State of Texas

New Issue Report

Ratings

Long Term Issuer Default Rating	AAA
New Issues	
$28,425,000 Texas Water Development Board Water financial assistance Refunding bonds, Series 2019C-1	AAA
$37,485,000 Texas Water Development Board Variable Rate Water financial assistance Refunding bonds, Series 2019C-2	AAA
$22,535,000 Texas Water Development Board Water financial assistance Refunding bonds, Series 2019D	AAA
$42,130,000 Texas Water Development Board Water financial assistance Refunding bonds, Series 2019E-1	AAA
$81,235,000 Texas Water Development Board Variable Rate Water financial assistance Refunding bonds, Series 2019E-2	AAA
$8,170,000 Texas Water Development Board Water financial assistance Refunding bonds, Series 2019F	AAA
Outstanding Debt	
State of Texas General Obligation Bonds	AAA
Constitutional Appropriation Bonds	AAA
State of Texas General Obligation CP Notes	AAA
State of Texas Lease Revenue Refunding Bonds	AA+

Rating Outlook

Stable

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New Issue Summary

Sale Date: Via negotiation on May 15, 2019

Series: Texas Water Development Board Water Financial Assistance Refunding Bonds, Series 2019C-1, 2019C-2 (variable rate), 2019D, 2019E-1, 2019E-2 (variable rate) and 2019F.

Purpose: The bonds are being issued by the Texas Water Development Board (TWDB) for refunding purposes.

Security: The bonds are general obligations (GOs) to which the state pledges its full faith and credit.

Analytical Conclusion

Texas' Long-Term 'AAA' Issuer Default Rating (IDR) and GO bond rating reflect its growth-oriented economy and the ample fiscal flexibility provided by its conservative approach to financial operations and high reserve balance. In recent years, economic diversification and broader growth momentum allowed Texas to absorb a material contraction in its globally important energy sector during the 2014-2015 period. The sector is now experiencing robust growth and renewed development, which has boosted associated tax revenues; however, volatility in crude oil prices could dampen future prospects. Overall state economic and fiscal trends remain solid, with employment and revenue collections rising steadily.

Economic Resource Base: Texas' economic resource base is large and diverse, although oil and gas remain significant and are subject to volatility. The state has been a population magnet and economic growth leader for decades, resulting in a degree of diversification well beyond resource-related sectors. Fitch Ratings views the state's longer-term economic prospects as strong. Broader economic momentum continues, with trade, technology and other services driving gains alongside renewed growth in energy-related activity. Employment gains are exceeding national averages after a period of slower growth related to the decline in energy prices.

Key Rating Drivers

Revenue Framework: 'aaa'
Texas' revenue growth is expected to be in line with or above the level of U.S. economic growth, driven by rapid population and economic gains over time. Like most states, Texas retains nearly unlimited legal ability to raise operating revenues. Sales tax is the dominant source of revenue, although franchise, transportation, energy and other levies are also important.

Expenditure Framework: 'aa'
Texas retains ample flexibility to cut spending throughout the economic cycle, an attribute that the state relies on if needed to maintain fiscal equilibrium. Spending pressures from education, Medicaid, transportation, water and other growth-related needs are notable, and litigation has periodically been a source of uncertainty. Carrying costs are low but likely to increase given rising retirement obligations.

Long-Term Liability Burden: 'aaa'
The combined burden of Texas' debt and net pension liabilities is low relative to its resource base. Reluctance to borrow results in a low burden of net tax-supported debt. Net pension liabilities are a larger but manageable burden. Fitch expects tha net pension liabilities are likely

Rating History (IDR)

Rating	Action	Outlook/ Watch	Date
AAA	Affirmed	Stable	6/15/18
AAA	Revised	Stable	4/05/10
AA+	Affirmed	Stable	4/13/06
AA+	Assigned	—	10/30/92

to climb given several factors including higher than average funding discount rate assumptions and contributions that are capped instead of shifting with actuarially calculated needs.

Operating Performance: 'aaa'

Financial resilience is solid, with exceptional gap-closing capacity stemming from a willingness to cut even high priority spending and a very well-funded budgetary reserve that receives a portion of constitutionally dedicated oil and gas tax revenues. The state has a high level of fundamental financial flexibility despite a historical disinclination to raising operating revenues. To a limited degree, there is some deferral of required spending, including for pension contributions, education and Medicaid.

Rating Sensitivities

Economic Growth and Ample Flexibility: Texas' 'AAA' IDR and Stable Outlook assume continued strong prospects for economic growth and the maintenance of ample fiscal flexibility. The rating could be pressured in the event the state becomes unwilling to address potential fiscal challenges in an effective and timely manner.

Credit Profile

Texas' GO bonds are issued by various state agencies and payable from a constitutional appropriation out of the first moneys coming into the state treasury not otherwise appropriated. This unrestricted balance equaled $57.7 billion as of Aug. 31, 2018, the fiscal year-end. The TWDB issues GO water financial assistance bonds under various constitutional provisions to support water conservation and infrastructure projects throughout the state. Most GO water financial assistance bonds are self-supporting from repayments of project loans and income received from investments.

Texas' economy continues to grow and diversify, propelled by population gains and the dynamism of its nationally important metro regions. The current population is estimated at more than 28 million and is younger than the U.S. as a whole. Despite the continued prominence of resource extraction activities concentrated in several regions across the state, services are the main driver of growth and trade activities are also significant. The state retains ample fiscal flexibility to absorb economic and revenue volatility, both in the form of its budgetary reserve, the economic stabilization fund (ESF), which held $12.6 billion as of February 2019, and a practice of taking budgetary actions as needed to maintain balance. However, rapid growth continues to create other fiscal challenges, with rising demands to address education, social service, transportation and water needs.

Revenue Framework

Texas' main revenue source for funding expenditures is a statewide sales tax; there is no personal or corporate income tax. Other levies are important, including a franchise tax on businesses, various transportation taxes and fees, and oil and gas production taxes. Oil and gas, in particular, remain important, but volatile, and have fallen as a share of state revenues over several decades as the economy has grown and diversified. Sales taxes are also affected by energy sector volatility, although to a lesser degree. The constitutional diversion of most oil and gas tax revenues into the ESF and for highways spares the state's main operating fund, the general revenue fund (GRF), from the most extreme energy sector volatility.

Rapid population growth and diverse labor markets provide the basis for a revenue growth profile that Fitch expects to exceed the typical U.S. state over time. The dedication of revenues for specific needs (including oil and gas production taxes for budgetary reserves and highways,

Related Research

Fitch Rates Texas Water Development Board's $220MM GO Bonds 'AAA'; Outlook Stable (April 2019)

Related Criteria

U.S. Public Finance Tax-Supported Rating Criteria (April 2018) and sales taxes for highways beginning in fiscal 2019) may affect how closely economic performance aligns with general fund revenue collection trends over time.

Texas has almost unlimited legal ability to raise revenues, with the exception of a constitutional restriction on levying a property tax.

Expenditure Framework

Spending commitments are dominated by education and social services, particularly Medicaid. Education is the state's largest state expenditure and consists of formula spending for K-12 education distributed as intergovernmental aid to local school districts; public college and university funding are also significant line items.

Fitch has long noted the spending pressures arising from growth-related demands for both operating and capital needs. Education funding is provided through a combination of state resources and local property taxes and has been a longstanding policy flashpoint given enrollment growth, limits on local property taxes, and the state's demonstrated willingness to limit education funding based on state fiscal conditions. Transportation needs are also considerable, particularly within and between cities, with the state taking action in recent years to devote a larger share of both transportation and general revenues to address congestion.

The state has not hesitated to cut or defer spending on core services in the face of projected revenue weakness. This includes deep cuts to education formula funding, deferrals of transfers or spending into later biennia, and underfunding of Medicaid, including in the current biennium.

Texas' carrying cost for liabilities is low and only slightly above the median for states, driven primarily by actuarially calculated pension contributions. Actual contributions are statutorily capped at a level that in recent years has been below what is necessary to make progress on amortizing the liability based on funding valuations. Thus, rising pension liabilities over time are likely to increase carrying costs.

Long-Term Liability Burden

Texas' overall liability burden, at 7.1% of personal income, is above the 6% median for U.S. states as of Fitch's 2018 state pension update report but remains a low burden on resources. The net tax-supported debt burden alone also remains low, measuring 1.3% of personal income, driven by a longstanding reluctance to pursue tax-supported borrowing at the state level, although self-supported borrowing is a significant source of capital spending and much of this debt carries a GO pledge.

Pension liabilities are larger, given the state's responsibility both for its own retirees (Employees' Retirement System [ERS]) and for most of the obligation associated with retired teachers (Teachers' Retirement System [TRS]). Measuring the net pension liability (NPL) using Fitch's standard 6% discount rate brings the state's adjusted NPL for all pensions to approximately 5.8% of personal income. This figure leaves the reported NPL of the employees' and another smaller plan as reported, given their use of a blended accounting discount rate. Recent reforms have included partial cost-shifting to local schools and higher employer and employee contributions, although challenges for the pensions include still higher than average funding discount rate assumptions, long amortization periods and contributions that are statutorily capped. The fairly recent reduction in ERS's assumed investment rate of return, to 7.5% from 8%, extended attaining full system funding to an infinite period in recognition of these challenges.

The senate's pending supplemental appropriations bill for the 2020-2021 biennium includes a $542 million appropriation from the ESF to the teacher retirement trust account to boost system funding; a separate house version appropriates a lower $231 million for this purpose. The senate's budget bill appropriates an additional $388 million (a 7.2% increase from the current biennium) in all funds financing for teacher pension funding. The appropriations are targeted to move the state closer to full prefunding. The TRS board lowered the plan's discount rate to 7.25% from 8% in July 2018, which lowered the system funding ratio to 76.1% from 80.5%.

The state has significant internal liquidity, driven in part by the high ESF balance, which it has used to a limited degree to provide self-support for variable-rate borrowing and CP programs. With the exception of the fiscal 2016-2017 biennium, the state also has routinely relied on external cash flow borrowing to cover intra-year cash flow needs. Annual cash flow borrowing in fiscal 2019 totaled $7.2 billion through a tax and revenue anticipation note issuance.

Operating Performance

Texas' financial resilience is high, driven both by the exceptionally large ESF balance and by a willingness to make deep cuts to spending or transfers, including those affecting core services, in the event that current or forecast revenues are insufficient. For details, see Scenario Analysis, page 6.

Constitutional provisions result in the transfer of most oil and gas revenues to the ESF and for highways; these provisions have both spared the GRF from some energy revenue-related volatility and resulted in very high ESF balances. The state has tapped the ESF for various needs, including for budget balancing and for non-recurring investments. These included a one-time $2 billion draw to establish a loan program for water-related projects, in 2015, and the use of $989 million as part of the fiscal 2018-2019 biennial budget, primarily for maintenance and capital needs.

Operating performance has generally been consistent with Fitch's expectations. Revenues in the fiscal 2016-2017 biennium, which ended August 2017, tracked forecast expectations that were lowered following adoption of the biennial budget to reflect the impact of weaker energy sector revenues early in the biennium. For the biennium as a whole, general revenue-related taxes fell 2.9%, while sales taxes rose 1.6%.

Recent Operating Performance

For the fiscal 2018-2019 biennium, which began Sept. 1, 2017, the comptroller's October 2017 certification revenue estimate (CRE) forecast total general revenue-related taxes rising 5.5% in fiscal 2018 and falling 2% in fiscal 2019 after the impact of a recent constitutional provision that shifts $3.2 billion in sales tax collections for highways in fiscal 2019 was incorporated. The state comptroller issued a revision to the 2018-2019 CRE in July 2018 that boosted biennial sales taxes, Texas' largest revenue source, by 2% while total biennial GRF revenue increased by almost 5%. Despite the planned ESF draws, the July 2018 CRE forecast the ESF balance at $11.9 billion at the end of the 2018-2019 biennium.

All funds appropriated expenditures for the fiscal 2018-2019 biennium total $235.8 billion, following legislative actions in the 2017 session, gubernatorial vetoes, and anticipated supplemental adjustments for fiscal 2019. Appropriated spending was initially supported by several one-time actions, including adjustments to the sales tax transfer noted above and drawing funds from the ESF. Final projected expenditures are estimated to have increased by $19.2 billion compared to initial appropriations largely due to $12.2 billion in additional federal funds related to Hurricane Harvey. The second largest increase is for health and human services at $2.2 billion, partly to fund Medicaid expense that was underfunded in the enacted budget.

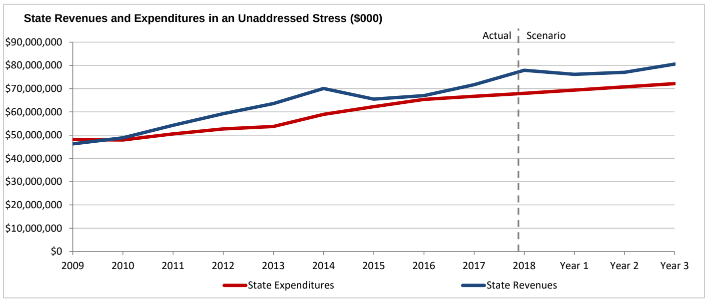
The comptroller's January 2019 biennial revenue estimate (BRE) provides a baseline for current discussions on the state's 2020-2021 biennial budget. The BRE forecasts $119.1 billion in GRF-related revenue available for appropriation (up 8.1% from the 2018-2019 biennium) net of $6.3 billion in required appropriations to the ESF and the state highway fund. Total all funds revenue is forecast at $265.6 billion and is reduced to $256 billion after required trust fund transfers. The forecast projects continued economic momentum, with solid growth in both goods-producing and service-providing industries alongside continued growth in energy-related activity. The ESF balance is expected to approximate $15.4 billion at the end of the biennium based on required deposits.

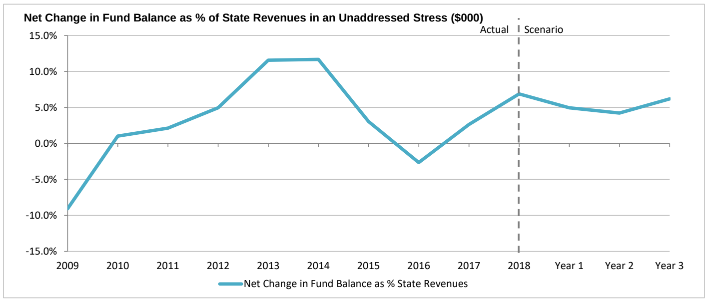
Separate versions of an operating budget for the upcoming 2020-2021 biennium have passed through the legislature and a conference committee for the purpose of reconciling the senate's $248 billion all funds budget with the house's $251 billion budget has been constituted. Both chambers concur on a $9 billion increase in GRF education funding with $4 billion targeted for teacher and librarian salary increases, $2.3 billion for unspecified education support and $2.7 billion for property tax relief and reducing reliance on recapture as an education funding source. Other program spending categories expected to see growth from the current biennium include Medicaid, child protective services, transportation and behavioral health.

The budgets do not include an appropriation from the ESF to fund operations; however, the senate's supplemental appropriations bill allocates almost $4.4 billion from the fund for hurricane relief efforts, resiliency measures and the TRS and would reduce the ESF balance to $10.7 billion at the end of fiscal 2021. The house version appropriates $2 billion from the ESF for similar purposes.

Texas, State of (TX)

Scenario Analysis





Analyst Interpretation of Scenario Results:

Texas' financial resilience is high, driven both by the exceptionally large ESF balance and by a willingness to make deep cuts to spending or transfers, including those affecting core services, in the event that current or forecast revenues are insufficient. At the end of the 2016-2017 biennium, the ESF balance equaled $10.3 billion and was equivalent to 20% of GRF revenue. As of Feb. 2019, the ESF balance of $12.6 billion equaled about 22% of estimated fiscal 2019 general revenues, providing ample cushion to absorb unexpected shocks.

Scenario Parameters:	Year 1	Year 2	Year 3
GDP Assumption (% Change)	(1.0%)	0.5%	2.0%
Expenditure Assumption (% Change)	2.0%	2.0%	2.0%
Revenue Output (% Change)	(2.2%)	1.2%	4.6%

Revenues, Expenditures, and Net Change in Fund Balance	Actuals										Scenario Output		
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Year 1	Year 2	Year 3
Expenditures													
Total Expenditures	83,799,000	90,410,000	95,446,000	90,918,000	91,762,000	98,742,000	104,127,964	109,674,426	110,384,791	114,301,305	116,587,331	118,919,078	121,297,459
% Change in Total Expenditures	8.0%	7.9%	5.6%	(4.7%)	0.9%	7.6%	5.5%	5.3%	0.6%	3.5%	2.0%	2.0%	2.0%
State Expenditures	48,100,000	47,927,000	50,539,000	52,699,000	53,746,000	58,966,000	62,258,844	65,390,464	66,715,243	67,995,529	69,355,440	70,742,548	72,157,399
% Change in State Expenditures	(1.7%)	(0.4%)	5.4%	4.3%	2.0%	9.7%	5.6%	5.0%	2.0%	1.9%	2.0%	2.0%	2.0%
Revenues													
Total Revenues	81,928,000	91,368,000	99,165,000	97,461,000	101,583,000	109,861,000	107,350,895	111,259,520	115,336,459	124,213,385	123,394,370	125,222,493	129,699,319
% Change in Total Revenues	2.5%	11.5%	8.5%	(1.7%)	4.2%	8.1%	(2.3%)	3.6%	3.7%	7.7%	(0.7%)	1.5%	3.6%
Federal Revenues	35,699,000	42,483,000	44,907,000	38,219,000	38,016,000	39,776,000	41,869,120	44,283,962	43,669,548	46,305,776	47,231,892	48,176,529	49,140,060
% Change in Federal Revenues	24.6%	19.0%	5.7%	(14.9%)	(0.5%)	4.6%	5.3%	5.8%	(1.4%)	6.0%	2.0%	2.0%	2.0%
State Revenues	46,229,000	48,885,000	54,258,000	59,242,000	63,567,000	70,085,000	65,481,775	66,975,558	71,666,911	77,907,609	76,162,479	77,045,963	80,559,259
% Change in State Revenues	(9.8%)	5.7%	11.0%	9.2%	7.3%	10.3%	(6.6%)	2.3%	7.0%	8.7%	(2.2%)	1.2%	4.6%
Excess of Revenues Over Expenditures	(1,871,000)	958,000	3,719,000	6,543,000	9,821,000	11,119,000	3,222,931	1,585,094	4,951,668	9,912,080	6,807,039	6,303,415	8,401,860
Total Other Financing Sources	(2,327,000)	(456,000)	(2,564,000)	(3,607,000)	(2,474,000)	(2,935,000)	(1,229,934)	(3,364,110)	(3,068,838)	(4,546,405)	(3,028,857)	(3,047,629)	(3,411,168)
Net Change in Fund Balance	(4,198,000)	502,000	1,155,000	2,936,000	7,347,000	8,184,000	1,992,997	(1,779,016)	1,882,830	5,365,675	3,778,182	3,255,786	4,990,692
% Total Expenditures	(5.0%)	0.6%	1.2%	3.2%	8.0%	8.3%	1.9%	(1.6%)	1.7%	4.7%	3.2%	2.7%	4.1%
% State Expenditures	(8.7%)	1.0%	2.3%	5.6%	13.7%	13.9%	3.2%	(2.7%)	2.8%	7.9%	5.4%	4.6%	6.9%
% Total Revenues	(5.1%)	0.5%	1.2%	3.0%	7.2%	7.4%	1.9%	(1.6%)	1.6%	4.3%	3.1%	2.6%	3.8%
% State Revenues	(9.1%)	1.0%	2.1%	5.0%	11.6%	11.7%	3.0%	(2.7%)	2.6%	6.9%	5.0%	4.2%	6.2%

Notes: Scenario analysis represents an unaddressed stress on issuer finances. Fitch's downturn scenario assumes a -1.0% GDP decline in the first year, followed by 0.5% and 2.0% GDP growth in Years 2 and 3, respectively. Expenditures are assumed to grow at a 2.0% rate of inflation. For further details, please see Fitch's US Tax-Supported Rating Criteria.

The ratings above were solicited and assigned or maintained at the request of the rated entity/Issuer or a related third party. Any exceptions follow below.