

# State of Texas

### **New Issue Summary**

Sale Date: June 21, 2023 by negotiation

Series: \$23,005,000 General Obligation (GOs) Water Financial Assistance Bonds, Series 2023A; \$36,230,000 GO Water Financial Assistance Refunding Bonds, Series 2023B; \$73,130,000 GO Water Financial Assistance Bonds, Series 2023C (Economically Distressed Areas Program); and \$21,580,000 GO Water Financial Assistance Bonds, Taxable Series 2023D (Economically Distressed Areas Program)

**Purpose:** Bond proceeds will finance water conservation and infrastructure projects and refund outstanding bonds for debt service savings.

**Security:** The bonds are GOs to which the state pledges its full faith and credit. 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.

Texas' 'AAA' Issuer Default Rating (IDR) and GO bond rating reflects its growing economy and the ample fiscal flexibility provided both by its conservative approach to financial operations and the maintenance of substantial reserves, including in its budgetary reserve, the economic stabilization fund (ESF).

The Texas Water Development Board 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.

**Economic Resource Base:** Texas has been a population magnet and economic growth leader for decades, with a large and diverse economic base. Oil and gas remain significant industries (natural resources development accounted for 11.2% of state GDP in 2022 compared with 3% for the U.S.) and their volatility can affect the state's economy and revenues. Despite this concentration, services are the main driver of growth, which, together with trade activities, has diversified the economy.

Growth in employment, personal income and GDP has exceeded the nation in recent years, supported by broad economic momentum in trade, technology and other services, as well as energy-related activity. This broader growth momentum has allowed Texas to manage through volatility in its globally important energy sector. While wealth levels are midrange compared with the states, the state's growth has led the nation.

## **Key Rating Drivers**

Revenue Framework: 'aaa': Texas has experienced strong revenue growth in line with or above the level of U.S. economic growth since the Great Recession, driven by rapid population and economic gains that Fitch Ratings anticipates will continue over the long term. Like most states, Texas retains nearly unlimited legal ability to raise operating revenues. The 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 the state relies on to maintain fiscal balance. Spending pressures from education, Medicaid, transportation, water and other growth-related needs are notable, and litigation has periodically been a source of uncertainty. Fitch expects carrying costs to increase, given rising retirement obligations, but to remain low.

Long-Term Liability Burden: 'aaa': The combined burden of Texas' debt and net pension liabilities (NPLs) is low relative to its resource base but above the U.S. states median. Fitch



### Ratings

Long Term Issuer Default Rating AAA

#### New Issues

\$23,005,000 General Obligation Water Financial Assistance Bonds, Series 2023A AAA \$26,230,000 General Obligation Water Financial Assistance Refunding Bonds, Series 2023B AAA\$73,130,000 General Obligation Water Financial Assistance Bonds, Series 2023C (Economically Distressed Areas Program) AAA \$21,580,000 General Obligation Water Financial Assistance Bonds, Taxable Series 2023D (Economically Distressed Areas Program) AAA

#### **Outstanding Debt**

State of Texas General Obligation
Bonds AAA
Texas Public Finance Authority
State General Obligation Bonds AAA
Texas Public Finance Authority
Lease Revenue Bonds AA+
Texas Public Finance Authority) CP
Notes (State Liquidity) Various
Series F1+

#### Rating Outlook

Stable

#### Applicable Criteria

U.S. Public Finance Tax-Supported Rating Criteria (May 2021)

#### Related Research

Fitch Rates Texas' \$154 Million GO Bonds 'AAA'; Outlook Stable (May 2023)

#### **Analysts**

Karen Krop +1 212 908-0661 karen.krop@fitchratings.com

Bryan Quevedo +1 415 732-7576 bryan.quevedo@fitchratings.com

1

New Issue | May 11, 2023 fitchratings.com



anticipates liabilities will increase over time, particularly for pensions, given higher than average funding discount rates. However, legislative changes that now require full appropriations on an actuarial basis and increasing employer contribution rates could improve funding over time, assuming plan actuarial assumptions are met.

Operating Performance: 'aaa': Financial resilience is strong, with superior gap-closing capacity stemming from a willingness to cut even high-priority spending and a budgetary reserve that is robust and has increased despite allocations that divert 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 education and Medicaid.

# Rating History (IDR)

		Outlook/	
Rating	Action	Watch	Date
AAA	Review -	Stable	3/17/23
	No Action		
AAA	Revised	Stable	4/5/10
AA+	Affirmed	Stable	4/13/06
AA+	Assigned	_	10/30/92

### **Rating Sensitivities**

Factors that could, individually or collectively, lead to positive rating action/upgrade:

Not relevant for an 'AAA' rating.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

 Unwillingness to address potential spending challenges, such as rising education funding, pension contributions, and capital demands, in a sustainable and timely manner.

### **Current Developments**

### **Economic Update**

Texas' labor market did not suffer as severe a decline as the nation as a whole during the pandemic, and the labor market recovery has been very strong in the post-pandemic period. Nonfarm payrolls declined by about 11% at the pandemic's start (from February 2020 to April 2020), lower than the national decline of 14%. Employment in Texas is now 6.7% higher than pre-pandemic, well above the national recovery of 2.2%. Headline unemployment in March of 4% exceeds the U.S. (3.5%) for that month. Texas' labor force has remained stable in recent months. The state's employment to population ratio (EPOP, a measure of labor force utilization) as of March 2023 was 61.3%, equivalent to its pre-pandemic level (61.2%) and slightly above the national rate (60.4%).

#### **Budget Update**

Fiscal 2023, which began on Sept. 1, 2022, is the second year of Texas' biennial budget. Revenue performance in the first year of the biennium was much stronger than anticipated in the enacted budget, which had assumed a sound rebound from pandemic-related revenue weakness, but slower than historical growth. Revenues instead increased 26% yoy in fiscal 2022, with all revenue sources performing well, but led by particular strength in the sales tax and oil and gas production taxes. This revenue performance has continued into fiscal 2023, leading the Controller to revise the forecast of revenues available for general purpose spending in fiscal 2023 upward by 20% to \$80 billion from \$67 billion.

With the strong revenue performance, the state anticipates sizable transfers to the ESF, bringing its total to \$13.7 billion by the end of the current biennium (Aug. 31, 2023), 17% of fiscal 2023 general revenues. Additional transfers in fiscal 2024, including \$3.3 billion in oil and gas tax collections and the required transfer of half of the fiscal 2023 unencumbered balance, estimated at \$5.7 billion, could bring the balance of the ESF to \$23.5 billion (29% of fiscal 2024 revenues). Subject to legislative action, the ESF is expected to reach its constitutional limit of 10% of prior biennial general revenue, less some exclusions, by the end of the fiscal 2024-2025 biennium.

The Controller's Biennial Revenue Estimate (BRE, January 2023) being used in the formulation of the fiscal 2024-2025 budget provided a forecast of \$166 billion in general revenue-related collections, a 5.7% increase over the revised estimate for the current fiscal 2022-2023 biennium. The forecast assumes the Texas economy will continue to grow but at a pace that is lower than the historical trend. The economic assumptions underlying the BRE assume stronger growth in 2024 for the U.S. than Fitch's economic outlook ("Global Economic Outlook - March



2023"). The BRE assumes 1.8% growth in 2024 versus Fitch's assumption of 1% GDP growth, leaving the state's revenue forecast susceptible to some downside risk.

The legislature is currently in session that began in January and extends through May. It is likely to take additional spending commitments or tax reduction actions that will reduce the carryover balance and the amount available to be appropriated in the next biennium. There is clear executive and legislative interest in using a significant portion of the \$33 billion balance to reduce local property taxes, which are the primary support for local education spending.

The House-passed budget incorporates property tax cuts via increased funding for school districts, pay raises for teachers and state employees, and supplemental spending from the carryover balance, including \$3.5 billion for one-time COLA pension increases for retired teachers. The Senate passed budget would spend slightly more than the House version, raise teacher and state employee salaries, and would reduce property taxes by raising the homestead exemption. Fitch will monitor the extent to which the state creates an ongoing funding obligation for schools and potential structural budget imbalance by providing local property tax relief using one-time surplus revenues.

Texas' state and municipal governments received \$27 billion from ARPA's Coronavirus State and Local Fiscal Recovery Funds, of which the state's portion is \$16 billion. The legislature appropriated \$13 billion in a September 2021 special session, allocating funds to a wide variety of programs in health, human services, housing assistance, and business assistance. A significant \$7.2 billion was allocated to the state's unemployment compensation fund as well as \$500 million for broadband infrastructure expansion.

#### Credit Profile

#### Revenue Framework

Texas' main revenue source for funding expenditures is a statewide sales tax, which accounts for more than 50% of general revenue-related revenues; 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. The latter, in particular, remains an important but volatile revenue stream; however, it has 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 support a revenue growth profile that Fitch expects will be in line with or above national GDP growth over time. The dedication of revenues for specific needs (including oil and gas production taxes for budgetary reserves and highways, and up to \$2.5 billion per year in sales taxes for highways that began in fiscal 2018) may affect how closely revenue collections in the GRF align with economic performance over time.

Texas has almost unlimited legal ability to raise revenues through rate increases or base broadenings, with the exception of a constitutional restriction on levying a state property tax.

#### **Expenditure Framework**

Spending commitments are dominated by education and social services, particularly Medicaid. Education is the state's largest expenditure and consists of formula spending for K-12 education distributed as intergovernmental aid to local school districts and public college and university funding. A companion bill to the 2020-2021 budget, House Bill (HB3), shifted more of the funding responsibility for K-12 education from local tax bases to the state and materially boosted financial support (a 20% increase), largely through an increase in the per-student basic allotment.

Overall, spending growth, absent policy actions, is expected to be marginally above expected revenue growth. Fitch has long noted the spending pressures arising from growth-related demands for both operating and capital needs, including for education, social services, transportation and water. Transportation needs are considerable, particularly within and between cities, with the state acting in recent years to devote a larger share of both



transportation and general revenues to address congestion. Following devastation from Hurricane Harvey in 2017, flood planning and resiliency initiatives increased in importance.

Education funding is provided through a combination of state resources and local property taxes, and Fitch anticipates the change to funding approach noted earlier may pressure future operations given expected enrollment growth and further limits on local property taxes. The fiscal 2022-2023 budget fully funded the states commitment to public education, including for projected enrollment growth during the biennium. The state retains the ability to reduce student formula funding in future biennia based on fiscal conditions.

The state retains ample expenditure flexibility; it has not hesitated to make cuts even to core services in the face of projected revenue weakness. These include deep cuts to education formula funding, deferrals or transfers of spending into later biennia, and underfunding of Medicaid (enacting budgets with low enrollment and spending assumptions that are later reversed), including for the 2020-2021 biennium. Periodic underbudgeting of Medicaid in the second year of biennial budgets is a concern, in Fitch's view, as legislative action is required to resolve any imbalance, potentially during periods of future revenue weakness.

Federal action to revise Medicaid's programmatic and financial structure does not appear to be a near-term priority of the current federal administration or congressional leadership. As with all federal programs, Medicaid remains subject to regulatory changes that could affect various aspects of the program. Texas, like all states, has begun the potentially complicated administrative task of resuming Medicaid redeterminations and disenrollment.

Texas' carrying cost for debt and post-retirement benefits is low at 5.4%, but above the median for states (4.5% in 2021), and has generally trended upward, driven primarily by pension contributions. Contributions historically have been set by state statute, which in recent years has been below what is necessary to amortize the liability based on funding valuations.

Various pieces of legislation (Senate Bill [SB12] in the 2019 legislative session and SB 321 more recently passed in 2021) have attempted to address this lack of progress. SB12 increased state, district and employee contributions to the Teachers' Retirement System of Texas (TRS) to improve system funding and SB321 requires actuarially based payments and closes the amortization period. The state appropriated funds from the ESF to cover the increased payments of \$263 million and \$261 million, respectively, in fiscal years 2020 and 2021.

### Long-Term Liability Burden

Texas' long-term liability burden is above the median for U.S. states but overall remains a low burden on resources. As of Fitch's "2022 State Liability Update (Personal Income Surge Offsets Liability Increase)," dated Nov. 15, 2022, which used fiscal 2021 data, combined debt and NPLs equaled 6.7% of personal income, compared with a state median of 4.6%, with strong personal income growth offsetting an increase in the Fitch-adjusted NPL. Long-term debt obligations measure a low 0.9% of personal income, reflecting a long-standing reluctance to pursue tax-supported borrowing at the state level.

A significant portion of the state's GO debt is self-supporting and, therefore, excluded from the overall long-term liability metric. This is also true for debt related to toll-revenue based public private partnerships, which have increased in recent years as the state seeks different avenues to address its transportation infrastructure needs.

Pension liabilities are large, given the state's responsibility for its own retirees and most of the obligation associated with retired teachers, as well as statutorily capped contribution rates that have resulted in annual contributions below actuarial recommendations.

Measuring the NPL using a 6% discount rate would bring the state's adjusted NPL for all pensions to approximately 6.3% of personal income. Although the two largest plans covering employees and teachers now receive contributions sufficient to improve the likelihood of actuarial improvement over time, two smaller plans use lower, blended discount rates that are below the 6% level to which Fitch adjusts reported pension liabilities.

The ratio of assets to liabilities for the Texas employees' retirement system (ERS) has significantly improved following changes that took effect in 2022, shifting contributions to actuarially determined, rather than fixed. SB321, which took effect Sept. 1, 2021, targets



eliminating unfunded liabilities by 2054 and establishes a cash balance plan for new employees. State OPEB obligations, as reported in the state's annual audit report, are large, equal to 4.2% of state personal income, but Fitch views them as a more flexible obligation.

The state has significant internal liquidity in the treasury pool, 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 commercial paper programs. The state routinely utilizes external cash flow borrowing to cover intra-year cash flow needs in the GRF in addition to utilizing GRF borrowable resources; however, given current ample liquidity, the state does not anticipate borrowing for cash flow purposes in the current biennium.

### Operating Performance

Texas' financial resilience is high, driven both by the large ESF balance and a willingness to make deep cuts to spending or transfers in the event that current or forecast revenues are insufficient. 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 comptroller's office is required to make formulaic transfers to the ESF within 90 days after the end of each fiscal year up to a fund cap of 10% of general revenue in the previous biennium.

Effective in fiscal 2015, half of required deposits to the ESF from oil and gas severance taxes are instead deposited in the state highway fund, through Aug. 31, 2034. Appropriations from the ESF can be made with a two-thirds vote of the legislature or a three-fifths vote of the legislature when addressing a deficit or to make appropriations in a biennium where a decline in revenues from the prior biennium is forecast. Even with these diversions, the ESF offers considerable financial flexibility.

The state has used its sizable ESF to address various fiscal and policy priorities, including budget balancing, capital needs and pension contributions, even during periods of economic expansion. Texas' reliance on the ESF to occasionally support ongoing needs, as well as the historical underfunding of Medicaid and pension contributions relative to actuarial recommendations, limits Fitch's assessment of the state's budget management during periods of economic recovery.

#### **ESG Considerations**

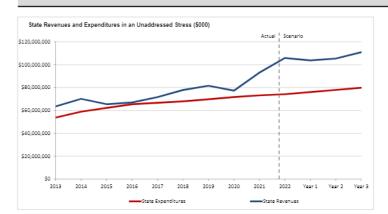
Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of 3, meaning that ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity.

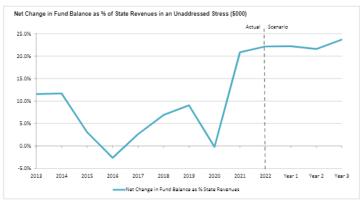
For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.



#### Texas, State of (TX)

Scenario Analysis





#### Analyst Interpretation of Scenario Results

Texas' financial resilience is high, driven both by the large ESF balance and by a willingness to make deep cuts to spending or transfers in the event that current or forecast revenues are insufficient. Constitutional provisions result in the transfer of most oil and gas revenues to the ESF and for highways; these provisions have both spared the general revenue fund 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, capital needs, pension contributions and other policy priorities. The comptroller's office is required to make formulaic transfers to the ESF within 90 days after the end of each fiscal year up to a fund cap of 10% of general revenue in the previous blennium.

Effective in fiscal 2015, half of required deposits to the ESF from oil and gas severance taxes are instead deposited in the state highway fund, through Aug. 31, 2034. Appropriations from the ESF can be made with a two-thried voice of the legislature or by a three-fifths vote of the legislature when addressing a deflict or to make appropriations in a blennium where a decline in revenues from the prior blennium is forecast. Even with these diversions, the ESF offers considerable financial flexibility.

Scenario Parameters:		Year 1	Year 2	1
GDP Assumption (% Change)		(1.0%)	0.5%	
xpenditure Assumption (% Change)		2.5%	2.5%	
Revenue Output (% Change)	Minimum Y1 Stress: -1% Case Used: Moderate	(2.0%)	1.6%	

Revenues, Expenditures, and Net Change in Fund Balance	Actuals								Scenario Output				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Year 1	Year 2	Year 3
Expenditures													
Total Expenditures	91,762,000	98,742,000	104,127,964	109,674,426	110,384,791	114,301,305	116,565,638	127,944,362	145,509,317	168,012,801	172,213,121	176,518,449	180,931,410
% Change in Total Expenditures	0.9%	7.6%	5.5%	5.3%	0.6%	3.5%	2.0%	9.8%	13.7%	15.5%	2.5%	2.5%	2.5%
State Expenditures	53,746,000	58,966,000	62,258,844	65,390,464	66,715,243	67,995,529	69,736,725	71,721,610	73,210,625	74,160,997	76,015,022	77,915,397	79,863,282
% Change In State Expenditures	2.0%	9.7%	5.6%	5.0%	2.0%	1.9%	2.6%	2.8%	2.1%	1.3%	2.5%	2.5%	2.5%
Revenues													
Total Revenues	101,583,000	109,861,000	107,350,895	111,259,520	115,336,459	124,213,385	128,414,726	133,479,846	165,360,293	199,649,287	199,891,044	203,957,813	211,895,520
% Change In Total Revenues	4.2%	8.1%	(2.3%)	3.6%	3.7%	7.7%	3.4%	3.9%	23.9%	20.7%	0.1%	2.0%	3.9%
Federal Revenues	38,016,000	39,776,000	41,869,120	44,283,962	43,669,548	46,305,776	46,828,913	56,222,752	72,298,692	93,851,804	96,198,099	98,603,052	101,068,128
% Change in Federal Revenues	(0.5%)	4.6%	5.3%	5.8%	(1.4%)	6.0%	1.1%	20.1%	28.6%	29.8%	2.5%	2.5%	2.5%
State Revenues	63,567,000	70,085,000	65,481,775	66,975,558	71,666,911	77,907,609	81,585,813	77,257,094	93,061,601	105,797,483	103,692,945	105,354,761	110,827,392
% Change In State Revenues	7.3%	10.3%	(6.6%)	2.3%	7.0%	8.7%	4.7%	(5.3%)	20.5%	13.7%	(2.0%)	1.6%	5.2%
Excess of Revenues Over Expenditures	9,821,000	11,119,000	3,222,931	1,585,094	4,951,668	9,912,080	11,849,088	5,535,484	19,850,976	31,636,486	27,677,923	27,439,364	30,964,110
Total Other Financing Sources	(2,474,000)	(2,935,000)	(1,229,934)	(3,364,110)	(3,068,838)	(4,546,405)	(4,483,814)	(5,677,839)	(434,584)	(8,203,846)	(4,669,298)	(4,693,876)	(4,735,889)
Net Change in Fund Balance	7,347,000	8,184,000	1,992,997	(1,779,016)	1,882,830	5,365,675	7,365,274	(142,355)	19,416,392	23,432,640	23,008,625	22,745,488	26,228,221
% Total Expenditures	8.0%	8.3%	1.9%	(1.6%)	1.7%	4.7%	6.3%	(0.1%)	13.3%	13.9%	13.4%	12.9%	14.5%
% State Expenditures	13.7%	13.9%	3.2%	(2.7%)	2.8%	7.9%	10.6%	(0.2%)	26.5%	31.6%	30.3%	29.2%	32.8%
% Total Revenues	7.2%	7.4%	1.9%	(1.6%)	1.6%	4.3%	5.7%	(0.1%)	11.7%	11.7%	11.5%	11.2%	12.4%
% State Revenues	11.6%	11.7%	3.0%	(2.7%)	2.6%	6.9%	9.0%	(0.2%)	20.9%	22.1%	22.2%	21.6%	23.7%

Notes: Scenario analysis represents an unaddressed stress on Issuer finances. Fitch's scenario analysis assumes the GDP and expenditure growth sequence shown in the 'Scenario Parameters' section. 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.

#### **DISCLAIMER & DISCLOSURES**

All Fitch Ratings (Fitch) credit ratings are subject to certain limitations and disclaimers. Please read these limitations and disclaimers by following this link: https://www.fitchratings.com/understandingcreditratings. In addition, the following https://www.fitchratings.com/rating-definitions-document details Fitch's rating definitions for each rating scale and rating categories, including definitions relating to default. Published ratings, criteria, and methodologies are available from this site at all times. Fitch's code of conduct, confidentiality, conflicts of interest, affiliate firewall, compliance, and other relevant policies and procedures are also available from the Code of Conduct section of this site. Directors and shareholders' relevant interests are available at https://www.fitchratings.com/site/regulatory. Fitch may have provided another permissible or ancillary service to the rated entity or its related third parties. Details of permissible or ancillary service(s) for which the lead analyst is based in an ESMA- or FCA-registered Fitch Ratings company (or branch of such a company) can be found on the entity summary page for this issuer on the Fitch Ratings website.

In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third- party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information hey provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any security. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a si

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see https://www.fitchratings.com/site/regulatory), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

 $Copyright @ 2023 \, by Fitch \, Ratings, Inc., Fitch \, Ratings \, Ltd. \, and its subsidiaries. \, 33 \, Whitehall \, Street, \, NY, \, NY \, 10004. \, Telephone: \, 1-800-753-4824, \, (212) \, 908-0500. \, Fax: \, (212) \, 480-4435. \, Reproduction \, or \, retransmission \, in \, whole \, or \, in \, part is \, prohibited \, except \, by \, permission. \, All \, rights \, reserved. \, All \, rights$