bonds or other obligations to finance alternative fuels equipment and infrastructure projects for state agencies, institutions of higher education, and political subdivisions.

The 74th Legislature authorized the Authority to issue building revenue bonds on behalf of the Texas Department of State Health Services (formerly the Texas Department of Health) for financing a Public Health Laboratory in Travis County and to issue general obligation bonds on behalf of the Texas Juvenile Probation Commission (now the Texas Juvenile Justice Department).

The 75th Legislature authorized the Authority to issue bonds on behalf of the Texas Low-Level Radioactive Waste Disposal Authority (see Texas Commission on Environmental Quality, *supra*), Midwestern State University, Texas Southern University and Stephen F. Austin State University. Other legislation passed by the 75th Legislature authorized the Authority to issue revenue bonds on behalf of the Texas Health and Human Services Commission and the Texas Parks and Wildlife Department. The legislature also authorized the Authority to issue bonds to finance the Texas State History Museum on behalf of the State Preservation Board.

The 76th Legislature authorized the Authority to issue revenue obligations to finance automated information systems for the Texas Department of Human Services' electronic benefits transfer (EBT) and integrated eligibility (TIERS) programs.

In 2001, constitutional amendments were adopted authorizing the issuance of: 1) up to $850 million of general obligation bonds to finance construction, renovation, and equipment acquisitions for thirteen state agencies (Texas Constitution, Article III, Section 50-f); and 2) up to $175 million of general obligation bonds to finance assistance to border counties for roadways in colonias (Texas Constitution, Article III, Section 49-l). Additionally, the 77th Legislature authorized the Authority to issue bonds to finance nursing home liability insurance and to establish a corporation to issue bonds for charter schools. Bonds issued for charter schools do not constitute state debt.

In 2003, the 78th Legislature authorized the Authority to issue revenue bonds on behalf of the Texas Workforce Commission to fund the unemployment compensation program. (See the Texas Labor Code, Chapter 203, Subchapter F.) The 78th Legislature also authorized: 1) the Authority's issuance of general obligation bonds to finance assistance to local governments for economic development projects to enhance the military value of military facilities. Texas voters approved SJR 55 on September 13, 2003, and amended the Texas Constitution, Article III, Section 49-n and Texas Government Code, Chapter 436; and 2) the Authority's issuance of up to $75 million of revenue bonds to fund the FAIR Plan, which provides residential property insurance of last resort. The 86th Legislature authorized the use of loan proceeds to pay other debt incurred for the purpose of financing the project.

The 79th Legislature authorized the Authority to issue revenue bonds to finance building improvements for the Texas Department of Transportation (HB 2702) and to refinance certain of the Texas Building and Procurement Commission's lease-purchase agreements (now the Texas Facilities Commission).

The 80th Legislature authorized the Authority to issue $3 billion of general obligation debt to finance cancer research (Texas Constitution, Article III, Section 67) and $1 billion to finance capital projects for certain state agencies (Texas Constitution, Article III Section 50-g).

In 2011, the Sunset Advisory Commission conducted a review of the Authority pursuant to the Texas Government Code Chapter 325. HB 2251, 82nd Legislature, Regular Session (2011) became effective June 17, 2011, authorizing the continuation of the Authority for another twelve years. The legislation also authorized Stephen F. Austin State University to issue debt on its own (under prior law the Authority was the exclusive issuer of debt for that university) and authorized Texas State Technical College System and other general academic teaching institutions to contract with the Authority to issue or refund debt on their behalf.

The 84th Legislature authorized the Authority to issue $767 million in building revenue bonds on behalf of the Texas Facilities Commission for financing Phase I of its construction of state office buildings and parking garages in the Capitol Complex and North Austin Campus.

The 86th Legislature authorized the Authority to issue an additional $475 million in building revenue bonds on behalf of the Texas Facilities Commission for financing Phase II of its construction of state office buildings and parking garages in the Capitol Complex and North Austin Campus. Additionally, the Authority was authorized to issue $326 million in building revenue bonds on behalf of the Texas Department of Transportation for its Campus Consolidation Project. The Authority was also authorized to issue $208 million in revenue bonds for the Health and Human Services Commission for deferred facilities maintenance. The Legislature passed House Joint Resolution 12, proposing an amendment to the Texas Constitution which would increase the general obligation bond authorization for CPRIT to $6.0 billion from $3.0 billion, subject to voter approval.

The Authority is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts. The issuance of not self-supporting debt for Texas Constitution, Article III Section 50-f and 50-g authorizations also require Legislative Budget Board approval.

Purpose: Proceeds from the sale of general obligation bonds issued under Article III, Section 49-h are used to finance the cost of constructing, acquiring, and/or renovating prison facilities, youth correction facilities, and mental health/mental retardation facilities. Proceeds of obligations issued under Article III, Section 50-f are used for state agency renovation, construction, and equipment acquisition projects. Proceeds of obligations issued under Article III, Section 49-l are used to provide assistance to border counties for colonia roadway projects. Proceeds from the sale of general obligation bonds issued under Article III, Section 67 are used to finance grants for cancer research and the operation of the Cancer Prevention and Research Institute of Texas. Proceeds from the sale of building revenue bonds are used to purchase, construct, renovate, and maintain state buildings. Proceeds of bonds issued under Article III, Section 49-n are used to fund the Texas Military Value Revolving Loan Fund to make loans to certain defense communities for improved military value or economic development projects. Proceeds from the sale of bonds for the Workers' Compensation Fund were used to fund the Workers' Compensation Insurance Fund. Proceeds from the issuance of commercial paper under the Master Lease Purchase Program are used to finance equipment purchases of state agencies. (For a description of the use of funds for bonds issued on behalf of the Texas Military Facilities Commission [now the Texas Military Department], the Texas Parks and Wildlife Department, and the Texas state colleges and universities that are clients of the Authority, see the applicable sections in this Appendix.) Proceeds of bonds issued on behalf of the Texas National Research Laboratory Commission were used to finance costs of the Superconducting Super Collider; however, the project was canceled in 1995. The revenue bonds issued for the project were defeased in 1995, and the general obligation bonds were economically defeased in November 1999.

Security: Building revenue bonds are obligations of the Authority and are payable from "rents, issues, and profits" resulting from leasing projects to stateagencies. These sources of revenue come primarily from legislative appropriations. The general obligation bonds pledge the first monies not otherwise appropriated by the Constitution that come into the state treasury each fiscal year to pay debt service on the bonds. Revenue debt issued for the Unemployment Compensation Insurance Fund was secured by a special obligation assessment imposed on Texas employers by the Texas Workforce Commission. Revenue bonds issued for the Master Lease Purchase Program are secured by lease payments from state agencies, which come from state appropriations.

Dedicated/Project Revenue: Debt service on general obligation bonds has generally been payable from the state's General Revenue Fund. Loan repayments paid by participating defense communities to the Texas Military Preparedness Commission are used to pay debt on the outstanding bonds.

Debt service on the revenue bonds is payable from lease payments, which are primarily general revenue funds appropriated to the respective agencies and institutions by the legislature. The legislature, however, may appropriate lease payments to be used for debt service on the bonds from any source of funds that is lawfully available. University revenue bonds are repaid from pledged revenue such as tuition and fees. The university bonds are self-supporting, and the state's credit is not pledged for their repayment.

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TEXAS PUBLIC FINANCE AUTHORITY/TEXAS WINDSTORM INSURANCE ASSOCIATION BONDS

Statutory/Constitutional Authority: In the event of a catastrophe, the Texas Public Finance Authority (the "Authority") is authorized to issue revenue obligations for the Texas Windstorm Insurance Association (the "Association") pursuant to Subchapters B-1 and M, Chapter 2210, of the Texas Insurance Code (the "Act").

The Authority and the Association are required to obtain the approval of the State Insurance Commissioner, the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

Purpose: Proceeds from the sale of revenue bonds issued may be used to pay incurred claims and operating expenses of the Association; to pay for the purchase of reinsurance for the Association; to provide a reserve fund; and to pay capitalized interest and principal on the public securities for the period determined necessary by the Association.

Security: The bonds are special obligations of the Authority and the Association equally and ratably secured solely by and payable solely from a pledge of and lien on the Pledged Revenues. Pledged Revenues consist of premium revenues received by the Association or from the assessment of the surcharges pursuant to the Authorizing Law, amounts on deposit in the Obligation Revenue Fund and accounts created therein, and in the Program Fund and accounts created therein, including all derived investment income.

Dedicated/Project Revenue: Debt service on bonds issued by the Association is payable from any one or a combination of the following: premiums and other revenue of the Association, as well as premium surcharges on property insurance policies in the catastrophe area.

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TEXAS PUBLIC FINANCE AUTHORITY CHARTER SCHOOL FINANCE CORPORATION

Statutory/Constitutional Authority: The Texas Public Finance Authority Charter School Finance Corporation (the "Corporation" or "Issuer") is a public, non-profit corporation created by the Texas Public Finance Authority (the "Authority" or "Sponsoring Entity") and exists as an instrumentality of the state pursuant to Texas Education Code, Section 53.351 as amended (the "Act"). The Corporation is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

Purpose: Pursuant to the Act, the Issuer is authorized to issue revenue bonds and to lend the proceeds thereof to authorized charter schools for the purpose of aiding such schools in financing or refinancing "educational facilities" (as such term is defined in the Act) and facilities that are incidental, subordinate, or related thereto or appropriate in connection therewith.

Security: The bonds are special and limited obligations of the Issuer, payable solely from revenues to be derived under the loan agreement, the Issuer Master Notes, and in certain circumstances, out of amounts secured through the exercise of remedies provided in the Indenture, the loan agreement, the deed of trust, and the Issuer Master Notes. The bonds are not obligations of the state of Texas or any entity other than the Issuer. The Issuer has no taxing power.

Dedicated/Project Revenue: The Issuer issues the bonds and loans the proceeds to the Borrower (an eligible open-enrollment charter school) to finance education facilities of the Borrower. The Borrower's obligations under the Loan Agreement are expected to be paid primarily from the state general revenue allocation the Borrower receives as a charter school, pursuant to Chapter 12 of the Texas Education Code.

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TEXAS STATE AFFORDABLE HOUSING CORPORATION

Statutory Authority: Chapter 2306, Subchapter Y of the Texas Government Code, authorizes the Texas State Affordable Housing Corporation (the "Corporation") to issue bonds. In accordance with the Texas Government Code, as amended, the Corporation is authorized to issue statewide 501(c)(3) bonds, qualified residential rental project bonds, and qualified mortgage revenue bonds under Section 2306.553 and Section 2306.555. The 77th Legislature established the Professional Educators Home Loan Program under Section 2306.562. The 78th Legislature authorized the Fire Fighter, Law Enforcement or Security Officer, and Emergency Medical Services Personnel Home Loan Program under Section 2306.5621. The 83rd Legislature reauthorized both of the Corporation's profession-specific single family programs by adding all eligible occupations under the Professional Educators Home Loan Program to the Homes for Texas Heroes (formerly known as the Fire Fighter, Law Enforcement or Security Officer, and Emergency Medical Services Personnel) Home Loan Program, creating a single program under Section 2306.5621.

The Corporation is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

Purpose: The Corporation's primary public purpose is to facilitate the provision of housing and the making of affordable loans to individuals and families of low, very low, and extremely low income for eligible participants under its programs. The Corporation is required to perform such activities and services that will promote and facilitate the public health, safety, and welfare through the provision of adequate, safe, and sanitary housing for individuals and families of low, very low, and extremely low income.

Security: Any bonds issued are payable solely from the revenues and funds pledged for the payment thereof. The Corporation's bonds are not obligations of the state of Texas, and neither the state's full faith and credit nor its taxing power is pledged toward the payment of the Corporation's bonds.

Dedicated/Project Revenue: Revenue received by the Corporation from the repayment of loans and investment of bond proceeds is pledged to the payment of principal and interest on the bonds issued.

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TEXAS WATER DEVELOPMENT BONDS

Statutory/Constitutional Authority: The Texas Water Development Board (the "Board") is authorized to issue both revenue and general obligation bonds.

General Obligation: The Board issues self-supporting general obligation bonds for the Development Fund and Rural Water Assistance Programs. The Board may issue not self-supporting general obligation bonds for the State Participation (SP), Water Infrastructure Fund (WIF), Economically Distressed Areas Program (EDAP) and the Agricultural Water Conservation Loan Program.

General Obligation Authority: Article III, Sections 49-c, 49-d, 49-d-1, 49-d-2, 49-d-4, 49-d-6, 49-d-7, 49-d-8, 49-d-9, 49-d-10, 49-d-11 and 50-d of the Texas Constitution, initially adopted in 1957, contain the authorization for the issuance of general obligation bonds by the Board.

The 71st Legislature (1989) passed comprehensive legislation that established the EDAP. Article III, Section 49-d-7(b), provides for subsidized loans and grants from the proceeds of bonds authorized by this section. The 80th Legislature authorized an additional $250 million in general obligation bonds for the EDAP detailed in Article III, Section 49-d-10.

General Obligation Approval: Legislative appropriation and voter approval are required for the issuance of general obligation debt. Legislative appropriation is required for not self-supporting debt, while no further legislative action is required for self-supporting debt. The issuance of not self-supporting debt also requires Legislative Budget Board review. The Board is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts.

General Obligation Purpose: Proceeds from the sale of the general obligation bonds are used to make loans (and grants under the EDAP) to political subdivisions of Texas for the performance of various projects related to water conservation, transportation, storage, and treatment.

General Obligation Security: The general obligation bonds are secured by program revenues and the first monies coming into the Comptroller of Public Accounts - Treasury Operations not otherwise dedicated by the Constitution. The Development Fund Program is designed to be self-supporting. No general revenue draw has been made on this program since 1980. All outstanding series of the SP Program are considered self-supporting. No general revenue draw has been made on this program since 2010.

The EDAP is anticipated to have general revenue draws. The WIF Program includes certain series that are self-supporting and others that are not self-supporting. The not self-supporting series are anticipated to have general revenue draws.

Revenue Debt Authority: The Texas Water Resources Fund administered by the Board was created in 1987 by the 70th Legislature (Texas Water Code, Section 17.853), to issue revenue bonds that facilitate the conservation of water resources.

The State Water Implementation Revenue Fund for Texas (SWIRFT), administered by the Board, was created in 2013 by the 83rd Legislature (Texas Water Code, Chapter 15, Subchapter H), to issue revenue bonds to provide financing or refinancing for projects included in the state water plan. Constitutional related provisions applicable to the SWIRFT are detailed in Article III Section 49-d-13 of the Texas Constitution.

Revenue Debt Approval: Further legislative approval of specific bond issues is not required; however, the Board is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts. For the SWIRFT, the Texas Constitution requires that the Board provide written notice to the Legislative Budget Board for approval before issuing a revenue bond.

Revenue Debt Purpose: Proceeds from the sale of revenue bonds authorized under Texas Water Code, Section 17.853, are used to provide funds to the State Water Pollution Control Revolving Fund (also known as the Clean Water State Revolving Loan Fund) or any other state revolving fund that is created under Subchapter J, Chapter 15 of the Texas Water Code, including Drinking Water State Revolving Fund, and to provide financial assistance to local government jurisdictions through the acquisition of their obligations.

SWIRFT bond proceeds will be used to provide financial assistance to local government jurisdictions through acquisition of their obligations for the purpose of financing state water plan projects.

Revenue Debt Security: Any revenue bonds issued are obligations of the Board and are payable solely from the income of the program including the repayment of loans to political subdivisions. Principal and interest payments on the loans to political subdivisions for projects are pledged to pay debt service on the revenue debt issued by the Board.

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TEXAS WATER RESOURCES FINANCE AUTHORITY BONDS

Statutory Authority: The Texas Water Resources Finance Authority (the "Authority") was created in 1987 (Texas Water Code, Chapter 20) and given the authority to issue revenue bonds. The Authority is required to obtain the approval of the Bond Review Board and the Attorney General's Office prior to issuance and to register its bonds with the Comptroller of Public Accounts. No such bonds are currently outstanding.

Purpose: Proceeds from the sale of bonds are used to finance the acquisition of the bonds of local government jurisdictions, including local jurisdiction bonds that are owned by the Texas Water Development Board.

Security: Issued bonds are obligations of the Authority and are payable from funds of the Authority. The Authority's bonds are not an obligation of the state of Texas, and neither the state's full faith and credit nor its taxing power is pledged toward payment of Authority bonds.

Dedicated/Project Revenue: Revenue from the payment of principal and interest on local jurisdiction bonds acquired is pledged to the payment of principal and interest on bonds issued.

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VETERANS' LAND AND HOUSING ASSISTANCE BONDS

Statutory/Constitutional Authority: Article III, Section 49-b, of the Texas Constitution, initially adopted in 1946, authorized the issuance of general obligation bonds to finance the Veterans Land Program. Article III, Section 49-b-1, of the Texas Constitution, adopted in 1983, authorized additional land bonds and created the Veterans' Housing Assistance Program and established the Veterans' Housing Assistance Fund within the program. Article III, Section 49-b-2, of the Texas Constitution, adopted in 1993, authorized additional land bonds and the issuance of general obligation bonds to finance the Veterans' Housing Assistance Program, Fund II. Article III, Section 49-b, amended in 2001 and 2003, also authorizes the Veterans Land Board to use assets from the Veterans' Land Fund, the Veterans' Housing Assistance Fund, or the Veterans' Housing Assistance Fund II in connection with veterans' cemeteries and veterans' long-term care facilities. Chapter 164 of the Texas Natural Resources Code authorized the Veterans Land Board to issue revenue bonds for its programs including the financing of veterans' long-term care facilities.

Purpose: Proceeds from the sale of the general obligation bonds are loaned to eligible Texas veterans for the purchase of land, housing, and home improvements. Proceeds from the sale of revenue bonds are used to make land loans to veterans, to make home mortgage loans to veterans, or to provide for veterans' skilled nursing-care homes. Additionally, funds are used to provide cemeteries for veterans.

Security: In addition to program revenues, the general obligation bonds pledge the first monies coming into the Comptroller of Public Accounts - Treasury Operations not otherwise dedicated by the Constitution. The revenue bonds issued under Chapter 164 are special obligations of the Board and are payable only from and secured by the revenue and assets pledged to secure payment of the bonds under the Texas Constitution and Chapter 164. The revenue bonds do not create or constitute a pledge, gift, or loan of the full faith, credit, or taxing authority of the state.

Dedicated/Project Revenue: Debt service on the general obligation bonds is payable from principal and interest payments on the underlying loans to veterans. Debt service for the revenue bonds is paid from all available revenue from the projects financed, which is pledged as security for the bonds. The programs are designed to be self-supporting and have never had to rely on the General Revenue Fund.

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Appendix F
The Private Activity Bond Program

Since the passage of the Tax Reform Act of 1986 (the "Tax Act"), federal law has limited the use of tax-exempt financing for private activities. Tax-exempt private activity bonds may be used to finance certain privately owned projects that serve a public purpose and meet the following tests: 1) Private Business Use Test — more than 10 percent of the proceeds are to be used for any private business use; 2) Private Security or Payment Test — payment on principal or interest of more than 10 percent of the proceeds is to be directly or indirectly secured by, or payments are to be derived from a private business use; and 3) Private Loan Financing Test — proceeds are to be used to make or finance loans to persons other than governmental units.

The Tax Act authorizes the issuance of six types (subceilings) of private activity bond issues: 1) single-family housing projects permitted to issue qualified mortgage revenue bonds (MRB) or mortgage credit certificates (MCC); 2) Certain state-voted bond issues; 3) Qualified small-issue industrial development bonds (IDBs) or enterprise zone bonds (EZBs); 4) Multifamily residential rental projects; 5) Student loan bonds; and 6) All other issues that include a variety of exempt facilities such as sewage facilities and solid and hazardous waste disposal facilities. The 2019 program year is the last year Higher Education Authorities (HEA) student loan bonds will have a dedicated subceiling. The 86th Legislative Session (2019) passed Senate Bill (SB) 1474 which, among other changes, will eliminate the HEA student loan bond subceiling but combine those issuers to the all other issues subceiling beginning in the 2020 program year. In recent years, a widening variety of projects have been permitted to utilize tax-exempt private activity bonds, including transportation facilities, environmental enhancements to hydroelectric generating facilities, and qualified public educational facilities.

In addition, the Tax Act imposes a volume ceiling (or cap) on the aggregate principal amount of tax-exempt private activity bonds that may be issued within each state during any calendar year. The current volume cap is the greater of $105 per capita or $316.7 million. Based on the per capita amount, the state's volume cap for calendar year 2019 was $3.01 billion.

Section 146(e) of the Internal Revenue Code provides for each state to devise an allocation formula or a process for allocating the state's volume cap. This provision gives each state the ability to allocate this limited resource in a manner consistent with its own specific needs.

Chapter 1372 of the Texas Government Code mandates the allocation process for the state of Texas. The Private Activity Bond Allocation Program (PAB or Program) regulates the volume cap and monitors the amount of demand and use of private activity bonds each year. The BRB has administered the Program since January 1, 1992.

The federal government determines the state's private activity ceiling, but historically, the demand for financing for qualified private activities outstrips the supply of available volume cap. To address the excess demand over supply for most types of PAB financing, the legislature devised a lottery system that ensures an allocation opportunity for each eligible project type.

Reservations of state ceilings are initially allocated by lottery for applications received from October 5th through October 20th of the preceding program year, and thereafter on a first-come, first-served basis. Single-family housing has a separate priority system based on prior applications received and prior bond issues. Reservations are made under each subceiling, as applicable, from January through August 14th of each year. On August 15th (the collapse date), all unreserved allocation from all the subceilings are combined and redistributed by lottery number or on a first-come, first-served basis if all applicants from the lottery have received a reservation.

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Appendix G
Glossary

Advance Refunding – A refunding in which the refunded obligation remains outstanding for a period of more than 90 days after the issuance of the refunding issue. The Tax Cuts and Jobs Act of 2017 eliminated the option of issuing a tax-exempt advanced refunding of a tax-exempt municipal debt after December 31, 2017.

Allocation – The amount of private activity bond authority obtained from the state ceiling and assigned to a bond issuer using the issuance proceeds for a private activity that qualifies for exemption from federal income tax under the IRS Code.

Allotment – Amount of securities distributed to each member of the underwriting syndicate to fill orders.

Authorized but unissued – Debt that has been authorized for a specific purpose by the voters and/or the legislature but has not yet been issued. Authorized but unissued debt can be issued without the need for further legislative action.

Bond – A debt instrument in which an investor loans money to the issuer that specifies: when the loan is due ("term" or "maturity" such as 20 years), the interest rate the borrower will pay (such as 5 percent), when the debt-service payments will be made (such as monthly, semi-annually, annually), and the revenue source pledged to make the payments.

Bond Counsel – Attorney retained by the issuer to give a legal opinion that the issuer is authorized to issue the proposed securities, the legal requirements necessary for issuance have been met, and the proposed securities will be exempt from federal income taxation and state and local taxation where applicable.

Bond Insurance – A legal commitment by an insurance company to make timely payments of principal and interest in the event that the issuer of the debt is unable to make the payments.

Bond Proceeds – The money paid to the issuer by the purchaser or underwriter of a new issue of municipal securities. These funds are used to finance the project or other purpose for which the securities were issued and to pay certain costs of issuance as may be provided in the bond contract or bond purchase agreement.

Build America Bonds (BABs) – A debt instrument created by the American Recovery and Reinvestment Act of 2009 (ARRA) that could be issued as Tax Credit BABs or Direct-Payment BABs. Tax Credit BABs provide a tax credit to investors equal to 35 percent of the interest payable by the issuer. Direct-Payment BABs provide a direct federal subsidy payment to state and local governmental issuers equal to 35 percent of the interest payable. With the implementation of the Budget Control Act of 2011, the BAB subsidies have been reduced. Authority to issue BABs expired in December 2010.

Federal Fiscal Year (October 1st thru September 30th)	Sequestration Rate Reduction
2020	5.9%
2019	6.2%
2018	6.6%
2017	6.9%
2016	6.8%
2015	7.3%
2014	7.2%
2013	8.7%

Capital Appreciation Bonds (CABs) – A municipal security on which the investment return (interest) on an initial principal amount is reinvested at a stated compounded rate until maturity. At maturity, the investor receives a single payment (the "maturity value") representing both the initial principal amount and the total investment return.

CAB Maturity Amount – The single payment for a capital appreciation bond an investor receives at maturity representing both the initial principal amount and interest. For capital appreciation bonds, compound accreted values are calculated as interest in the year of maturity.

CAB Par Amount – The face amount assigned to a capital appreciation bond at issuance and paid to the investor at maturity.

CAB Premium – The amount by which the price paid for a (CAB) security exceeds par value.

Carryforward – A private activity bond term for the three types of state ceiling that can be carried over for use by an issuer in the subsequent three years. The three types are:

1) Traditional Carryforward - The amount of the state ceiling not reserved before November 15 and any amount previously reserved that becomes available on or after that date because of a reservation cancellation.
2) Non-Traditional Carryforward - The amount of state ceiling reserved by an issuer for a specific purpose and for which the closing date extends beyond the year in which the reservation was granted.
3) Unencumbered Carryforward - The amount of state ceiling at the end of the year that is not reserved, nor designated as carryforward, and for which no application for carryforward is pending.

Certificate of Obligation (CO) – A bond issued by a city, county, or certain hospital districts without the approval of voters to finance public projects. Although voter approval is not required, the sale can be stopped if 5 percent of the total voters in the taxing area sign a petition and submit it prior to approval of the ordinance to sell such certificates.

Certificate of Participation (COP) – A tax-exempt, lease-financing agreement used by a municipality or local government in which an investor buys a share or participation in the revenue generated from the lease-purchase of the property or equipment to which the COP is tied. COPs do not require voter approval.

Charter School – Charter schools were created by the Texas Legislature in 1995 as part of the public-school system. Under Texas Education Code Chapter 12, the purpose of charter schools is to improve student learning, to increase the choice of learning opportunities within the public-school system, to create professional opportunities that will attract new teachers to the public-school system, to establish a new form of accountability for public schools, and to encourage different and innovative learning methods.

Commercial Paper – 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.

Competitive Sale – A sale in which the issuer solicits bids from underwriting firms and sells the securities to the underwriter or syndicate offering the most favorable bid that meets the specifications of the notice of sale.

Component Unit (CU) – A legally separate entity for which the elected officials of the primary government (PG) are financially accountable. The nature and significance of the CUs relationship with the PG is such that exclusion from the PG's financial reports would be misleading or create incomplete financial statements.

Conduit Issuer – An issuer, usually a government agency, that issues municipal securities to finance revenue-generating projects in which the funds generated are used by a third party (known as the "conduit borrower" or "obligor") for debt-service payments.

Costs of Issuance – The expenses associated with the sale of a new issue of municipal securities, including underwriting costs, legal fees, rating agency fees, and other fees associated with the transaction.

Coupon – The interest rate paid on a security.

Counterparty Risk – The risk to each party in a swap contract that the counterparty will not fulfill its contractual obligations.

Current Interest Bond (CIB) – A bond in which interest payments are made on a periodic basis throughout the life of the bond as opposed to a bond (such as a capital appreciation bond) that pays interest only at maturity. This term is most often used in the context of a combination issuance of bonds that includes both capital appreciation bonds and current interest bonds.

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

CUSIP – A unique nine-character identification for each class of security approved for trading in the United States. CUSIPs are used to facilitate clearing and settlement for market trades.

Dealer Fee – Cost of underwriting, trading, or selling securities.

Debt Outstanding – The amount of unpaid principal on a debt that will continue to generate interest until paid off.

Debt per Capita – A measurement of the value of a government's debt expressed in terms of the amount attributable to each citizen under the government's jurisdiction. The formula is the debt outstanding as of August 31 divided by the estimated residential population of the issuer.

Debt Service – The amount that is required to cover the repayment of principal and interest on a debt for a particular period.

Defeasance – A provision that voids a debt when the borrower sets aside cash, securities, or investments sufficient to service the borrower's debt.

Derivative – A financial instrument whose value is based on one or more underlying assets. An example is a swap contract between two counterparties that specifies conditions (especially the dates, underlying variables, and notional amounts) under which payments are to be made between the parties.

Disclosure – The act of releasing accurately and completely all material information to investors and the securities markets for outstanding or to be issued securities.

Disclosure Counsel – An attorney or law firm retained by the issuer to provide advice on issuer disclosure obligations and to prepare the official statement and/or continuing disclosure agreement.

Discount – The amount by which the price paid for a security is less than its par value.

Escrow – Fund established to hold monies or securities pledged to pay debt service.

Escrow Agent – Commercial bank or trust company retained to hold the investments purchased with the proceeds of an advance refunding and to use the invested funds to pay debt service on the refunded debt.

Financial Advisor – A securities firm that assists an issuer on matters pertaining to a proposed issue such as structuring, timing, marketing, fairness of pricing, terms, and debt ratings.

Fiscal Year – Information is sorted on the fiscal year of the state, September 1 through August 31. Debt-service adjustments have been made for local governments with different fiscal years. Information is provided on cash, not accrual basis.

Fixed Rate – An interest rate that does not change during the entire term of the obligation.

General Obligation (GO) Debt – Debt legally secured by a constitutional pledge of the first monies coming into the State Treasury not otherwise constitutionally dedicated for another purpose. General obligation debt must be approved by a 2/3 vote of both houses of the Texas Legislature and by 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).

Indenture – Deed or contract, which may be in the form of a resolution, that sets forth the legal obligations between the issuer and the securities holders. The indenture also names the trustee that represents the interests of the securities holders.

Issuer – A legal entity that sells securities for the purpose of financing its operations. Issuers are legally responsible for the obligations of the issue and for reporting financial conditions, material developments, and any other operational activities.

Lease Purchase – Financing 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.

Lease-Revenue Bonds – Bonds issued by a non–profit corporation or government issuer, which are secured by lease payments made by the government or third-party borrower for use of specified property.

Letter of Credit – A credit enhancement used by an issuer to secure a higher rating for its securities. A Letter of Credit is usually a contractual agreement between a major financial institution and the issuer consisting of an unconditional pledge of the institution's credit to make debt-service payments in the event of a default.

Liquidity – The relative ability of a security to be readily traded or converted into cash without substantial transaction costs or loss in value.

Liquidity Provider – A financial institution that facilitates the trading of a security by insuring that it will be purchased if tendered to the issuer or its agent because it cannot be immediately remarketed to new investors.

Management Fee – A component of the underwriting spread that compensates the underwriters for assistance in creating and implementing the financing.

Maturity Date – The date principal is due and payable to the security holder.

Mortgage Credit Certificate – A certificate issued by certain state or local governments that allows a taxpayer to claim a tax credit for some portion of the mortgage interest paid during a given tax year.

Municipal Bond – A debt security issued to finance projects for a state or local government issuer. Municipal securities are exempt from federal taxes and from most state and local taxes.

Negotiated Sale – A sale in which an issuer selects an underwriting firm or syndicate to assist with the issuance process. At the time of sale, the issuer negotiates a purchase price for its securities with that underwriting firm or syndicate.

Not Self-Supporting Debt – Either general obligation or revenue debt intended to be repaid with state general revenues.

Notice of Sale – Publication by an issuer describing the terms of sale of an anticipated new offering of municipal securities.

Official Statement – The document published by the issuer that provides complete and accurate material information to investors on a new issue of municipal securities, including the purposes of the issue, repayment provisions, and the financial, economic, and social characteristics of the issuing government.

Par – The face value of a security that is due at maturity. A "par bond" is a bond selling at its face value.

Paying Agent – The entity responsible for processing debt-service payments from the issuer to the security holders.

Permanent School Fund (PSF) – The PSF was created in 1854 by the 5th Legislature expressly for the benefit of public schools. In addition, the Constitution of 1876 stipulated that certain lands and proceeds from the sale of those lands would also be dedicated to the PSF. The Constitution requires that distributions from the returns on the PSF be made to the Available School Fund to be used for the benefit of public and charter schools, and allows the PSF to be used to guarantee bonds issued by public and charter schools.

Permanent School Fund Bond Guarantee Program (BGP) – The BGP was created in 1983 as an alternative for school districts to avoid the cost of private bond insurance by obtaining a PSF guarantee for voter-approved public-school bond issuances. To qualify for the BGP guarantee, school districts and charter schools must be accredited by the state, have investment-grade bond ratings (but below AAA), and have their applications approved by the Commissioner of Education. Bonds guaranteed by the BGP are rated AAA.

Permanent University Fund (PUF) – The PUF is a state endowment contributing to the support of twenty-one 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).

Premium – The amount by which the price paid for a security exceeds par value.

Premium Capital Appreciation Bond (PCAB) – A type of CAB that has a stated yield or accretion rate that is higher than its actual current yield to investors. This difference results in a lower initial stated par amount, which preserves debt capacity.

Principal – The face value of a bond, exclusive of interest.

Printer – A business that produces the official statement, notice of sale, and any bonds required to be transferred between the issuer and purchasers of the bonds. The costs associated with a printer are typically rolled into the Costs of Issuance.

Private Activity Bond (PAB) – A tax-exempt bond issued by or on behalf of local or state government for the purpose of financing the project of a private user, and generally, the government does not pledge its credit.

Private Placement – A securities sale in which an issuer sells its securities directly to investors through a placement agent without a public offering.

Put Bond – A bond that allows the holder to force the issuer to repurchase the security at specified dates before maturity. The repurchase price is set at the time of issue and is usually par value.

Qualified Energy Conservation Bonds (QECB) – a bond that enables qualified state, tribal, and local government issuers to borrow money at attractive rates to fund energy conservation projects. While not a grant, a QECB is among the lowest-cost public financing tools available because the U.S. Department of the Treasury subsidizes the issuer's borrowing costs.

Rating Agency – An entity that provides publicly available ratings of the credit quality of securities issuers, measuring the probability of the timely repayment of principal and interest on municipal securities.

Refunding Bond – Bonds issued to retire or defease all or a portion of outstanding bonds.

Registrar – An entity responsible for maintaining ownership records on behalf of the issuer.

Remarketing Fee – Compensation to an agent for remarketing a secondary offering of short-term securities, usually for a mandatory or optional redemption or put (return of the security to the issuer).

Reservation – The notice given by the BRB to a private activity bond issuer reserving a specific amount of the state ceiling for a specific issue of bonds for 120 to 180 days, depending on the type of bond issuance.

Revenue Debt – Debt that is legally secured by a specified revenue source(s). Revenue debt does not require voter approval and usually has a maturity based on the life of the project to be financed.

Self-Supporting Debt – Debt that is designed to be repaid with revenues other than state general revenues. Self-supporting debt can be either general obligation debt or revenue debt.

Selling Group – Group of municipal securities brokers and dealers that assist in the distribution of a new issue of securities.

Serial Bond – A bond issue in which a portion of the outstanding bonds matures at regular intervals until all of the bonds have matured.

Spread Expenses – A component of the underwriting spread representing the costs of operating the syndicate such as financial advisors, legal counsel, travel, printing, day loans, wire fees, and other associated fees.

State Ceiling – The amount of private activity bond authority granted to a state under the IRS Code to issue tax-exempt private activity bonds during a calendar year.

Structuring Fee – A component of the underwriting spread that compensates the underwriters for assistance with developing a marketable securities offering within the issuer's legal and financial constraints.

Swap – A derivative in which counterparties exchange cash flows of one party's financial instrument for those of the other party's financial instrument.

Syndicate – A group of underwriters formed to purchase a new issue of securities from the issuer and offer it for resale to investors.

Takedown – A component of the underwriting spread representing the discount that the members of the syndicate receive when they purchase the securities from the issuer. Takedown is also known as the selling concession.

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

Term Bond – A bond issue in which all or a large part of the issue comes due in a single maturity. Term bond issuers make periodic payments into a sinking fund for mandatory redemption of term bonds before maturity or for payment at maturity.

Trustee – A bank or trust company designated by the issuer or borrower under the indenture or resolution as the custodian of funds. The trustee represents the interests of the security holders, including making debt-service payments.

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. The legislature has to authorize the projects in statute, and the TRBs cannot be used for auxiliary space, such as dormitories. 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.

Underwriter – An investment banking firm that purchases securities directly from the issuer and resells them to investors.

Underwriting Spread – The amount representing the difference between the price at which securities are bought from the issuer by the underwriter and the price at which they are re-offered to the investor. The underwriting spread generally includes the takedown, management fee, expenses, and underwriting risk fee.

Underwriting Risk Fee – A portion of the underwriting spread designed to compensate the underwriter for the risk associated with market shifts and interest rate fluctuations.

Underwriter's Counsel – Attorney who prepares or reviews the issuer's offering documents on behalf of the underwriter and prepares documentation for the underwriting agreement and the agreement among underwriters.

Underwriter's Risk – The risk of loss that could arise due to overestimated demand for an issuance or due to sudden changes in market conditions borne by the underwriters until resale.

Variable Rate – An interest rate that fluctuates based on market conditions or a predetermined index or formula. (Fixed rates do not change during the life of the obligation.)

Years to Maturity – The period of time for which a financial instrument remains outstanding. Maturity refers to a finite time period at the end of which the financial instrument will cease to exist and the principal is repaid with interest.

Yield – The investor's rate of return.

Zero Coupon Bond – A bond that is issued at a deep discount to its face value but pays no interest.

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