State of Hawaii
Debt Affordability Study

12/10/2024

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DEBT AFFORDABILITY STUDY

I. Introduction

A. Goals and Objectives

The Director of Finance has undertaken a biennial Debt Affordability Study (Study) in order to optimize the use of limited debt capacity while meeting public spending goals and to ensure the prudent use of debt and to preserve sufficient future debt capacity. The Study has been prepared by PFM Financial Advisors LLC on behalf of the State of Hawaii (State) and Department of Budget and Finance (B&F). The Study summarizes and analyzes the current debt outstanding and future capital plans of the State and State Departments as it evolves over time. The Study aims to aid in decision making with respect to the State and State Department multi-year capital plans and to understand trade-offs while evaluating projects and debt alternatives.

The Study seeks to identify affordability metrics to measure debt burden, assess affordability of proposed debt issuances, ensure the State does not over leverage, and assess overall adequacy of revenues to pay for all obligations including pension and other postemployment benefits (OPEB) costs.

B. Scope

On June 26, 2015, Governor David Y. Ige signed Act 149, Session Laws of Hawaii 2015 directing the Director of Finance to submit a debt affordability study to promote both transparency in budget-making and more informed decisions on capital improvement project and debt issuance authorizations. The Director of Finance is charged with the submission of a debt affordability study to the legislature before the convening of the regular session of each odd-numbered year. The Act is codified within the Hawaii Revised Statutes §37C on State Debt, and the first such report on affordability was submitted in December 2016 before the start of the 2017 legislative session. This is the fifth report.

C. Summary of Overall State Debt and State Department Debt Programs

The Department of Budget and Finance plans, monitors, and manages the issuance of State bonds. B&F oversees the general management of State debt, including reimbursable general obligation bonds (RGO) and non-reimbursable general obligation (GO) bonds, special assessment bonds, refunding bonds, mortgage credit certificates, short-term loans, certificates of participation (COPs), and municipal lease financings. In addition, B&F has oversight responsibility for revenue bonds and special facility revenue bonds issued by State Departments including the Department of Transportation – Airports, Harbors, and Highways Divisions, University of Hawaii, Hawaiian Home Lands, Department of Business, Economic Development, and Tourism, and Hawaii Housing Finance and Development Corporation.

The Study focuses on each financing program to review outstanding debt, discuss legal limitations, summarize callable bonds, project and analyze multi-year capital plans, and measure affordability based on pertinent metrics and credit and peer considerations.

D. General Assumptions

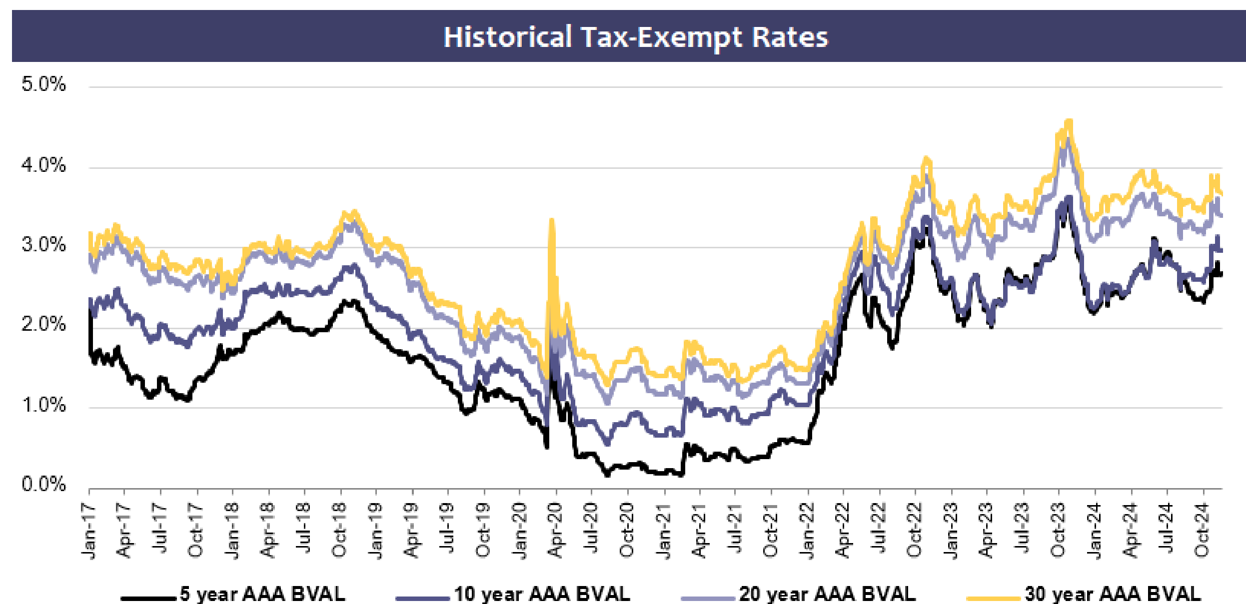
This Study makes certain assumptions and projections about future financial information and bond issuance timing and amount, for the purpose of analyzing debt affordability. The projected debt plans are as of September 30, 2024. In addition, conservative interest rate assumptions were utilized (see Appendix A for details) for estimating debt service on the debt issuance plans reported in the Study. Actual financial performance, bond issuance timing and amounts, interest rates, and therefore the debt and credit metrics, may vary from the projections presented in this Study. In addition, this Study does not take into consideration potential future refundings that may occur and may reduce annual debt service costs. The credit ratings reflected in this report are as of November 15, 2024. The debt outstanding under each financing program is as of November 1, 2024. For the latest credit and financial information, please refer to the State's investor relations website: http://investorrelations.hawaii.gov.

E. Market Conditions

This section highlights the municipal market conditions over the last seven years. These factors affect the market for the State's bonds.

Interest Rates

The Bloomberg Valuation Service (BVAL) AAA curve is the benchmark for tax-exempt municipal borrowing rates. The chart below depicts the 5-year, 10-year, 20-year and 30-year AAA BVAL interest rates.



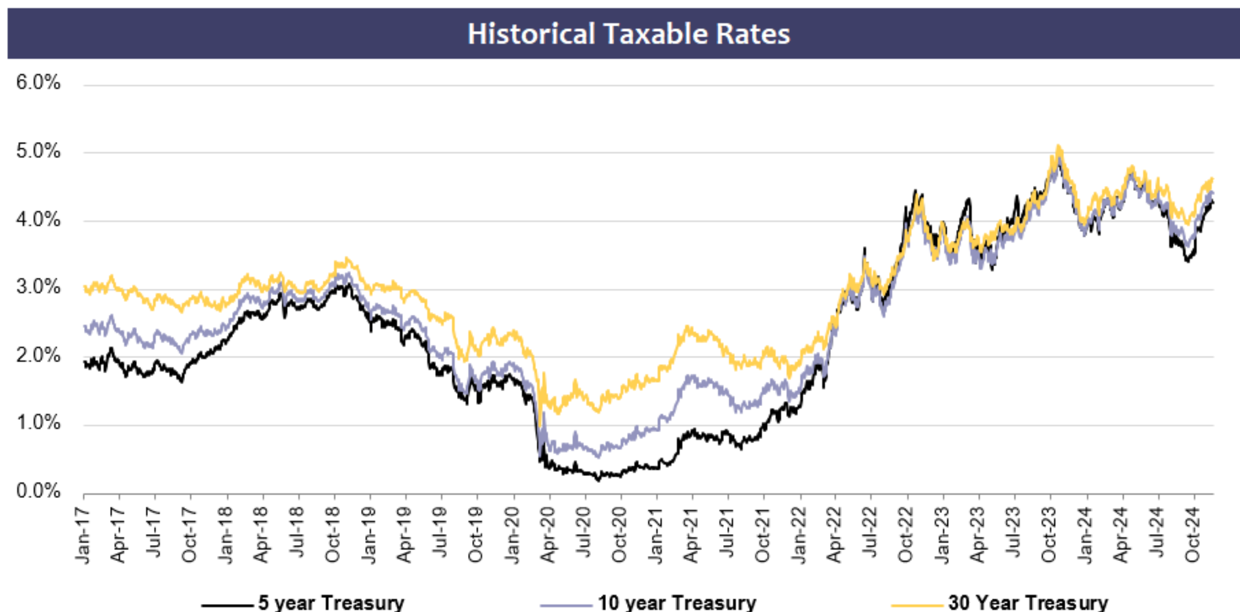
Source: Bloomberg

As reflected in the chart, interest rates were extremely volatile in early 2020 when the news of the COVID-19 pandemic first broke. Tax-exempt interest rates dropped to all-time lows in 2020 and remained close to historic-low levels through 2021, before increasing dramatically in early 2022 in response to Fed actions and broader inflation concerns. The Fed raised interest rates ten times through May 2023 to 5.00%-5.25% range and the AAA BVAL rates followed suit. The 30-year BVAL surpassed 4.50% in October 2023, the

highest it has been in over a decade. Rates have since improved as inflation moderated, albeit very gradually. With several economic data points indicating a slowdown in economic activity, the Fed cut rates by an aggregate 0.75% in late 2024.

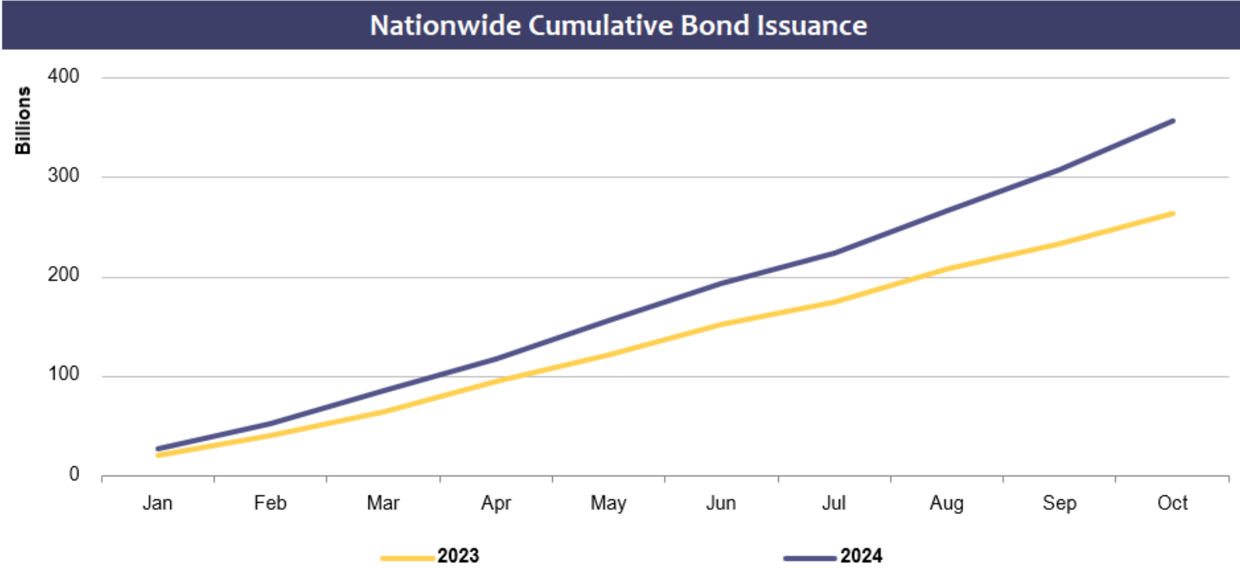
The US Treasury yields are the benchmark for taxable municipal borrowing rates. The chart below depicts the 5-year, 10-year, and 30-year US Treasury rates, which, much like the AAA BVAL, have swung from all-time lows in 2020 to the highest levels in recent history. At the outset of the pandemic investors flocked to US Treasury bonds, which are considered safe assets, leading to a dramatic drop in rates to a record low below 1%. Treasury rates started ticking up in 2021 and skyrocketed in 2022 with the 30-year rate crossing 4.00% for the first time in over a decade and surpassing 5.00% again in October 2023. Rates have since improved from this recent peak; however, they continue to show volatility throughout 2024, including a recent spike above 4.00% following the 2024 presidential election.

Source: Bloomberg



Bond Issuance Volume

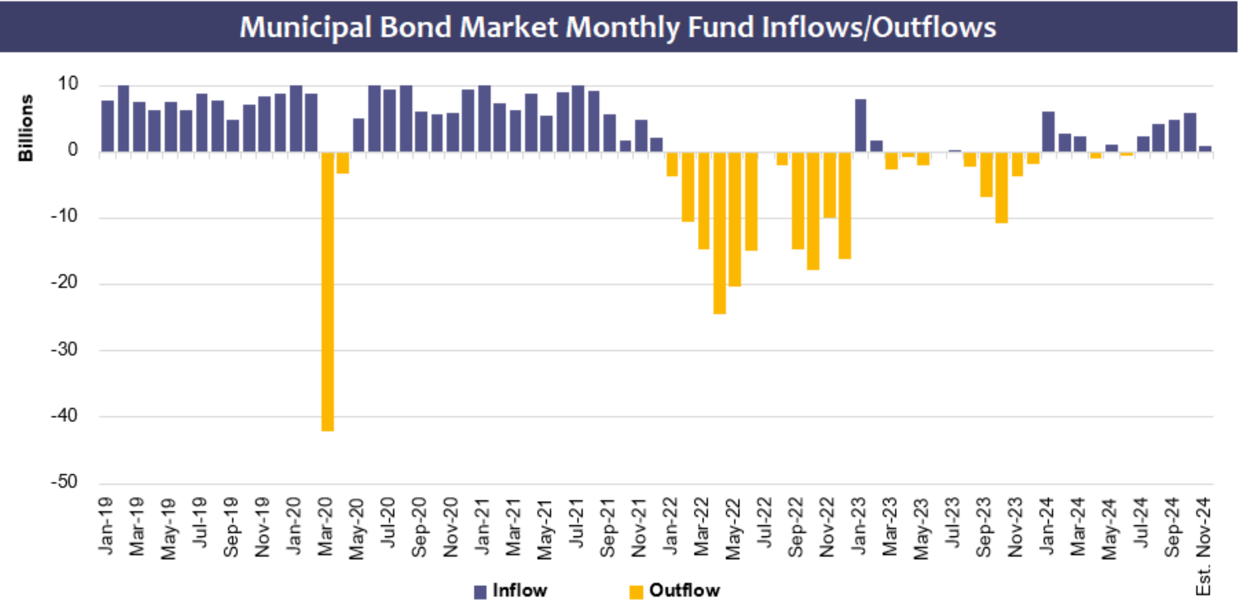
Generally, the interest rates for municipal bonds are a function of supply and demand relative to other fixed-income investments. A good measure of supply is the amount of new municipal issuance in a given year relative to prior years. Nationally, municipal bond issuance volume year-to-date has been higher in 2024 than in 2023 as seen in the following chart. Cumulative bond issuance for the first ten months through October 2024 was $441.7 billion or 37.8% higher compared to the same period in 2023. Much of the increase is attributable to issuers taking advantage of the recent improvements in the rate environment, as well as some end-of-the-year volume that was advanced to earlier months to avoid market volatility around the presidential elections.



Source: Bloomberg

Municipal Bond Market Monthly Fund Inflows/Outflows

Municipal bond mutual funds specializing in tax advantaged investments represent a significant segment of the investor base for tax-exempt bonds. Asset inflows and outflows of cash from these funds are a good proxy of overall demand for municipal bonds.

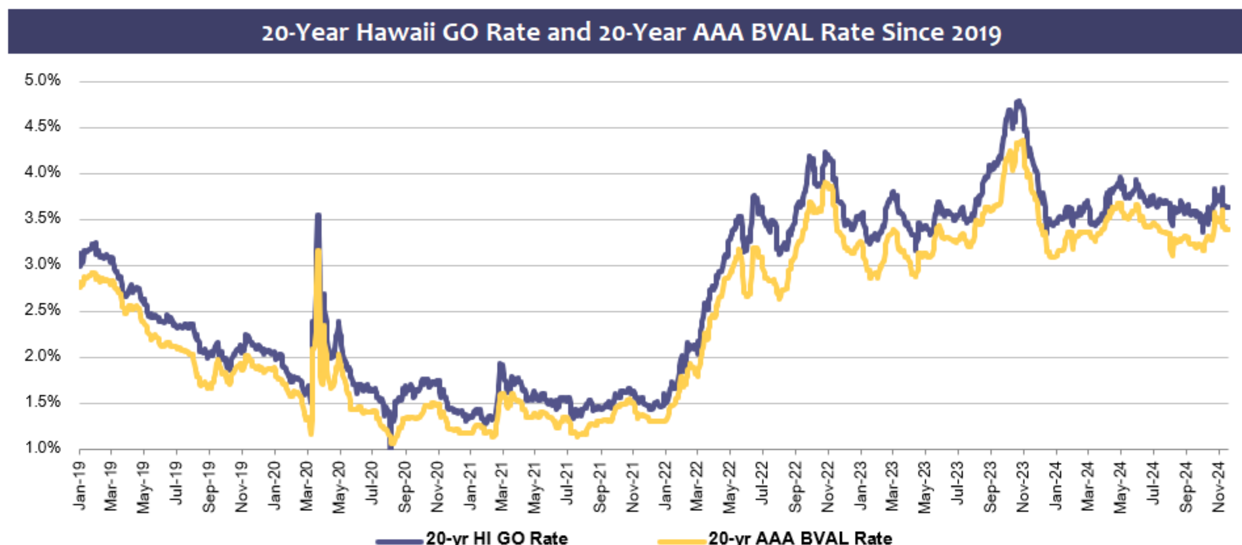


Source: Investment Company Institute

The chart above shows a history of monthly inflows and outflows from long-term municipal bond funds. The strong inflows in municipal bond funds in 2021 were offset by significant outflows in 2022, and continuing outflows in 2023. 2024 saw a return to net positive inflows as rates eased.

Interest Rates on Hawaii's Bonds

Interest rates on Hawaii's bonds are driven by both State-specific factors such as credit ratings as well as overall market conditions. Given the State's GO credit ratings in the 'AA' category, the State's GO bonds trade close to the AAA benchmark rates. Over the last five years, the State's interest rates have consistently tracked the AAA benchmark as seen in the following chart, showing little to no fluctuation even during challenging periods such as the 2023 Maui wildfires.



Source: Bloomberg

F. Other Considerations

Environmental Natural Disasters:

Given the State's geology and location in the Pacific Ocean, natural disasters such as earthquakes, volcanic eruptions, hurricanes, wildfires, flooding, mudslides, and tsunamis may impact the State. In fact, geothermal activity as well as storms are not unusual for the State. The State has experienced and managed such events in the past, with most recent being the August 2023 Maui wildfires which particularly affected the region of Lahaina. While Maui tourist activity slowed in the immediate aftermath of the wildfires, there have not been any sustained adverse effects on tourism following this disaster or any such natural disasters in Hawaiian history. The 2023 natural disasters did not have an adverse effect on the State's credit ratings. The State's strong financial position and funding assistance from FEMA and other federal sources, support these views.

Economic Environment:

The Federal Reserve raised the Fed Funds Rates several times in 2022 and 2023 to bring all-time high inflation under control. With inflation cooling off, the Fed is loosening the monetary policy, albeit with a very measured approach. It is not possible to predict if and when a recession may occur. Market participants continue to track several economic indicators such as GDP growth forecast, yield curve inversion, inflation rate, national retail sales, layoffs, jobless claims and unemployment rate, manufacturing index, policy

impacts with a new government, international tensions, among other things which could provide any signs of stress. Issuers should take the economic backdrop into consideration when evaluating new debt.

Overview of Recent Financial Performance and Revenue Projections:

For most of the State Departments, revenues fully recovered to pre-pandemic levels by FY2022 or FY2023 and have continued to improve and grow in FY2024 based on the estimates for the year. Actual performance may vary from the projections presented in this report especially if there are other economic events. Given the improvement in revenues and some stabilization in the markets with Fed loosening monetary policy, most State Departments plan to issue debt in the next six years. Departments will evaluate such future debt in the context of their financial position at the time and the prevailing economic conditions.

II. The Department of Budget and Finance and General Fund Debt

The Department of Budget and Finance, headed by the Director of Finance, administers the State budget, develops near-term and long-term financial plans and strategies for the State, conducts reviews of finances, organization, and operations of each department of the State to ensure appropriate and effective expenditure of public funds and provides programs for the improvement of management and financial management of the various departments and agencies. The issuance of all debt issued by Departments of the State is coordinated with and overseen by the Director of Finance and the Department of Budget and Finance. Non-general fund State financing programs are described in the following sections under applicable Departments.

It is important to note that the State has unique characteristics as compared to the other 49 U.S. states by virtue of its location in the Pacific Ocean. Since the State is not physically connected to any other state, it is dependent on air and sea transportation to bring goods and people to and from the islands. The State has a large military presence because of its strategic location. This results in sizeable federal spending in the State which is a significant component of the State economy, particularly in relation to its size and population. Compared to most other states, Hawaii's scenic location promotes tourism and is a source of considerable economic activity and revenues for the State.

Additionally, the State of Hawaii's general fund supports several functions that are typically supported by regional and local governments in other states across the nation. These additional responsibilities include GO bond funding for the K-12 education system, the community college system, the hospital system, and the jail and penitentiary system that are typically supported by cities and counties, school districts, community college districts, hospital districts etc. in other states.

The combination of these economic characteristics that drive the State's revenues in combination with the State's expanded support of otherwise regional/local obligations make the State of Hawaii particularly unique and it is challenging to compare the State with other states. While these programs contribute to the overall debt levels of the State, they are essential to the long-term viability of the State and the welfare of the population. Major State general fund tax revenues include general excise and use tax, income taxes, transient accommodations tax, and other taxes. There was a significant tax relief legislation passed in 2024 with cuts to both excise and income tax. Act 46, SLH incrementally decreases the State's income tax burden over a seven-year period with a combination of increase in standard deductions as well as amendments to income tax brackets. Act 47, SLH 2024 reduces excise tax collections through its exemption of medical and dental services paid with Medicare, Medicaid, and TRICARE. The State's Council on Revenues has incorporated the revenue loss expected from these laws in its September 2024 report. This revised forecast has also been incorporated in the affordability analysis.

B&F administers the issuance of general fund supported debt including GO bonds. While GO bonds are the primary financing program, B&F also issues COPs and enters into financing agreements such a capital leases, as required. All GO bonds are secured by the full faith and credit of the State, and the State must take action to ensure that sufficient revenues will be raised and provided from time to time for the purpose of payment of principal and interest on GO bonds. The State also issues reimbursable GO bonds on behalf of other Departments, and debt service on these bonds is reimbursed by the beneficiary Department from

revenues or user taxes, or both, derived from the public undertaking or improvements that were financed by such GO bonds. The State has issued short-term GO debt or bond anticipation notes (BANs) to provide interim financing. These notes are also secured by the State's general fund but are typically repaid from the proceeds of long-term GO bonds. COPs and capital leases are payable from any lawfully available funds of the State including the general fund and are subject to legislative appropriation.

A. Debt Profile

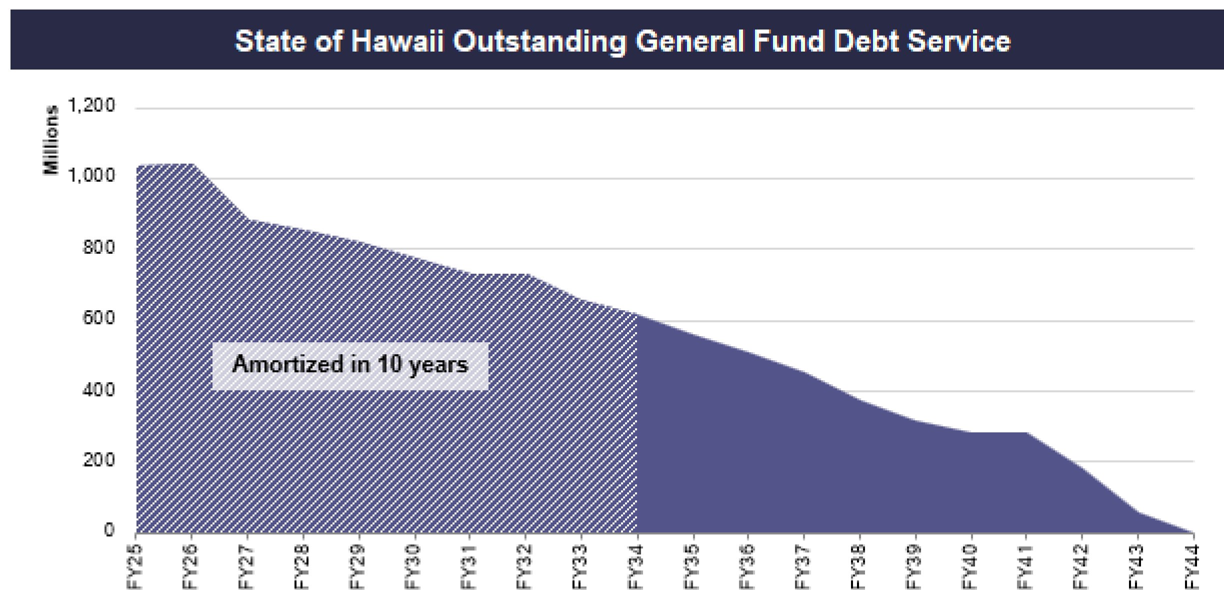
The State currently has 32 series of GO bonds outstanding with a total par amount of $8.1 billion. In addition to GO debt, the State has capital leases outstanding in the amount of $30.6 million, which are payable from the general fund and account for less than 1% of the total debt portfolio. A detailed list of all outstanding series supported by the general fund is included in **Appendix B**.

Summary of General Fund Supported Debt			
GENERAL FUND SUPPORTED DEBT	**OUTSTANDING**		
Figures in thousands	Reimbursable	Non-Reimbursable	Total
General Obligation Bonds	$37,466*	$8,066,287	$8,103,753
Capital Lease	NA	$30,570	$30,570
TOTAL GENERAL FUND SUPPORTED DEBT	**$37,466**	**$8,096,857**	**$8,134,323**

*As of November 1, 2024

B. Debt Service Chart

Per the Hawaii Constitution, the State is required to structure all GO bonds with annual level principal payments or annual level debt service payments resulting in an overall tapering amortization schedule as seen below. With the State's conservative GO debt structure, the State's debt service amortization is rapid. About 70% of GO bonds principal is repaid within ten years. The chart below reflects the State's annual general fund debt service.



C. Credit Ratings

Credit ratings provide an independent opinion regarding the State's ability and willingness to meet its financial commitments. Credit ratings issued by the bond rating agencies are a major factor in determining the cost of borrowed funds in the municipal bond market and are one of the tools used by investors when purchasing municipal obligations. Moody's Investors Service (Moody's), Standard & Poor's (S&P), and Fitch Ratings (Fitch) assign ratings to the State's GO bonds. As reflected in the table below, the State maintains 'AA' category ratings from Moody's, S&P and Fitch.

State of Hawaii GO Credit Ratings			
	Moody's	**S&P**	**Fitch**
General Obligation Debt	Aa2 Stable	AA+ Stable	AA Stable

S&P published its new US Government rating criteria in 2024 and affirmed the 'AA+' rating on the State's GO debt within that framework. Both Moody's and Fitch also recently reviewed the State's GO credit in the context of the upcoming 2024 Series GN bond sale and affirmed the ratings at 'Aa2' and 'AA', respectively. All outlooks are stable.

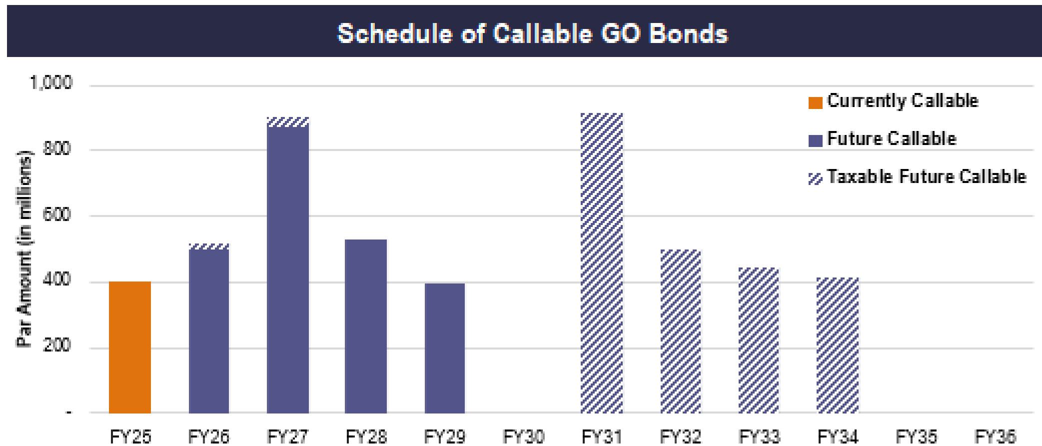
The State's strong credit ratings are supported by its prudent fiscal management and strong financial position, which has weathered several major economic stressors during the last two decades; strong financial governance practices including multi-year planning, frequent revenue forecast updates from the independent Council on Revenues facilitating prompt identification of budget gaps and alignment needs; strong executive power to reduce spending; no legal limits on tax or fee increases; and commitment to and progress toward reducing pension and OPEB liabilities. Additional credit strengths include rapid amortization of debt with a conservative all-fixed-rate debt profile, stable military presence, and strong reserve coupled with demonstrated commitment to grow it.

Credit challenges include vulnerability to tourism concentration, and to a global downturn, as seen during the COVID-19 pandemic. Long term challenges include adverse demographic shifts (outmigration, aging population, and below average labor force participation) that constrain long-term economic growth, substantial fixed costs with higher-than-average debt ratios, and large pension and OPEB liabilities. More imminent rating challenges also include unanticipated revenue volatility as the state implements recent tax policy changes and any potential budgetary and debt impacts from the Maui wildfires.

The State's GO ratings are largely driven by outside forces. Economic performance continues to be a major driver of the credit picture for the State. Continued sound financial management and proactive measures will contribute to addressing rating concerns. Although the State's debt levels are among the highest in the nation, additional credit factors including historical fiscal conservatism and management's willingness to utilize the budget balancing tools at its disposal provide stability to the State's credit. In addition, this biennial Debt Affordability Study promotes a systematic approach towards prudent use of debt further supporting sound financial management. The State has always strived to obtain the highest possible credit ratings in order to minimize interest costs while maintaining future flexibility, and the State continues to work towards that goal despite the credit challenges.

D. Schedule of Callable Bonds

The State monitors its debt portfolio for refunding opportunities and, from time to time, has executed refundings, both current and advance, based on market conditions and other factors. Over the last ten fiscal years, the State issued $3.54 billion in refunding bonds for total nominal savings of $375.1 million and present value savings of $245.0 million.



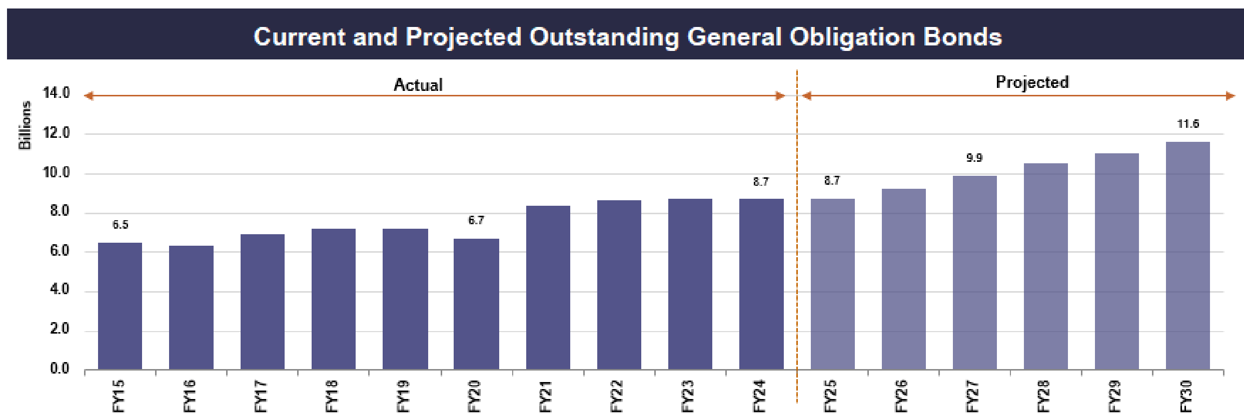
The chart above provides a summary of outstanding GO callable par amounts by fiscal year. The State's total outstanding GO callable par is about $5.03 billion. Of the callable par, $400.7 million is currently callable and the remaining is callable in future years beginning in FY2026. As indicated in the chart, the callable par amounts also include certain portions of taxable bonds that are callable at par without the make-whole-call (MWC) premium that is typically associated with taxable bonds.

Pursuant to the criteria outlined in its Debt Management Policy, the State may pursue opportunities to refund callable bonds. However, with the elimination of tax-exempt advance refundings, the State may choose to wait until the call date to current refund bonds or explore other options such as a forward refunding on a case-by-case basis.

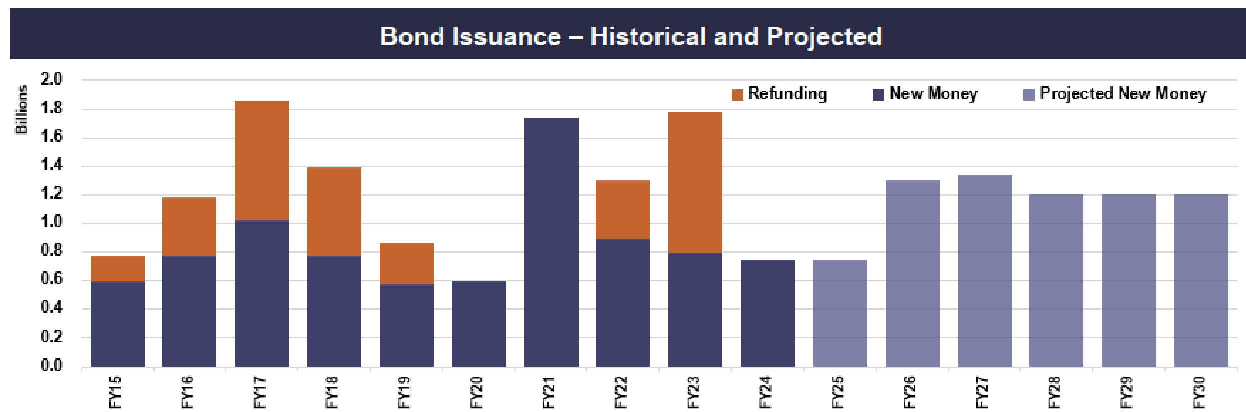
E. Multi-Year Program Anticipated/Intended Debt Issuance

Existing Debt and Anticipated Issuance

The State's annual issuance, and by relation the amount of GO debt outstanding, has increased significantly since 1990, more rapidly so in recent years. New money issuance in the last five fiscal years totaled $4.8 billion including the last issuance of $750 million in December 2023. The amount of debt supported by the general fund increased by 20.3% over the five-year period (from FY2019). The State has accessed the market at least once a year since FY2022, each time with a new money component and refunding bonds, if advantageous. Based on the State's projected new money requirements, the State anticipates that total GO debt levels will continue to climb over the next five years.



The State anticipates issuing an additional $7.3 billion new money GO bonds through FY2030, including $750 million in GO bonds in December 2024. These GO bonds are anticipated to fund infrastructure projects throughout the State.



Separate from capital needs, the State may have a liability in relation to the 2023 Maui wildfires. A settlement was reached in November 2024 in which the defendants, among them the State, the County of Maui, Kamehameha Schools and Hawaiian Electric Company, Inc., agreed to contribute to an approximately $4.0 billion pool of settlement funds from which current and future plaintiffs with personal and property damage claims would be paid. The settlement also stipulated that insurers could not bring subrogation claims against defendants. This is being challenged by insurance companies in the Hawaii

Supreme Court and a resolution has not yet been reached as of the date of this report. The settlement remains subject to court approval, and the State's contribution is subject to approval by the Legislature.

Should the settlement be approved, the State has agreed to contribute approximately $807.5 million towards the pool, plus $65 million to the One ʻOhana Fund. The State's funding strategy for the $807.5 million contribution, if approved, could take several different forms (including but not limited to the insurance payout received for damaged State buildings, one-time appropriation, use of rainy day funds and additional debt) and could be spread out over time. Given all the variables, the impact of this on the State's financial position and debt affordability cannot be evaluated at this time and is not included in the following discussions regarding debt burden, metrics, and affordability considerations.

Authorized but Unissued Debt

As of August 31, 2024, the State had about $5.09 billion authorized unissued remaining and the State plans to issue $750 million in GO bonds in December 2024.

F. Measuring Debt Burden

Debt ratios form the basis for peer comparison and allow the State to measure and track its debt burden over time. It is important to note that the State is unique in that it funds capital needs that are more typically funded by local municipal entities (as described previously). As such, the State's debt burden metrics are higher in comparison to medians and peers. The State's affordability metrics since FY2019 are provided below. In addition, the State is projected to issue $7.3 billion in new money GO Bonds through FY2030 and the projected impact on affordability metrics is shown in the table as well.

Historical and Projected (six-years) Metrics

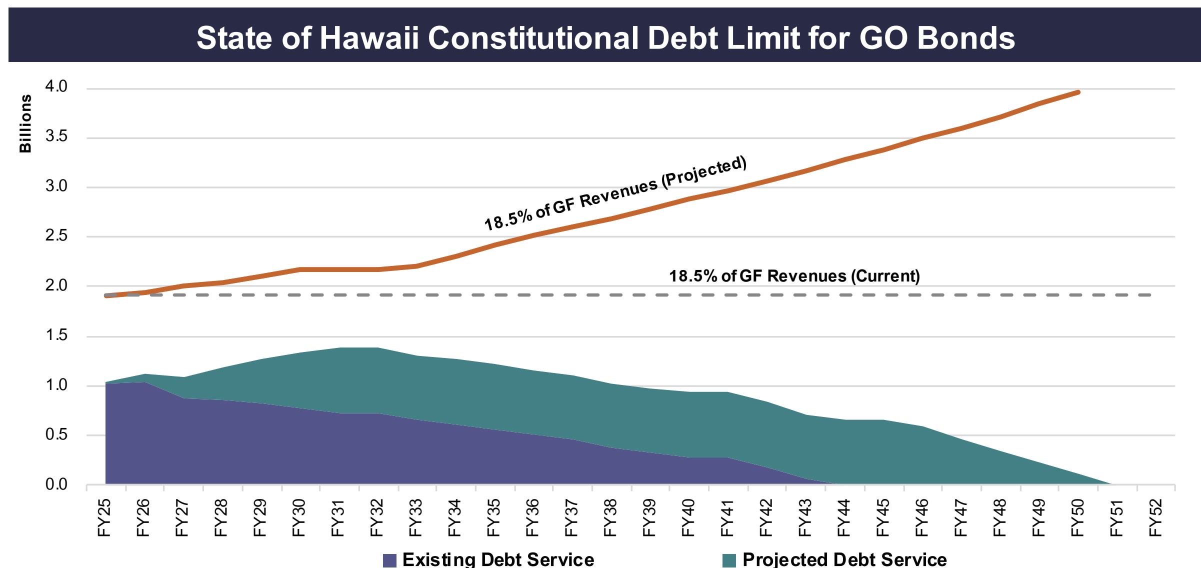
AFFORDABILITY METRICS	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	10.5%	11.5%	10.9%	12.9%	9.8%	10.2%	9.8%	10.3%	9.6%	10.1%	10.5%	11.8%
Pension contribution to annual revenues	8.3%	10.1%	11.4%	9.1%	7.9%	8.3%	8.4%	8.4%	8.4%	8.4%	8.3%	9.1%
OPEB contribution to annual revenues	10.9%	10.7%	16.7%	5.9%	7.8%	7.7%	7.7%	7.6%	7.4%	7.3%	7.1%	7.7%
All annual obligations to annual revenues	29.7%	32.4%	39.0%	27.9%	25.6%	26.2%	25.8%	26.3%	25.4%	25.8%	26.0%	28.6%
Annual debt service to annual appropriations	12.0%	12.2%	11.2%	17.7%	13.7%	9.6%	9.4%	10.9%	10.4%	11.1%	11.9%	12.6%
Pension contribution to annual appropriations	9.5%	10.7%	11.7%	12.4%	11.0%	7.8%	8.1%	8.9%	9.1%	9.2%	9.4%	9.7%
OPEB contribution to annual appropriations	12.5%	11.3%	17.2%	8.1%	10.9%	7.3%	7.4%	8.0%	8.0%	8.0%	8.0%	8.2%
All annual obligations to annual appropriatior	34.0%	34.3%	40.0%	38.2%	35.6%	24.8%	24.9%	27.8%	27.5%	28.3%	29.3%	30.4%
Debt per capita	$4,994	$5,055	$5,950	$6,043	$6,094	$6,088	$6,104	$6,461	$6,910	$7,301	$7,662	$8,012
Debt per capita (Adjusted)	$3,034	$3,070	$3,610	$3,665	$3,695	$3,690	$3,383	$3,057	$2,788	$2,519	$2,253	$2,000
Pension UAAL per capita	$6,265	$6,640	$7,188	$5,795	$6,217	$6,623	$6,643	$6,636	$6,603	$6,547	$6,464	$6,359
OPEB UAAL per capita	$6,457	$6,570	$6,153	$5,630	$4,931	$4,819	$4,732	$4,629	$4,513	$4,381	$4,236	$4,082
Debt as a % of state GDP	8.0%	8.4%	10.0%	9.0%	8.4%	7.9%	7.6%	7.7%	7.9%	8.1%	8.2%	8.3%
Debt as a % of state GDP (Adjusted)	4.9%	5.1%	6.0%	5.4%	5.1%	4.8%	4.2%	3.6%	3.2%	2.8%	2.4%	2.1%
Pension UAAL as a % of state GDP	10.0%	11.1%	12.0%	8.6%	8.5%	8.6%	8.2%	7.9%	7.6%	7.2%	6.9%	6.6%
OPEB UAAL as a % of state GDP	10.3%	10.9%	10.3%	8.4%	6.8%	6.3%	5.9%	5.5%	5.2%	4.8%	4.5%	4.2%
Debt as a % of personal income	9.4%	9.1%	10.2%	9.8%	9.6%	9.1%	8.8%	9.0%	9.2%	9.4%	9.6%	9.7%
Debt as a % of personal income (Adjusted)	5.7%	5.5%	6.2%	5.9%	5.8%	5.5%	4.9%	4.2%	3.7%	3.3%	2.8%	2.4%
Pension UAAL as a % of personal income	11.8%	12.0%	12.3%	9.4%	9.8%	9.9%	9.6%	9.2%	8.8%	8.5%	8.1%	7.7%
OPEB UAAL as a % of personal income	12.2%	11.9%	10.5%	9.1%	7.8%	7.2%	6.8%	6.4%	6.0%	5.7%	5.3%	5.0%
Pension UAAL as a % of total GF revenues	122.0%	132.3%	141.2%	92.8%	83.5%	89.3%	88.2%	86.3%	83.3%	80.4%	77.3%	81.3%
OPEB UAAL as % of total GF revenues	125.7%	130.9%	120.8%	90.2%	66.2%	65.0%	62.8%	60.2%	56.9%	53.8%	50.7%	52.2%
Liquidity – days' cash on hand	28 days	47 days	87 days	51 days	103 days	52 days	35 days	38 days	50 days	83 days	125 days	-

Note: Projected metrics assume issuance of $7.3 billion of additional new money GO bonds during the projection period (see anticipated debt above)

Relevant Affordability Metrics

The table on the prior page offers several metrics to measure debt burden and evaluate affordability. Many of the metrics are used for peer/median comparisons which is another way to measure debt levels and affordability. Some of the most relevant metrics are discussed below.

1. Constitutional Debt Limit for GO Bonds (Per Constitutional Calculation): The State constitution limits maximum annual debt service on aggregate outstanding GO bonds to 18.5% of average of general fund revenues for the three preceding years. As mentioned earlier the State passed significant tax relief measures in 2024. The State's Council on Revenues has incorporated the revenue loss from the tax cuts into their general fund revenue forecast. While reduced compared to prior forecasts, the revenues are projected to continue to grow at a good-to-modest range of 1.9%-3.5% annually through 2031. The expectations for growth in the tax base exceed the approved tax cuts resulting in continued growth for the general fund. Per the Council on Revenues, the factors contributing to the tax base growth include a recovery of tourists on the island of Maui after the wildfires, an expected gradual return of Japanese visitors, a strong construction outlook, and the stimulative effects coming from the cuts to the Federal Reserve's benchmark rate making for a more favorable economic outlook for the State in the coming years.



This revised revenue forecast has also been incorporated in the affordability analysis. Current revenue projections reflect sufficient capacity under the 18.5% ceiling (orange line in the chart below) even after accounting for future debt of $7.3 billion over the next six years. Projected debt service including the additional debt service is estimated to reach a maximum of 11.8% of projected general fund revenues (average for three preceding years) in FY2032.

2. Annual debt service payments to annual revenues or Annual debt service payments to annual appropriations: Both of these ratios indicate the percentage of the State's general fund budget that is allocated to "fixed costs" such as debt service payments. It is a measure of financial flexibility available within the State's general fund. High fixed costs limit such flexibility. For FY2024, an estimated 10.2%

of general fund *revenue* was utilized to service debt, a slight improvement over 10.5% in FY2019. Strong revenue performance in FY2024 has resulted in the improvement in this ratio. With tempered growth in projected revenues owing to the recent tax cuts and additional debt service from the planned new money issuance, this ratio is expected to gradually increase over the projection period and peak in FY2030 at about 11.8%.

Debt service payments account for 9.6% of FY2024 general fund *expenditures*, down from 12.0% in FY2019. This ratio is expected to increase over the projection period and peak at 12.6% in FY2030 as new debt service comes online. More generally, these ratios have been moderating slowly but steadily over the last decade and trending in the right direction. Strong growth in revenues relative to new debt have enabled the debt service-related fixed cost to moderate in the recent past.

<u>Pension and OPEB Contributions:</u> The general fund's contribution towards pension and OPEB are also considered "fixed" costs with limited ability to lower them. Accounting for these contributions over and above the debt service payments, approximately 26.2% of the State's general fund revenue for FY2024 supported fixed costs. The overall revenue growth has outpaced fixed costs resulting in the gradual improvement in this ratio.

The State expects to continue to contribute 100% of required contribution under state law for this pension plan. A State law was adopted to temporarily permit state and county employers to suspend OPEB UAAL prefunding payments starting in FY2021 to help address budget shortfalls resulting from the impacts of the COVID-19 pandemic. However, the State ultimately funded all of its ARC payments during the period. Significant federal stimulus helped the State to continue to meet its OPEB requirements. The State expects to contribute 100% of required contributions for OPEB in the foreseeable future.

As the State continues to fund its pension and OPEB plans, total fixed costs including debt service, are projected to be 25%-29% of general fund revenues through FY2030. Strong financial management has resulted in a stable-to-improving trend in total fixed cost ratio despite significant increases in the pension and OPEB contribution since 2015. However, maintaining the trend could prove to be challenging in case of volatility in revenue performance from the tax cuts or other factors, or additional debt in excess of current estimates.

3. <u>Debt as a percentage of State GDP:</u> This ratio is a measure of financial leverage provided by the State's economy and its ability to repay debt based on the goods and services produced in its economy. Debt-to-GDP is 7.9% for FY2024 which is higher than other states partly due to State funding of K-12 education that is normally funded at the local level in other states. It goes up slightly to a projected 8.3% in FY2030 despite the estimated $7.3 billion planned borrowing, as new issuance aligns closely with debt repayment and the working capital debt gets paid off by FY2026.

   Although not direct debt, the unfunded actuarial accrued liability (UAAL) for pension and OPEB are mandatory long-term obligations, and as such are treated akin to debt for financial analysis. The pension UAAL and OPEB UAAL account for about 8.6% and 6.3% of the estimated 2024 state GDP.

The OPEB UAAL was as high as 11.3% of State GDP in FY2014 compared to the 6.3% in FY2024. OPEB reforms (mandating 100% of actuarially determined required contribution including prefunding and amortization of liabilities over closed 30 year period to achieve 100% funded ratio) adopted by the State in 2013 made a significant impact in addressing these unfunded liabilities.

4. Debt as a percentage of personal income: Total personal income for a state provides the basis for evaluating its revenue generating ability. The debt-to-personal income metric measures a state's ability to continually generate sufficient revenues to repay debt. For FY2024, B&F's debt-to-personal income ratio is 9.1% and is projected to peak in FY2030 and moderate from there on. Pension UAAL and OPEB UAAL are 9.9% and 7.2% of the estimated FY2024 personal income. The ratio is similar to the debt-to-GDP ratio and therefore follows the same trend as discussed above.

5. Debt per capita: This ratio is a measure of the debt burden shared by each resident of a state on average. Since it accounts for all residents with no specificity for age, income or employment, the ratio is not as efficient in measuring ability to repay debt but is still meaningful for peer comparison. The State's debt per capita is $6,088 for FY2024. It is projected to rise to about $8,012 per capita by FY2030 as more debt is issued in accordance with the projected borrowing program. Pension and OPEB UAAL add roughly another $6,600 and $4,800 per capita, respectively, to B&F's obligations.

   As discussed in detail in the next section, the State's debt levels are already very high and the proposed borrowing over the next year is substantial. As such, the State needs to carefully monitor its debt issuances in relation to potential credit impact which may lead to borrowing cost increases. But it is also important to note that debt burden is one of several credit factors which determine the State's ratings, and a holistic credit review would take into account other pertinent criteria such as financial flexibility besides leverage.

Median Comparisons

Moody's publishes an annual Debt Median Report including debt ratios for all 50 States and the sector means and medians. The report provides a broader perspective on debt levels and basis for affordability through the comparison of Hawaii's debt burden to other states across the country. The following table summarizes the State's GO debt metrics alongside Moody's 2023 medians data. The 50-state FY2023 median for debt as percentage of state GDP and debt as a percentage of personal income is 1.8% and 2.3%, respectively. On a per capita basis, the 50-state median is $1,189. As discussed previously, the State's general fund supports significant capital needs for local municipalities in contrast to other states in the nation. As such, the State's general fund supported debt metrics are considerably higher than the states medians and are among the highest debt levels seen among states (rank in the top 3).

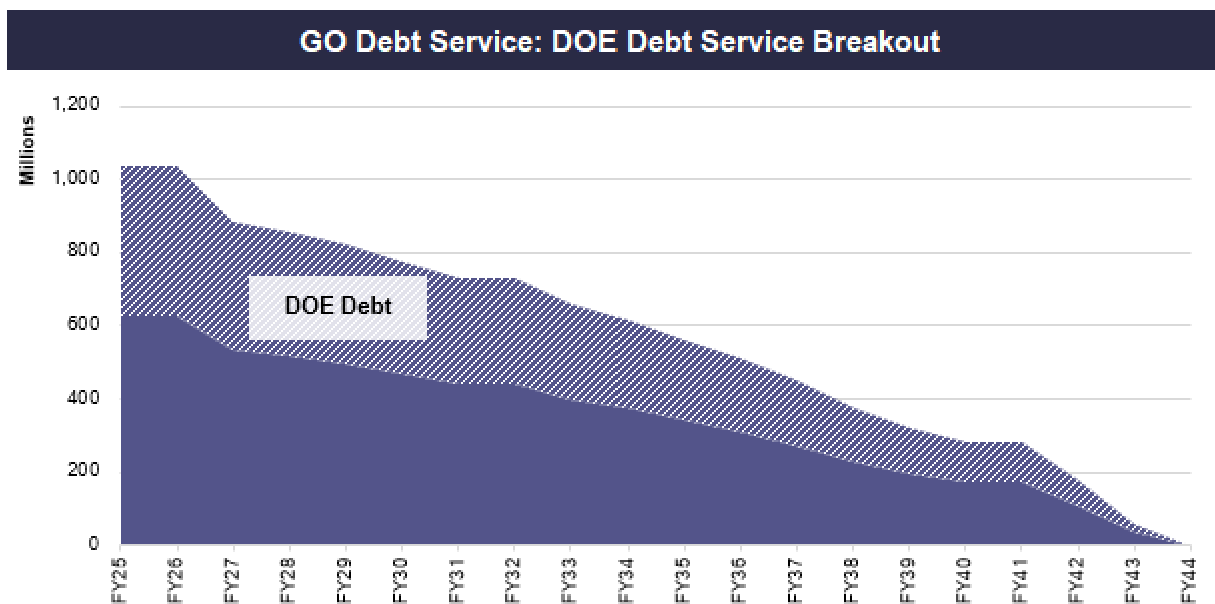
DEBT METRICS	MOODY'S STATES SECTOR DEBT REPORT			STATE OF HAWAII	
2023	Median	Average	Max	Actual	Adjusted*
Debt Service Ratio	1.81%	2.20%	n/a	9.83%	5.94%
Debt as a % of State GDP	1.80%	2.32%	9.10%	7.91%	4.79%
Debt as a % of Personal Income**	2.30%	2.91%	11.20%	9.13%	5.53%
Debt per Capita	$1,189	$1,857	$7,874	$6,094	$3,690

* Adjusted to exclude estimated debt incurred for K-12 school system; According to Moody's, Debt Service Ratio is annual debt service as a % of revenues

** As of 2022

Unlike other states, Hawaii has the responsibility for funding the K-12 school system, hospital system, and penitentiary capital needs which contributes to the State's high debt levels. To account for its unique characteristic and aid a more accurate comparison with State medians, the affordability metrics table also presents Hawaii's debt metrics as adjusted for the largest of these obligations: Department of Education (DOE) K-12 related obligations.

The following graph reflects the estimated DOE related debt service in relation to the State's overall GO debt portfolio. The *adjusted* debt ratios remain high when benchmarked against states' medians. With the modified metrics, the State still ranks among the top ten states with the highest debt levels. Note that the size and purpose of debt programs vary greatly from state to state since they are driven by several different factors and the resulting medians should be viewed as such.



G. Discussion on Debt Affordability, Potential Concerns and Recommendations

The State estimates issuing about $7.3 billion GO bonds during the next six years. With the additional debt issuances, the State is projected to remain comfortably below the 18.5% constitutional debt limit based on current revenue projections revised for tax relief. Taking into account the projected GO bond issuances, general fund revenues would have to decline by more than 27% from their current levels or 36% from their projected levels, in the year of peak debt service, before the debt limit is breached. Barring any extraordinary events, legal limits are unlikely to hinder the State's ability to borrow in accordance with the projected debt plan. However, with the proposed debt, projected fixed cost ratios are expected to increase over the next five years and remain elevated. It will continue to be an important discussion point with rating agencies.

From a credit perspective, the State is at the highest level of debt burden under the rating agency methodologies. The State's affordability metrics for general fund debt as evaluated on the basis of economic factors (debt-to-personal income, debt-to-GDP and debt-per-capita) are among the highest in the nation. For the most part, this is attributable to the State's unique responsibilities. For that reason, the

State will remain at the high end of the debt ratios spectrum which limits meaningful comparability to other states. We note here that all rating analysts also acknowledge the State's unique responsibilities and funding needs when comparing to other states and sector medians. For that reason, the ratings agencies are more focused on the State's ability to manage its operations and budget while funding the high fixed costs. That said, peer comparison is an important credit consideration and good financial practice for the State to ensure it is not too far of an outlier. Demonstrated use of budgetary flexibility and growing and maintaining strong reserve levels while remaining committed to funding pension and OPEB obligations has been a key rating consideration and will continue to inform rating opinions in the future.

From a long-term affordability perspective, the State's debt metrics indicate that borrowing has somewhat outpaced economic growth in the State. The State's stronger-than-expected revenue performance emerging from the COVID-19 pandemic and higher-than-ever general fund reserve levels at the end of FY2024 help offset these concerns to some degree and have positioned the State to better navigate both known and unknown budgetary challenges in the near-to-medium term. The State should closely monitor its economic forecast and leverage ratios and take that into consideration when developing long-term borrowing plans.

Volatility in general fund revenues from the 2024 tax cuts as well as lack of clarity on the Maui wildfire lawsuit represent potential challenges the State may have to address in the near future. The expected impact of the former has been incorporated in this report already. The impact of the latter is unknown at the moment. The size and timing of any State liability stemming from the wildfires is subject to court approval. The State's approach to funding such a liability is also not determined. The specific impact of such a liability will be evaluated in a future study, when a more complete picture is available. Apart from these concerns, dependence on tourism and the risk of other natural disasters have always been key credit factors for the State and, by extension, its affordability backdrop. That said, the State has a solid track record of navigating such events that include prior downturns, natural disasters and the recent COVID-19 pandemic. The State's focus on fiscal planning, both short-term and long-term, its ability and willingness to take revenue and expenditure measures to close budget gaps, and its solid rainy day funds should enable it to manage its financial position and borrowing needs.

H. Reserves

The State adopted a formal reserve policy in 2016. The policy was revaluated in 2022 in multiple contexts including revenue volatility, potential force majeure or other major economic event, rating agency criteria, and state peers and industry best practices. Taking all that into consideration the State is committed to maintaining *appropriate level* of reserves. Pursuant to Administrative Directive (AD) No. 22-01 which became effective in December 2022, the State Reserve Policy was modified to target a higher 20%-25% reserve, up from 15% as per the 2016 State Reserve Policy. State reserves include the Emergency and Budget Reserve Fund (EBRF), the unassigned general fund carryover balance, and the Hawaii Hurricane Relief Fund (HHRF). The State shall maintain an overall target balance of either 25% of general fund revenue or, if the EBRF fund balance objective is met, 20% of general fund revenue. The State reserve policy is currently being reviewed with the intent of revising the policy such that the HHRF balance would

no longer be treated as part of the State's operating reserve. For fiscal year 2024, the HHRF ending balance was $171.4 million or 1.7% of general fund revenues.

Importance of Reserves in the Context of Debt Affordability

As discussed in the prior sections, the State has some of the highest debt ratios (debt-to-GDP and debt-to-personal income) in the nation and its pension and OPEB liabilities are also considerably large. High leverage and overall fixed costs limit financial flexibility and have always been an important credit consideration for rating agencies. Given the State's unique responsibilities, the State's debt levels are expected to remain high. One way to address debt-related credit concerns is to mitigate them with strong financial position and management. Sufficiently high general fund balance strengthened by a formal reserve policy and commitment to maintaining strong reserve and liquidity position can help mitigate credit concerns with respect to financial flexibility and overall debt affordability. To that end, the State's actions to bolster its reserve policy by adopting a higher target balance and periodic reporting on information relevant to the State Reserve Policy to the State Legislature, reflects the State's commitment to maintaining a strong financial position. The State may periodically undertake a revenue volatility study and develop budget stress test scenarios to determine the adequacy of the reserve policy target set in AD 22-01. A brief summary of any such future analysis and studies related to the State's Reserve Policy may be included in subsequent Debt Affordability Studies.

State Revenue Volatility

In reviewing the State's historical revenue volatility, the State's revenue declines were experienced during periods of nation-wide recession coupled with a generally weak global economy in 2002, 2009, and 2020. The State's total general fund revenue declined by 6.7% year over year ("y.o.y.") in 2002 and again by 12.6% y.o.y. in 2009. The State's excise tax declined for three consecutive years during the Great Recession including by 7.2% (or $186.0 million) in 2009 and by 5.5% in 2010. During the COVID-19 pandemic, excise tax declined by 9.4% between 2019 and 2021. Similarly, income tax declined by 16.3% (or $267.0 million) in 2009 but to a lesser extent during the 2002 downturn. Over the last twenty years, the largest combined excise and income tax revenue decline was –12.47% over a 2-year period between FY2008 and FY2010.

Reserve Levels

The State not only adopted a higher reserve target in 2022 but took concrete action to fund it up to record high levels with multiple appropriations. The EBRF reached an estimated $1.52 billion or approximately 15.8% of revenues in FY2024. The legislature approved a $500 million transfer to the EBRF for FY2023 and FY2024 which resulted in the strong reserve levels. The State has also been able to grow its reserve fund position substantially in the last two years by maintaining a general fund balance that increased from $993 million in FY2020 to an estimated $1.59 billion in FY2024 (or 16.6% of revenues). The estimated market value of the HHRF investment portfolio at the end of FY2024 was $171.4 million. Combined reserve levels (EBRF plus unassigned general fund carryover balance plus HHRF) are estimated at 34% of general fund revenues in FY2024 and projected to remain above the 25% target level indicated in the State Reserve Policy, over the Projection Period. This includes HHRF balance as of the date of the report but if the reserve

policy is amended, HHRF balance which is about 1.7% of general fund revenues, may be excluded in subsequent reporting.

III. Department of Transportation – Airports

The Department of Transportation (DOT) maintains and operates the transportation facilities of the State and are carried out through three primary divisions: Airports, Harbors and Highways. The Department of Transportation, Airports Division (DOT-Airports) supervises and controls all State airways and State owned or managed airports and other air navigation facilities with the exception of private federal facilities. Nearly all non-military passenger traffic throughout Hawaii passes through the Airports System. The System includes five primary and ten secondary airports. The primary airports are Daniel K. Inouye International (on the Island of Oahu), Kahului (on the Island of Maui), Hilo International and Ellison Onizuka Kona International at Keahole (both on the Island of Hawaii), and Lihue (on the Island of Kauai).

Airports System revenues consist of operating revenues which include aeronautical revenues (landing fees, terminal rentals and user fees, aviation fuel tax and airports system support charges) and non-aeronautical revenues (non-aeronautical rentals, concession fees including duty-free, retail, and food and beverage revenues as well as parking revenues and ground transportation). Non-operating revenues include interest income, federal operating grants, passenger facility charges, rental customer facility charges, debt service support charges, and other revenues.

DOT-Airports' primary financing program consists of *airport system revenue bonds* secured by net available revenue. Net available revenue represents, generally, total operating revenues less total operating expenses excluding depreciation. DOT-Airports also issues COPs and enters into financing agreements such as loans and leases, as required. The COPs are also secured by the same net revenues however their claim is subordinated to revenue bonds. The rates and charges prescribed by the DOT-Airports on participating airlines are determined by a cost center hybrid residual rate-setting methodology. Under this methodology, the airlines are charged landing fees to allow DOT-Airports to fully recover operating and capital costs associated with the airfield facilities (runways, taxiways, and other facilities), net of any grant reimbursements. Costs associated with the terminal facilities are recovered through aeronautical rentals and user fees. System-wide deficit, if any, will be recovered via airline system support charges under the Airline Lease Extension Agreement. This provides DOT-Airports the flexibility to set rates such that it is fully compensated for all operating expenses including debt service.

As such, DOT-Airports benefits from relative financial stability in the fact that as operating costs and debt service increase, there is a corresponding increase in airline revenues sufficient to cover the increase in costs. However, as debt service costs increase, the cost to the airlines to operate at the airports will also increase which could eventually lead to airlines reducing service, particularly if those costs are materially higher than at other U.S. airports. This risk is mitigated by the high level of demand to, from, and in-between the islands, and the lack of alternative options for such travel, but airlines will generally deploy resources to their most profitable routes. As such, airline costs, measured by cost per enplanement (CPE), are an important measure of the ability of DOT-Airports to afford new debt. During the COVID-19 pandemic as enplanements plummeted, all *per-enplanement* metrics were skewed, however these have normalized since, and rebounded to pre-pandemic trends with the return of passenger traffic.

DOT-Airports is authorized under Act 226, SLH 2008 to impose a Customer Facility Charge (CFC) on car rentals at the airport, effective September 1, 2008. The rate was increased as per Act 104, SLH 2011 and

is currently set at $4.50 per day. The CFC has no expiration. Under Section 261-7, HRS, the DOT-Airports has the power to adjust the CFC rate, when necessary, without rule-making or legislative approval. The CFC revenues can be used for enhancement, renovation, operation, and maintenance of existing rental car facilities and the development of new rental car facilities and related services to better serve visitors and residents. DOT-Airports initiated its consolidated rental car facilities (ConRACs) program in 2011 funded by a combination of CFC revenues, bond proceeds from *CFC revenue bonds* and other debt secured by CFC revenues. The CFC revenue bonds are issued under a separate Master Trust Indenture and are secured by a pledge of CFC revenues and other payments related to rental car activity at the Airports. The CFC revenue bonds do not have a pledge of general airport revenues. DOT-Airport's ConRAC System consists of completed ConRACs at Kahului and Honolulu and ConRACs in the planning stages at other airports in the airport system.

DOT-Airports also issues special facility revenue bonds payable from leasing revenues collected from airlines. Given the payment source of special facility revenue bonds, such bonds would be excluded from DOT-Airports' affordability discussion. At this time, there is no such debt outstanding.

A. Debt Profile

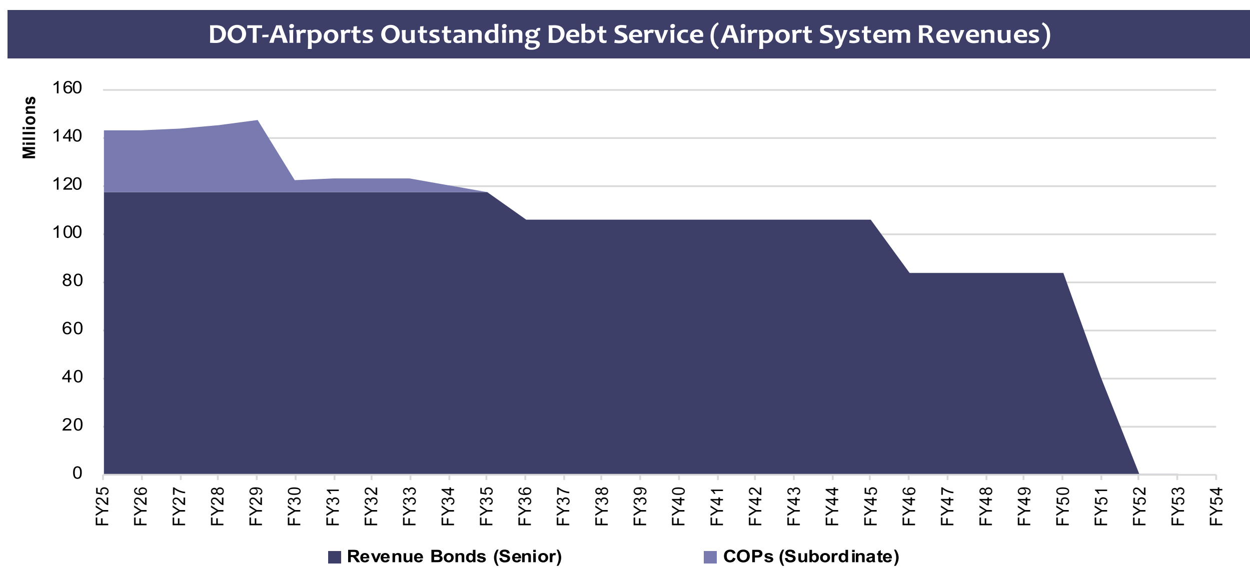
DOT-Airports currently has 12 series of senior lien general airport revenue bonds outstanding for a total par amount of $1.67 billion and three series of subordinate lien COPs outstanding for a total par amount of $120.5 million.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Par Call Date	Callable Par
Senior Lien Airport System Revenue Bonds							
Series 2015A	AMT	235,135,000	11/18/15	7/1/45	235,135,000	7/1/2025	235,135,000
Series 2015B	Non-AMT	9,125,000	11/18/15	7/1/45	9,125,000	7/1/2025	9,125,000
Series 2018A	AMT	388,560,000	8/22/18	7/1/48	388,560,000	7/1/2028	378,760,000
Series 2018B	Non-AMT	26,125,000	8/22/18	7/1/27	26,125,000	NC	-
Series 2018C	Non-AMT	93,175,000	4/7/20	7/1/28	74,020,000	NC	-
Series 2018D	Non-AMT	142,150,000	4/7/20	7/1/34	142,150,000	7/1/2030	100,030,000
Series 2020A	AMT	113,140,000	10/21/20	7/1/45	113,140,000	7/1/2030	110,220,000
Series 2020B	Non-AMT	165,885,000	10/21/20	7/1/50	165,885,000	7/1/2030	165,885,000
Series 2020C	Taxable	20,295,000	10/21/20	7/1/50	20,295,000	7/1/2030	20,295,000
Series 2020D	Non-AMT	184,855,000	10/21/20	7/1/39	184,855,000	7/1/2030	178,095,000
Series 2020E	Taxable	98,315,000	10/21/20	7/1/30	98,315,000	NC	-
Series 2022A	AMT	209,280,000	2/3/22	7/1/51	209,280,000	7/1/2032	209,280,000
Sub-Total					**1,666,885,000**		**1,406,825,000**
Subordinate Lien Certificate of Participation							
Series 2013	Non-AMT	167,740,000	12/19/13	8/1/28	82,625,000	8/1/2023	82,625,000
Series 2016	Non-AMT	8,057,000	4/13/16	8/1/25	76,864	8/1/2018	76,864
Series 2017	Non-AMT	51,500,000	3/31/17	8/1/34	37,788,362	8/1/2019	37,788,362
Sub-Total					**120,490,226**		**120,490,226**
Customer Facility Charge Revenue Bonds							
Series 2017	Taxable	249,805,000	7/27/17	7/1/47	212,210,000	7/1/2027	193,770,000
Series 2019	Taxable	194,710,000	8/27/19	7/1/47	169,195,000	7/1/2029	140,860,000
Sub-Total					**381,405,000**		**334,630,000**
Total					**2,168,780,226**		**1,861,945,226**

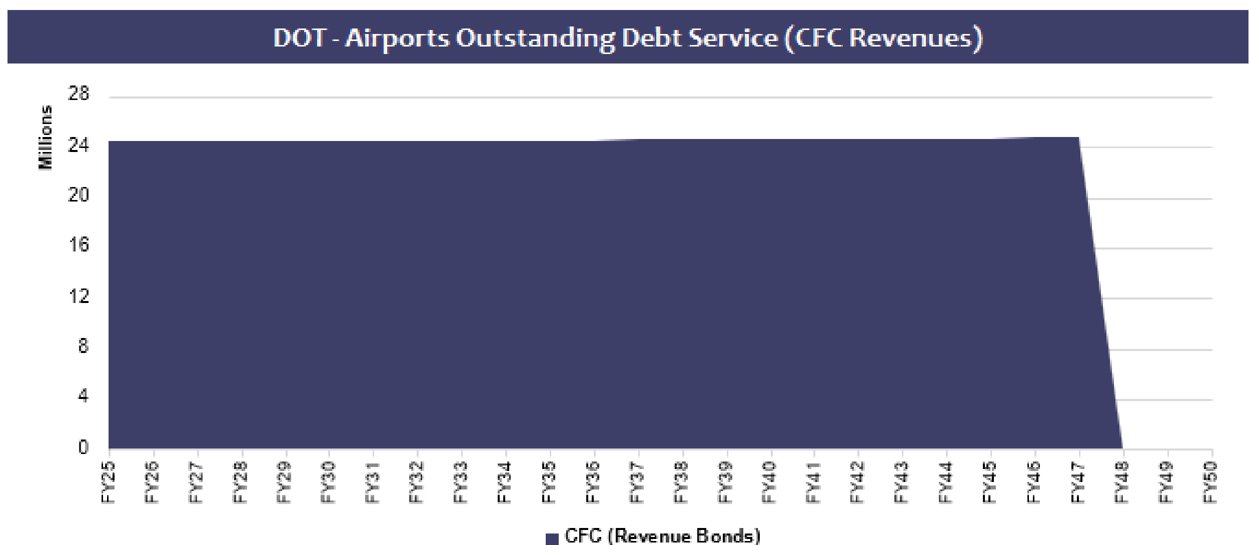
The COPs were issued to fund energy conservation projects and in addition to being secured by a subordinate lien on the net revenues of the airport system they are also secured by the improvements funded by these COPs. Energy savings generated from the projects are expected to be sufficient to cover debt service related to the COPs. In addition, DOT-Airports has $381.4 million outstanding across two series of CFC revenue bonds.

B. Debt Service Chart

DOT-Airports' revenue bonds debt service profile is fairly level. Total annual debt service on the senior lien revenue bonds is approximately $117.5 million per year through 2035 followed by small step-downs in FY2036 and again in FY2046 as certain series are paid off. Approximately 31% of revenue bond principal is expected to be paid off over the next ten years.



The debt service profile for CFC revenue debt consists of $24.6 million level annual debt service payments until the final maturity in 2047.



C. Credit Ratings

DOT-Airports maintains strong A-category ratings from all rating agencies. Moody's last affirmed all ratings for DOT-Airports in early 2024 due to the system's strong market position and traffic performance. Moody's maintains a positive outlook on the airport revenue credit since 2023. Fitch upgraded DOT-Airports' revenue bonds by one notch to 'AA-' with a stable outlook in March 2024 on account of continued strong financial metrics, coupled with a full recovery in enplanements and greater clarity with its ongoing capital program, which support the improvement in the credit profile. S&P upgraded the airport revenue bonds rating by one notch to 'AA-' in March 2024, returning it to the pre-pandemic level. Additional leverage, over and above current expectations, to complete ongoing projects could lead to some pressure on the ratings.

Department of Transportation Airport System Credit Ratings			
	Moody's	**S&P**	**Fitch**
Airport System Revenue Bonds	A1 Positive	AA- Stable	AA- Stable
Certificates of Participation	A2 Positive	A+ Stable	A+ Stable

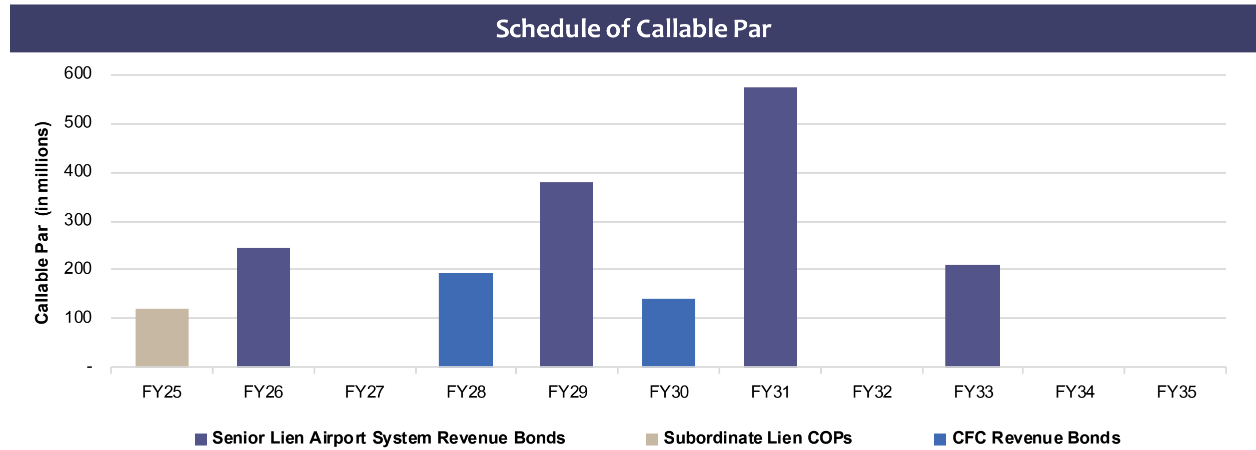
Credit strengths include uniquely strong competitive position as the monopoly air travel provider and strong travel demand, supportive cost recovery framework, strong financial flexibility owing to modest cost per enplanement (CPE), and strong liquidity position. Credit challenges include volatility from high degree of tourism and leisure-focused traffic and an ongoing capital program with associated future borrowing needs.

Department of Transportation CFC Credit Ratings			
	Moody's	**S&P**	**Fitch**
CFC Revenue Bonds	A2 Stable	A+ Stable	A+ Stable

Apart from the airport revenues bonds, Fitch also upgraded the CFC revenue bonds by one notch to 'A+' in 2024 reflecting a strengthening credit profile supported by rebounding transaction volumes and a robust debt service coverage ratio. S&P also upgraded the CFC revenue bond rating by one notch to 'A+' in 2023 reflecting the strong recovery in enplaned passengers and car rental activity for the system. Moody's affirmed the CFC revenue bonds ratings.

D. Schedule of Callable Bonds

The following chart provides a summary of callable DOT-Airports debt along with the par amounts and call dates. Of the total senior lien revenue bonds outstanding, $1.4 billion represents callable par with future call dates starting in 2025.



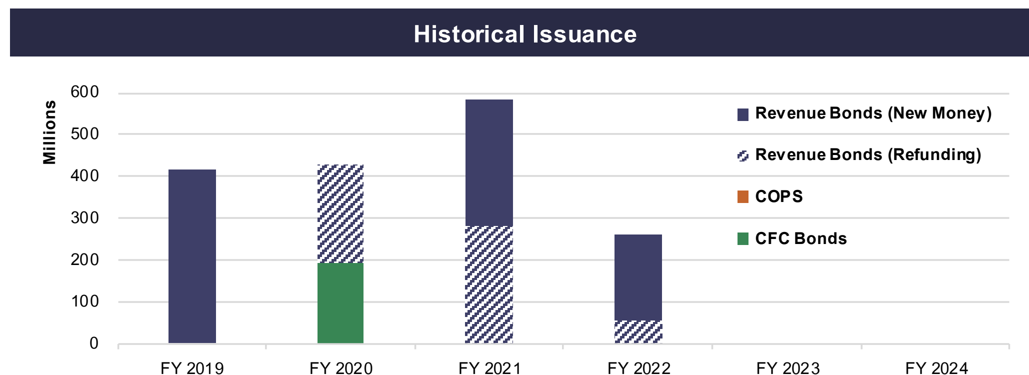
The CFC revenue bonds were issued with a 10-year par call and will be callable in FY2028 and FY2030. In addition to the above, the entire outstanding $120.5 million of the subordinate lien COPs are currently refundable at the option of DOT-Airports.

Pursuant to the criteria outlined in its Debt Management Policy, DOT-Airports may pursue opportunities to refund callable bonds.

E. Multi-Year Program Anticipated/Intended Debt Issuance

Existing Debt

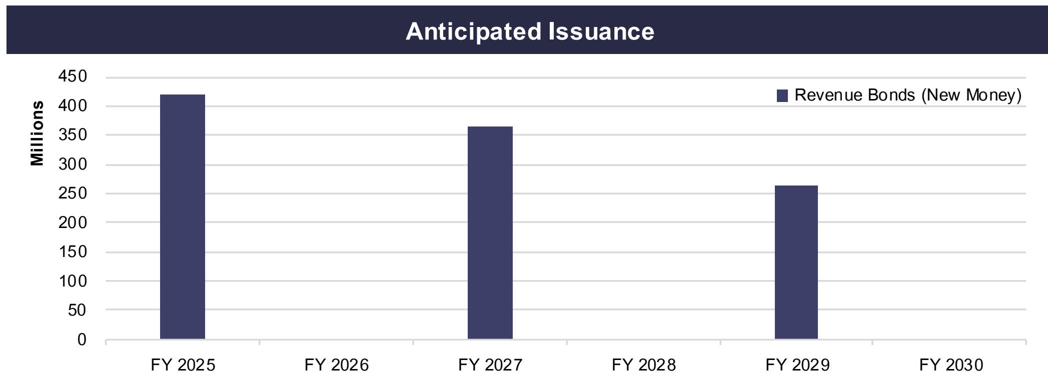
DOT-Airports currently has $1.67 billion senior lien airport system revenue bonds outstanding as reflected above. DOT-Airports' last issuance was in 2022 to fund capital projects as well as to refund prior bonds. The last CFC revenue bond issuance was in FY2020.



Anticipated Debt

As DOT-Airports makes progress on its airport capital program it is anticipated that new debt may need to be issued to fund these capital needs. DOT-Airports may issue approximately $1.05 billion in airport system revenue bonds over the next five years. Of this total DOT-Airports tentatively expects to issue $420 million in late February 2025. A portion of the total borrowing over the next five years will be used to complete ongoing projects with the remaining attributable to new projects from 2025-2029. These may be deferred depending on traffic and economic conditions.

Currently, DOT-Airports has no plans to issue additional CFC revenue bonds.



Authorized but Unissued Debt

DOT-Airports has a total of $1.88 billion in authorized but unissued revenue bonds as of June 30, 2024.

F. Measuring Debt Burden

Last Full Fiscal Year and Projected (six-years) Metrics

AFFORDABILITY METRICS (Airport Revenue Debt)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	19.7%	22.4%	23.4%	23.6%	24.5%	25.0%	22.9%
Pension pay-go to annual revenues	3.6%	3.6%	3.6%	3.7%	3.7%	3.7%	3.8%
OPEB pay-go annual revenues	3.1%	3.1%	3.0%	3.1%	3.1%	3.1%	3.2%
All annual obligations to annual revenues	26.4%	29.1%	30.1%	30.4%	31.3%	31.9%	30.0%
Annual debt service to annual appropriations	25.1%	26.6%	27.3%	27.1%	27.5%	27.6%	25.5%
Pension pay-go to annual appropriations	5.1%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
OPEB pay-go to annual appropriations	4.3%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
All annual obligations to annual appropriations	34.5%	35.8%	36.4%	36.3%	36.7%	36.8%	34.6%
Senior lien debt service coverage (excluding Coverage a/c)	2.31x	1.90x	1.77x	1.68x	1.58x	1.51x	1.32x
Total debt service coverage (excluding Coverage a/c)	1.82x	1.55x	1.47x	1.40x	1.32x	1.26x	1.28x
Senior lien debt service coverage (including Coverage a/c)	2.64x	2.20x	2.07x	1.99x	1.89x	1.82x	1.62x
Total debt service coverage (including Coverage a/c)	2.08x	1.79x	1.72x	1.65x	1.58x	1.51x	1.57x
Cost per Enplanement	15.24	15.34	16.08	16.35	17.05	17.80	17.91
Debt per Enplanement	95.95	110.30	105.40	118.16	112.89	119.84	115.32
Liquidity – days' cash on hand	789 days	788 days	793 days	790 days	783 days	768 days	756 days

Note: Projected metrics assume issuance of $1.05 billion of additional airport system revenue bonds during the projection period (see anticipated debt above)

AFFORDABILITY METRICS (CFC Revenue Debt)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Debt service coverage (Indenture)	2.96x	3.10x	3.14x	3.19x	3.24x	3.28x	3.33x
Debt service coverage (excluding rolling coverage fund)	2.64x	2.77x	2.82x	2.86x	2.91x	2.95x	2.99x
CFC Transaction Days ('000 days)	14,365	14,953	15,193	15,437	15,686	15,921	16,160

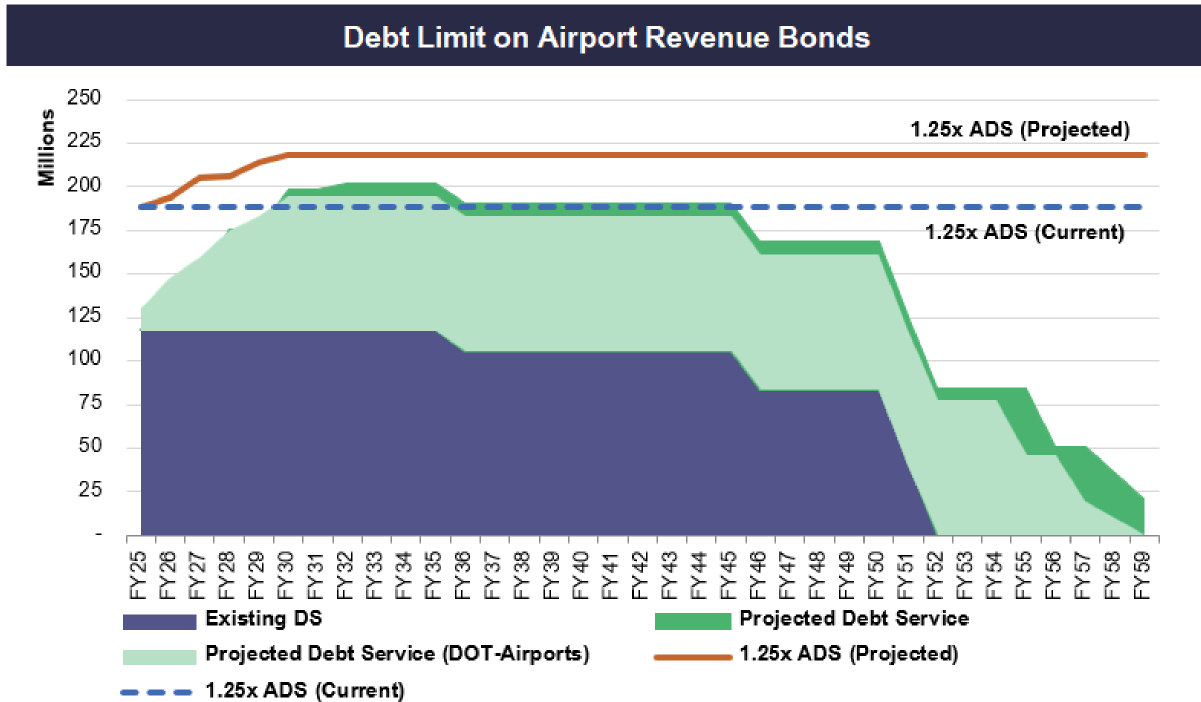
Note: No new CFC revenue bonds anticipated during the projection period.

Relevant Affordability Metrics

1. Certificate and Indenture Limitations: The Certificate of the Director of Transportation dated May 1, 1969, contains a rate covenant relating to DOT-Airports' airport system revenue bond debt. DOT-Airports shall impose rates and charges, which together with unencumbered funds on deposit in the Airport Revenue Fund at the end of the fiscal year certified as Revenues, should be sufficient to yield net revenues and taxes at least equal to 1.25 times debt service on all revenue bonds. The Certificate allows for the inclusion of the "Funded Coverage Account" in the computation of the rate covenant which is pre-funded at 25% of gross debt service.

   DOT-Airports may issue approximately $1.05 billion in airport revenue bonds to fund future capital projects. Any such additional bonds are subject to an additional bonds test (ABT) wherein pledged revenues based on most recent audited fiscal year must be at least 1.25 times annual debt service on outstanding debt for the year as well as projected pledged revenues as estimated by a consulting engineer over a three-year period after close of construction must be at least 1.25 times annual debt service on all bonds then outstanding including the additional bonds. As reflected in the following chart, current revenues are expected to be at least equal to 1.25 times current debt service in compliance with the rate covenant (with existing debt service in purple less than the 1.25 times revenue threshold

depicted by the blue dotted line). The projected debt service provided by DOT-Airports satisfies the ABT test (that is, the aggregate debt service including the new money in green is lower than the orange line representing the 1.25 times threshold in the chart).

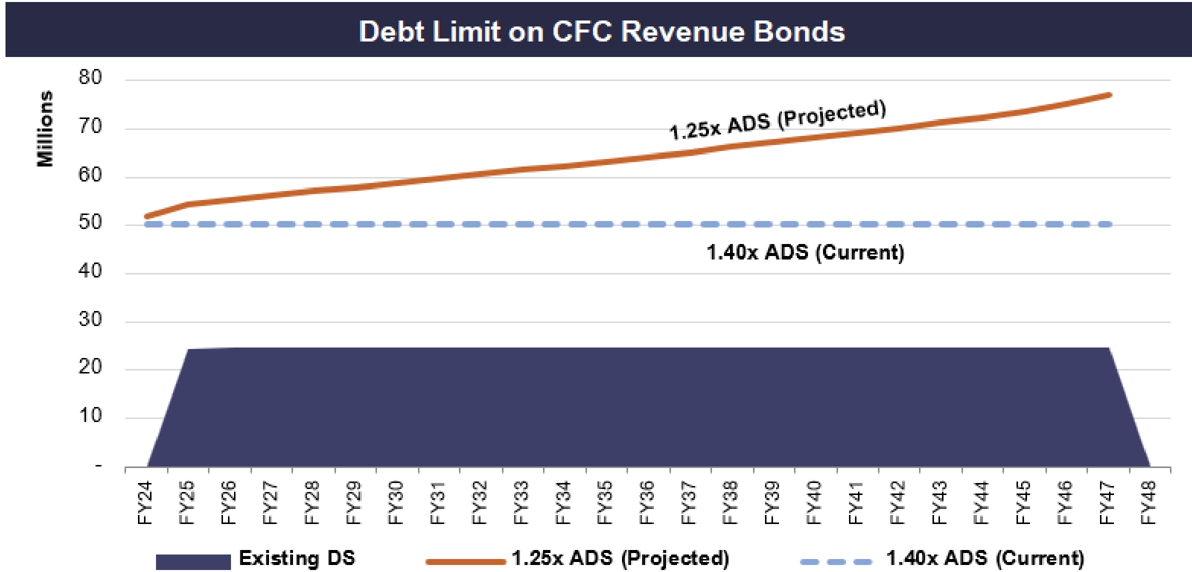


As previously described, DOT-Airports employs a hybrid residual rate-setting methodology: essentially, the airlines fully compensate DOT-Airports for any operating expenses and debt service. Due to cost recovery mechanisms in place, DOT-Airports is anticipated to have sufficient revenues to meet the indenture coverage requirements for any planned debt issuances, so long as the airlines are willing and able to pay the resulting rates and charges. To ensure the continued support of airlines, DOT-Airports will seek all necessary concurrence and approvals on any new projects before proceeding.

The 1969 Certificate of the Director also permits the construction of special facilities, such as the ConRAC facilities currently being constructed at the various airports, and provides for the issue of bonds, such as the CFC revenue bonds under the CFC Indenture. All debt secured by CFC revenues, is issued pursuant to the CFC Indenture of Trust dated August 14, 2014, as amended and supplemented. As per the indenture DOT-Airports must set the CFC rate and collect such CFC revenues as well as any additional “deficiency payments” from the rental car companies so as to provide a 1.40 times debt service coverage including funds available in the rolling coverage fund. The rolling coverage account is pre-funded at 25% maximum annual debt service.

DOT-Airports currently has no plans to issue additional CFC revenue bonds. Any additional bonds are subject to an ABT test wherein projected CFC revenues as estimated by a consulting engineer over three-year period after final expenditure of capitalized interest must be at least 1.25 times maximum annual debt service on all bonds then outstanding including the additional bonds. As reflected in the following chart, current CFC revenues and funds in the rolling coverage account are expected to be at

least equal to 1.40 times current debt service in compliance with the rate covenant (with existing debt service in purple less than the 1.40 times revenue threshold depicted by the blue dotted line). Should DOT-Airports plan to issue future CFC revenue bonds for additional ConRACs at Lihue or other airports within the system, the projected CFC revenues will be sufficient to pass the ABT test.



2. Annual debt service payments to annual revenues and Annual debt service payments to annual appropriations: Annual debt service is projected to be consistently at about 22% to 25% of annual revenues during the next six years. Annual debt service is projected to be approximately 25% to 28% of annual expenditures. The ratios peak in the years following new debt issuance and are stable thereafter. Including pension and OPEB contributions along with annual debt service, total fixed costs accounts for about one-third of revenues.

3. Debt Service Coverage Ratio (DSCR): Debt service coverage is equal to net revenues, as defined in the Certificate, plus certain funds on hand (mainly the Coverage Account which is funded at 25% of annual debt service) and divided by principal and interest requirements for the fiscal year. The net revenues are adjusted to include federal grants including CARES Act funding available for operations and debt service and to exclude operating expense for the ConRACs and non-cash pension and OPEB contributions. Due to DOT-Airports' hybrid rate setting methodology, revenues shall always be sufficient to meet existing and projected debt service requirements on all airport revenue debt as well as pay projected operating expenses.

   Based on net revenues from operations alone, excluding the Coverage Account, estimated senior lien coverage was 2.31 times in FY2024. Accounting for additional debt, it is projected to remain above 1.25 times over the next five years. Including the Coverage Account balance, the debt service coverage on senior lien debt is adequate (at least 1.6 times) over the projection period and the total debt service coverage on all senior and subordinate lien debt is also adequate (above 1.5 times). The projections assume that enplanements will continue to grow at a modest pace.

4. Liquidity – days' cash on hand: Days' cash-on-hand, a measure of liquidity, is unrestricted cash and investments plus discretionary reserves, divided by operating and maintenance expenditures and multiplied by 365. DOT-Airports anticipates maintaining current levels of unrestricted cash and investments which provide strong days' cash on hand. Over the projection period through FY2028, DOT-Airports is estimated to maintain over 700 days' cash on hand providing significant liquidity and flexibility.

5. Cost per enplanement: CPE is airline-derived revenues (airline payments for the use of airport facilities in accordance with the adopted rates and charges methodology) divided by enplaned passengers. Actual dollar cost to airlines is projected to increase over the next few years as DOT-Airports funds capital projects and layers on additional debt service. However, DOT-Airports' CPE levels remain competitive.

6. Debt per enplanement: Debt per enplaned passenger (DPE) is total debt divided by total enplaned passengers. DPE is projected to exceed $100 as DOT-Airports plans to issue debt over the next few years. It is expected to moderate thereafter.

7. CFC Debt Service Coverage Ratio: Based on projected collections through FY2030, coverage on CFC revenue bonds is expected to be strong, in excess of 3.0 times. DOT-Airport has the authority to increase the CFC rate in the future, if needed. Like the airport revenue bonds program, DOT-Airports is made whole by rental car companies. If CFC revenues are insufficient, the rental car agencies must provide "deficiency payments" to cover all of costs under the indenture. Hence revenues can always be expected to be sufficient to meet debt service requirements on CFC bonds.

8. CFC transaction days: At all Hawaii airports, a CFC or user fee is imposed on each rental car user. A $4.50 CFC fee is collected per transaction per day. Transaction days is an estimate of total rental car transactions times the average number of days a car is rented. Transaction days declined by 59.3% during the COVID-19 pandemic relative to FY2019. Transaction days began to rebound over FY2022 and FY2023, however the Maui wildfires negatively impacted the growth of CFC metrics in FY2024, as Maui is a key rental car market relative to other Hawaii airports. They are currently at about 89% of FY2019 and are projected to grow at a modest 1.5% annually, in line with anticipated visitor volume.

Peer/Median Comparisons

It is important to note that DOT-Airports is relatively unique in that it is a system of airports rather than a single airport. As such, it is challenging to evaluate DOT-Airports among peer airports. Using Fitch's Analytic Comparative Tool (FACT) for U.S. Airports for FY2022, DOT-Airports compares favorably to the operational and financial medians reflected below.

DEBT AND OPERATING METRICS	DOT Airports FY 2024	DOT Airports FY 2022	FITCH AIRPORTS SECTOR FY2022 MEDIANS				
			All	Large Hub	Regional O&D	AA-Rated	A-Rated
Fitch Rating	AA-	A+					
Enplanements	19,227	15,808	5,016	17,396	3,783	22,761	4,410
Largest Carrier Share	38%	43%	36%	47%	34%	35%	38%
O&D	94%	90%	95%	74%	98%	79%	95%
CPE	15.24	14.95	10.48	14.33	8.76	10.32	8.64
Days' Cash on Hand	789	675	581	618	535	891	492
Total Debt Service Coverage Ratio (x)	2.64	2.70	2.43	1.84	2.92	2.01	2.62
Net Debt/Cash Flow Avail. for Debt	3.58	5.60	3.30	7.60	2.50	4.50	3.90
Debt/O&D Enplanement	102	129	121	246	82	169	106
Debt/Enplanement	96	114	110	155	72	132	79

Fitch Analytic Comparative Tool for U.S. Airports FY2022. FY2024 data from DOT-Airports.

DOT-Airports' coverage, leverage and liquidity metrics were all more favorable compared to medians for large hubs. In FY2022 when DOT-Airports was rated 'A+', most of its credit metrics were significantly better than other 'A+' rated peers and aligned much more closely with the AA-category peer airports, which justifies its recent upgrade to 'AA-'. FY2022 DPE is low for DOT-Airports compared to the median for large hubs, but this metric will continue to evolve as DOT-Airports as well as other airports layer on additional debt. FY2022 CPE for DOT-Airports is slightly above the median for large hubs and is projected to increase to about $17.91 by FY2030 after accounting for new money issuance and similar increases in CPE are also expected for several peers and large hubs as they execute their capital plans.

DEBT AND OPERATING METRICS	DOT Airports FY 2024	DOT Airports FY 2022	PEERS					
			San Diego	Tampa	Greater Orlando	Las Vegas	Alaska	Broward County
Fitch Rating	AA-	A+	AA-	AA-	AA-	AA-	A+	A+
Enplanements	19,227	15,808	9,953	10,669	24,221	24,025	3,084	15,398
Largest Carrier Share	38%	43%	34%	27%	20%	35%	68%	29%
O&D	94%	90%	81%	96%	97%	95%	91%	85%
CPE	15.24	14.95	14.24	9.49	4.91	6.68	7.02	8.03
Days' Cash on Hand	789	675	1,925	610	876	1,070	471	459
Total Debt Service Coverage Ratio (x)	2.64	2.70	2.90	2.90	1.80	1.70	2.30	0.80
Net Debt/Cash Flow Avail. for Debt	3.58	5.60	7.60	4.20	3.40	4.20	2.10	11.60
Debt/O&D Enplanement	102	129	302	124	123	78	79	165
Debt/Enplanement	96	114	296	119	116	72	79	148

Fitch Analytic Comparative Tool for U.S. Airports FY2022. FY2024 data from DOT-Airports.

More generally, DOT-Airports must carefully balance the need to fund infrastructure with maintaining attractive airline cost structure. That said, given DOT-Airports' monopolistic position in the service area and strong tourism levels, higher CPE is less of a concern than for other airports that have competing airports nearby.

Moody's also publishes US Airport Medians annually, and sector medians for FY2022 are presented below. DOT-Airports' debt and financial position compares favorably with A-rated credits and especially with residual airports. In fact, coverage and leverage ratios in particular line up very closely with Aa3 rated credits.

DEBT AND OPERATING METRICS	DOT Airports FY 2024	DOT Airports FY 2022	MOODY'S AIRPORTS SECTOR FY2022 MEDIANS			
			Residual	Aa3 Rated	A1 Rated	A2 Rated
Moody's	A1	A1				
Enplanements	19,227	15,808	7,946	23,034	6,341	5,241
Largest Carrier Share	38%	43%	41%	36%	37%	40%
O&D	94%	90%	72%	85%	63%	81%
CPE	15.24	14.95	9.62	7.84	9.69	8.19
Days' Cash on Hand	789	675	472	993	752	727
Debt Service Coverage - Indenture (x)	2.64	4.29	1.48	2.11	2.28	2.33
Debt Service Coverage - Moodys (x)	1.82	2.52	1.11	2.56	2.49	2.02
Debt/O&D Enplanement	102	129	211	137	139	171
Debt/Enplanement	96	114	152	116	88	138

Moody's Investor Service: US Airport Medians Fiscal 2022. FY2024 data from DOT-Airports.

The DOT-Airports' CFC credit is one of the highest rated among airports in the nation. In the table below, we provide a comparison of the DOT Airports' CFC metrics with some of its peers, several of whom also have a significant tourism sector. The DOT-Airports' coverage and legal covenants compare very favorably to most of its peers and support its A-category ratings which are the highest amongst its peers.

CFC DEBT METRICS	DOT Airports	PEERS					
		Massport	San Diego	Tampa	Portland	New Orleans	Orlando
Rating (M/S/F)	A2/A+/ A+	A2/A/A+	A3/A-/-	A3/A/-	-/A/A-	Baa1/A/-	NR
CFC Rate	4.5	6.0	9.0	6.0	6.0	8.0	3.5
Rate Covenant (x)	1.40	1.30	1.30	1.50	1.50	1.35	1.25
FY2023 DSCR (x) **	3.06	3.08	1.93	1.54	2.08	1.30*	2.77

Source: Audit Reports and Continuing Disclosure Reports for FY2023, * New Orleans data as of FY2022; ** Debt service coverage ratios include rolling coverage account, supplemental reserve fund, CFC surplus account and other supporting accounts, as applicable.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

As DOT-Airports evaluates funding of future capital improvements, affordability for DOT-Airports can be assessed by several factors including debt service coverage, liquidity and cash balances, cost per enplanement and debt per enplanement. Often assessing whether an airport is over-leveraged is difficult because of the cost recovery mechanisms in place through the airline and/or rental car agreements.

Enplanements grew by 14.9% between FY2014 and FY2019 but declined by 68% in FY2020-FY2021. FY2024 enplanement have surpassed FY2019 levels and are forecasted to grow by a modest 1.5%-1.6% in the future. Enplanement levels and projected financial metrics can be subject to volatility due to unforeseen economic events. Continued progress on DOT-Airports' capital improvement plan combined with improved and stable operational and financial metrics support DOT-Airports' credit and overall

affordability. Projections reflect higher but still competitive CPE and DPE levels. Current enplanement and revenue projections indicate stable liquidity levels and sufficient revenues to pay existing and projected debt service on additional airport revenue debt.

Residual airline agreement and ability to adjust rates and charges coupled with extraordinary coverage protection in the form of Airports System Support Charge provide adequate coverage levels and compliance with the rate covenant regardless of enplanement levels. DOT-Airports' ability to adjust the scope and timing of projects provides additional flexibility in volatile times. That said, future projects should be evaluated in the broader economic context and in close collaboration with signatory airlines.

CFC transactions at Hawaii airports have recovered to a large extent but lag enplanement recovery. They are at 89% of pre-COVID levels in FY2025. Similar to enplanements, they are also expected to grow at a modest 1.5% in the foreseeable future. It is noted here that DOT-Airports has the flexibility to raise the CFC rate (which at $4.50 is lower than several other airports) and has contractual protection under the agreements with rental car agencies that must provide for deficiency payments, if needed. There are currently no plans to issue additional CFC Revenue Bonds. The DOT-Airports' overall conservative approach to funding the ConRAC capital cost with pay-go dollars, supports overall affordability of any future CFC revenue bonds, if and when contemplated, to fund ConRACs at Lihue or other airports in the system. Any such future debt should be evaluated in the context of rental car activity.

IV. Department of Transportation – Harbors

The Department of Transportation (DOT) maintains and operates the transportation facilities of the State and are carried out through three primary divisions: Airports, Harbors and Highways. The Department of Transportation, Harbors Division (DOT-Harbors) manages a commercial harbors system that facilitates safe and efficient operations of commercial cargo, passenger, fishing, and other commercial maritime-related services.

The Harbor System is comprised of ten harbors. DOT-Harbors operates as a landlord port. DOT-Harbors derives its revenues from three major sources: services revenues, rental income and other operating revenue. Services revenues are derived from tariffs assessed on the activities of ships and handling of cargo and include wharfage charges, dockage fees, port entry fees, demurrage, mooring charges and fees for other services. Rental income includes charges for wharf space and land, storage, pipeline usage and automobile parking space. DOT-Harbors operated for many years without any increase in tariffs, but it has remedied that in recent years. In 2016, DOT-Harbors adopted a schedule of discrete multi-year tariff increases in consultation and with support from primary harbor system users. Tariffs for wharfage charges and pipeline fees were increased by 17% in FY2017, followed by 15% in FY2018 and FY2019. Following these three increases, these tariff rates will be automatically raised every year by 3% or the Honolulu Consumer Price Index (CPI) rate, whichever is higher. The planned FY2021 tariff increase of 3% was deferred from July 1, 2020, to Jan 1, 2021, due to the COVID-19 pandemic. That was the only pandemic-driven deferral with the 3% increase implemented as planned for FY2022. Tariff rates for FY2023 and FY2024, were increased by 6% and 5.2%, respectively, with each increase representing the relative increase in annual CPI for Honolulu.

DOT-Harbors' primary financing program consists of harbor revenue bonds secured by net available revenue. Net available revenue represents generally, total operating revenues and interest earned on investments (including but not limited to rates and charges assessed in relation with the services provided) deposited into the Harbor Special Fund after payment of any operating costs. DOT-Harbors has the legal and contractual obligation to adjust the rates and charges prescribed for the services and use of DOT-Harbors facilities to ensure sufficiency of revenues. In certain cases, B&F may issue GO bonds on behalf of DOT-Harbors repayment of which is entirely the responsibility of DOT-Harbors. Repayment of reimbursable GO bonds is subordinate to payment on DOT-Harbors' revenue bonds.

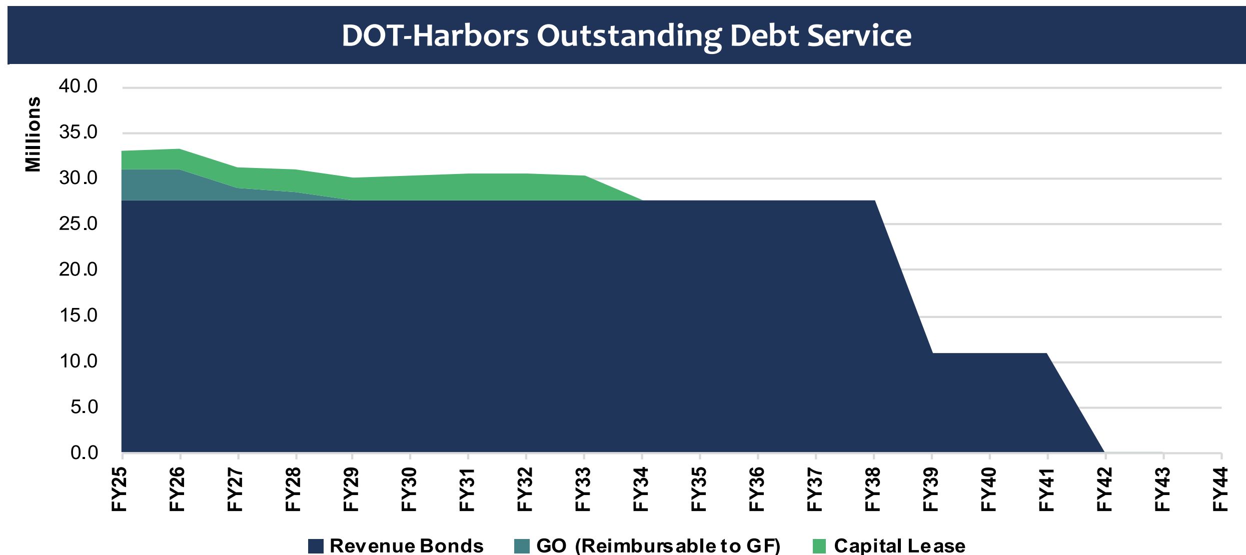
A. Debt Profile

DOT-Harbors currently has five series of harbor revenue bonds outstanding totaling $304.3 million. In addition, DOT-Harbors is responsible for payments on $8.1 million in reimbursable GO bonds. It also has a $18.2 million capital lease outstanding, the proceeds of which were used to fund energy conservation projects. Energy savings generated from the projects are sufficient to cover the lease payments.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Par Call Date	Callable Par
				Revenue Bonds			
Series 2013A	AMT	23,615,000	8/2/13	7/1/29	5,895,000	7/1/2019	5,895,000
Series 2016B	AMT	68,535,000	12/6/16	1/1/31	43,555,000	1/1/2026*	43,555,000*
Series 2016D	AMT	22,425,000	7/5/17	7/1/27	10,775,000	7/1/2018	10,775,000
Series 2020A	AMT	147,520,000	12/2/20	7/1/37	140,735,000	7/1/2030	102,310,000
Series 2020C	Non-AMT	103,345,000	12/2/20	7/1/40	103,345,000	7/1/2030	90,245,000
Sub-Total	-	-	-	-	**304,305,000**	-	**252,780,000**
				GO Bonds (Reimbursable)			
GO Bonds	Tax-Exempt	-	-	-	8,130,615	-	-
				Capital Lease			
Capital Lease	Tax-Exempt	26,992,659	9/17/15	10/1/32	18,188,657	-	-
Total	-	-	-	-	**330,624,272**		**252,780,000**

*$11.595 million is currently callable with the remaining $31.96 million callable on January 1, 2026.

B. Debt Service Chart



DOT-Harbors has a level debt service profile with a step-down in FY2039. Total debt service including reimbursable GO bonds and capital lease is approximately $31.1 million in FY2025, gradually decreasing to $27.7 million through FY2038, and stepping down to about $11.0 million in FY2039. DOT-Harbors has moderate debt amortization with 59% of revenue bond principal being repaid over the next ten years.

C. Credit Ratings

DOT-Harbors maintains strong ratings in the AA-category as reflected in the table below. Moody's last affirmed this rating in April 2023, and Fitch in February 2024. DOT-Harbors' ratings have been stable-to-improving over the last decade. The ratings were unaffected by the COVID-19 pandemic despite loss of revenues from liquid cargo and cruise passengers during the height of the pandemic. It entered the pandemic from a position of strength with very strong debt service coverage (more than 4.0 times) and liquidity position (over 1,000 days) that allowed DOT-Harbors to withstand short-term loss of revenues from liquid cargo and cruise passengers during fiscal 2021, the period severely impacted by COVID-19 shutdowns.

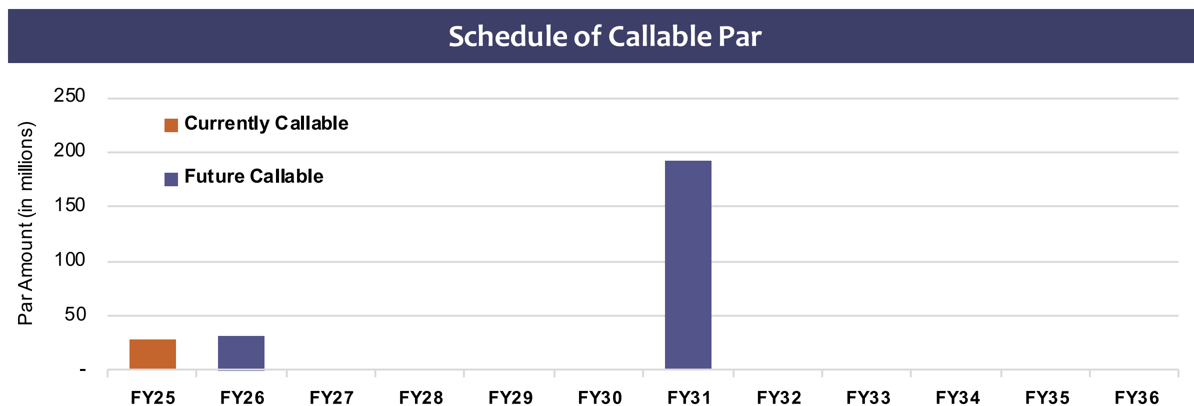
Department of Transportation Harbors Credit Ratings		
	Moody's	**Fitch**
Revenue Bonds	Aa3 Stable	AA- Stable

Credit strengths include DOT-Harbors' monopolistic position and its essentiality to Hawaii's economy, strong management focus on financial performance, demonstrated willingness to leverage its market position with a tariff increase mechanism in place, very strong financial position in terms of coverage (consistently over 4.0x) and cash balances (above 1,000 days) owing to strong cargo and container growth over the past decade, primarily cash-funded capital program and conservative debt structure.

Credit challenges include exposure to economic volatility owing to a significant tourism industry, customer concentration of cargo in one shipping line and a flow of funds that allows outflow to the State in excess of 150% of next year's requirements, although such transfers have been limited in recent years.

D. Schedule of Callable Bonds

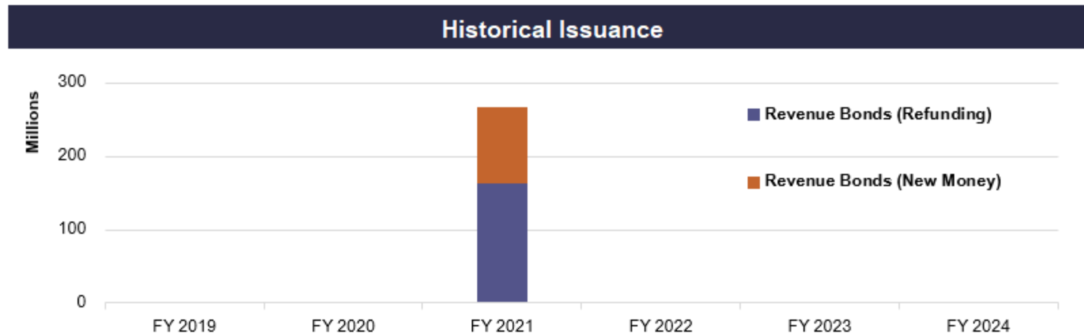
The following chart provides a summary of callable harbor revenue bonds and par amounts. DOT-Harbors has approximately $252.8 million of callable par. About $28.3 million is currently callable as reflected in FY2025 in the chart (Series 2013A, a part of Series 2016B and Series 2016D) but are unlikely to be refunded for savings at this time. Approximately $32.0 million is callable in FY2026 and another $192.6 million callable in FY2031. Pursuant to the criteria outlined in its Debt Management Policy, DOT-Harbors may pursue opportunities to refund such callable bonds when appropriate and financially advantageous.



E. Multi-Year Program Anticipated/Intended Debt Issuance

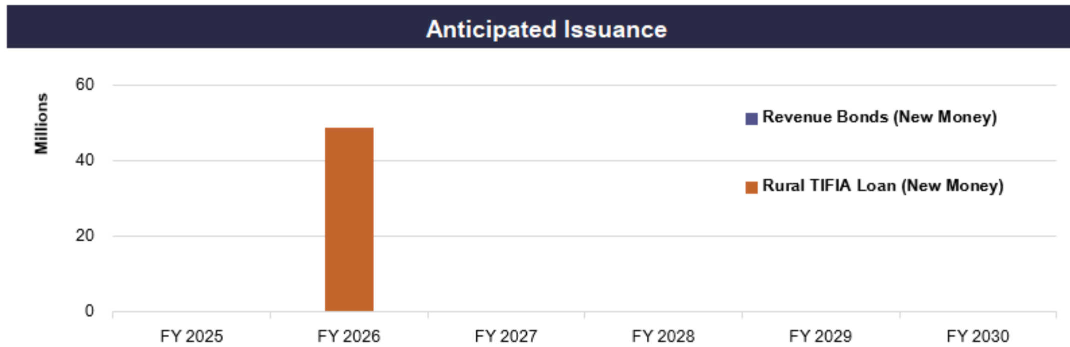
Existing Debt

In the past five years, DOT-Harbors has issued some new money as well as refunding bonds in FY2021. DOT-Harbors has historically cash-funded most of its capital needs, limiting the need for debt.



Anticipated Debt

DOT-Harbors anticipates significant cash-funding of its capital improvements program (CIP) which total $2.06 billion through 2038. Additionally, there is the possibility of obtaining a rural TIFIA loan of approximately $49.0 million to occur during the next year or two (assumed FY2026 for the purpose of the Study), which is expected to be on parity with the currently outstanding harbor revenue bonds. This rural TIFIA loan is expected to carry an interest rate that is half of the 30-year US Treasury rate, with an extended loan amortization period not to exceed 50 years.



Authorized but Unissued Debt

DOT-Harbors has approximately $634.0 million in authorized but unissued revenue bonds as of October 31, 2024.

F. Measuring Debt Burden

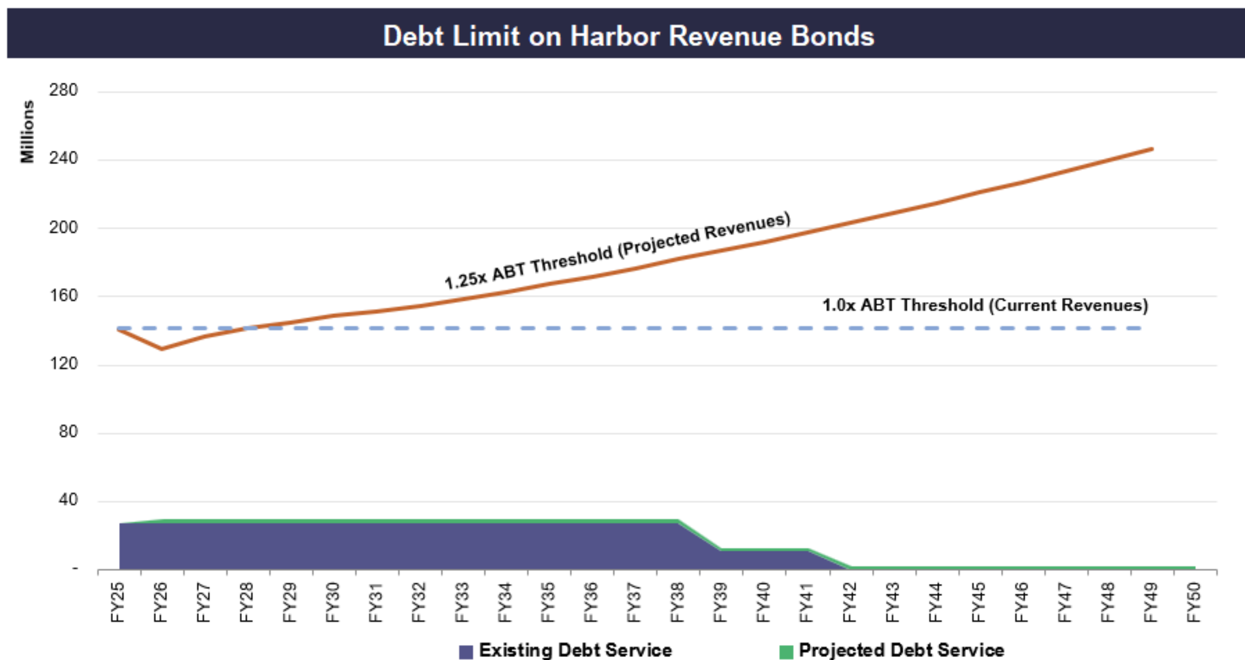
Last Full Fiscal Year and Projected (six-years) Metrics

AFFORDABILITY METRICS	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	16.3%	14.2%	15.6%	14.0%	13.4%	12.7%	12.5%
Annual debt service to annual appropriations	35.1%	26.4%	27.2%	25.6%	25.1%	24.3%	24.0%
Revenue bonds debt service coverage (Indenture Revenues)	6.47x	6.34x	5.48x	5.77x	6.00x	6.14x	6.28x
Total debt service coverage (Indenture Revenues)	5.43x	5.30x	4.61x	5.15x	5.39x	5.65x	5.76x
Revenue bonds debt service coverage (Net Revenues)	5.13x	5.10x	4.45x	4.72x	5.01x	5.14x	5.27x
Total debt service coverage (Net Revenues)	4.30x	4.26x	3.75x	4.22x	4.50x	4.73x	4.83x
Debt to operating revenues	1.68x	1.38x	1.55x	1.40x	1.25x	1.14x	1.03x
Liquidity – days' cash on hand (days)	1,351	859	837	850	885	864	767

Note: Projected metrics assume issuance of $49.0 million of additional debt during the projection period, in the form of a TIFIA loan on parity with revenue bonds (see anticipated debt above)

Relevant Affordability Metrics

1. Bond Certificate Limitations: As per the Bond Certificate of the Director of Transportation dated March 1, 1997, the DOT-Harbors' revenue bonds are subject to a rate covenant that requires setting appropriate rates, rents, fees, and charges so as to always remain self-supporting, i.e., generate sufficient revenues to cover all of DOT-Harbor's obligations including but not limited to operating expenses and debt service on outstanding revenue and reimbursable GO bonds. In other words, DOT-Harbors is required to demonstrate 1.0 times coverage on all bonds from net revenues of the system before adjustments. Additionally, net revenues over the next 12-month period, when adjusted for balances available in the reserve and contingency are subject to a rate covenant of 1.25 times aggregate debt service. Over and above that, should DOT-Harbors want to issue additional senior lien debt, the Certificate dictates a



twofold ABT test - at least one times coverage on all anticipated debt based on historical net revenues (such threshold shown as gray dotted line in the chart) and 1.25 times coverage after inclusion of any projected increases in most recent year's net revenues (such threshold shown as an orange line in the chart). With plans to obtain a rural TIFIA loan at preferential terms, but no plans to issue any additional revenue bonds, DOT-Harbors is projected to maintain very strong debt service coverage levels. Historical revenues, even before incorporating projected increases, provide coverage of over 1.0 times and projected revenues provide a coverage much greater than 1.25 times future debt service with significant capacity under the ABT test.

2. Annual debt service payments to annual revenues and annual debt service payments to annual appropriations: The annual debt service to annual revenues ratio is expected to gradually decline over the projection period, from 16.3% in FY2024 to 12.5% in FY2030. A combination of strong demand for the harbors system and scheduled inflation-driven increases in various fees and tariffs, have resulted in strong revenue performance for DOT-Harbors in recent years with a favorable impact on the debt service-to-annual revenues ratio. Over the projection period, annual debt service to annual appropriations also improved from 35.1% to 24.0% (FY2030).

   DOT-Harbors' total fixed costs, including estimated pension and OPEB contributions along with annual debt service, were modest at about 19% of revenues in FY2024. The ratio could further moderate with growth in revenues.

3. Debt service coverage: Debt service coverage is net revenues, as defined in the Certificate, divided by principal and interest requirements for the fiscal year. Over the projection period, debt service coverage for the revenue bonds (based on net revenues as adjusted based on the Certificate) is projected to remain very strong – in excess of 5.0 times. Total debt service coverage including all debt is also projected to remain strong at or above 4.0 times.

4. Debt-to-operating revenue: The debt-to-operating revenues ratio is calculated by dividing total outstanding debt by total annual operating revenues and is a measure of leverage. It has steadily declined since its 2011 peak of 4.9 times to 1.4 times in FY2025 with limited new debt and healthy increases in operating revenues over the period. With a cash-funded capital plan and no significant additional debt needs in the foreseeable future, apart from the rural TIFIA loan, the ratio is projected to drop below 1.0 times by FY2031.

5. Liquidity – days' cash on hand: Days' cash on hand, a measure of liquidity, is unrestricted cash and investments plus discretionary reserves, divided by operating and maintenance expenditures and grew by 365. Despite DOT-Harbors' planned use of cash on hand to fund capital projects and setting aside certain funds for future projects, liquidity ratios are very strong. DOT-Harbors estimates 1,351 days cash on hand at the end of FY2024. Liquidity position has improved significantly in recent years, however, it is conservatively projected to drop as cash balances are utilized to fund capital project needs in addition to operations. Days cash on hand is still projected to be robust - in the 800 days range over the next 5 years.

Peer/Median Comparisons

Utilizing FACT for U.S. Ports for FY2022, we compare DOT-Harbors against Fitch rated seaports sector medians, Harbor Department of Los Angeles, Port of Long Beach, Port of Beaumont Navigation District, and San Diego Unified Port District. As reflected in the tables, DOT-Harbors' liquidity is extremely strong in comparison to the seaports sector median and in line with what its peers maintain.

	DOT Harbors FY2024	DOT Harbors FY2022	FITCH SEAPORTS FY2022 MEDIANS		
			Overall Seaports	AA Rated	A Rated
Fitch Rating	AA-	AA-			
Days' Cash on Hand	1,351	1,139	765	1,515	757
Total Debt Service Coverage (x)	5.77	5.11	3.94	4.52	3.81
Net Debt/Cashflow available for debt	0.49	0.94	0.93	Cash +ve	1.46
Minimum Annual Guarantees as a % of Operating Revenues	0%	0%	46%	49%	58%

Fitch Analytic Comparative Tool for U.S. Ports released August 2023. FY2024 data from DOT-Harbors.

Since the tariff increases were implemented, DOT-Harbors debt service coverage ratio of 5.0-6.0 times is very strong, exceeding the sector median (4.3 times) and many of its peers.

DEBT AND OPERATING METRICS	DOT Harbors FY2024	DOT Harbors FY2022	PEERS			
			Harbor Dept. of Los Angeles	Port of Long Beach	Port of Beaumont Nav. District	San Diego Unified Port District
Fitch Rating	AA-	AA-	AA	AA/AA-	AA-	A+
Cargo TEU (% g since FY2019)	9.1%	8.9%	10.1%	24.3%	N/A	12.8%
Cargo Tons (% g since FY2019)	-11.2%	-15.4%	-19.4%	17.3%	-2.2%	-7.5%
Cruise Passengers (% g since FY2019)	12.6%	-85.6%	-16.4%	N/A	N/A	-47.9%
Days' Cash on Hand	1,351	1,139	1,640	1,391	1,681	239
Total Debt Service Coverage (x)	5.77	5.11	3.50	4.40	9.80	12.50
Net Debt/Cashflow avail. for debt service	0.49	0.94	Cash +ve	1.58	Cash +ve	Cash +ve
Minimum Annual Guarantees as a % of Operating Revenues	0%	0%	59%	83%	40%	67%

Fitch Analytic Comparative Tool for U.S. Ports released August 2023. FY2024 data from DOT-Harbors.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

DOT-Harbors' Modernization Plan is being funded primarily from cash and no significant additional debt is anticipated to be incurred over the projection period. As reflected in the affordability metrics above, DOT-Harbors is projected to maintain sufficient revenues to support outstanding debt service along with very strong coverage levels of over 6.0 times. DOT-Harbors' projected liquidity (as measured by days' cash on hand) is anticipated to remain high (above 800 days). This sizeable liquidity position provides tremendous financial flexibility and budgetary stability. It also continues to be a significant credit positive, and the rating agencies continue to cite DOT-Harbors' ability to utilize its cash to pay-go fund infrastructure needs as well

as provide budgetary relief as stabilizing credit factor. DOT-Harbors' projected revenues are sufficient to cover existing bond debt service and comfortably satisfy future ABT tests should additional debt be issued, even though none is planned at this time. Revenue growth assumptions remain conservative, driven primarily by inflation-driven tariff increases without any growth in volume, which provides additional assurance on the affordability assessment.

V. Department of Transportation – Highways

The Department of Transportation (DOT) maintains and operates the transportation facilities of the State and are carried out through three primary divisions: Airports, Harbors and Highways. The Department of Transportation, Highways Division (DOT- Highways) supervises the management and maintenance of the State Highway System and the location, design and construction of new highways roads and facilities. The State imposes taxes, fees, and charges relating to the operation and use of motor vehicles on the public highways of the State and these funds are deposited into the State Highway Fund. The major revenue sources of the State Highway Fund include highway fuel license taxes, vehicle registration fees, vehicle weight taxes, and rental motor vehicle, tour vehicle and car-sharing vehicle surcharge taxes. In response to COVID-19 pandemic-driven decline in revenues, the rental motor surcharge tax was raised by $0.50 per day to $5.50 per day for the calendar year 2022 and set to increase by $0.50 per day in each subsequent year through 2027. It is currently set to $6.50 for 2024.

DOT-Highways' primary financing program consists of highway revenue bonds. These revenue bonds are secured by a gross pledge of revenues in the State Highway Fund, including but not limited to highway fuel license taxes, registration fees, weight taxes rates and rental motor vehicle taxes. The flow of funds requires payment of debt service before operations and maintenance. With legislative approval, DOT-Highways has the flexibility to adjust the rates and allocation of the fees and taxes prescribed to ensure sufficiency of revenues. In certain cases, B&F may issue GO bonds on behalf of DOT-Highways, repayment of which is entirely the responsibility of DOT-Highways. Repayment of reimbursable GO bonds is subordinate to payment on DOT-Highways' revenue bonds as well as O&M and necessary capital costs. DOT-Highways also issues COPs and Lease Purchase Agreements payable from funds appropriated for DOT-Highways.

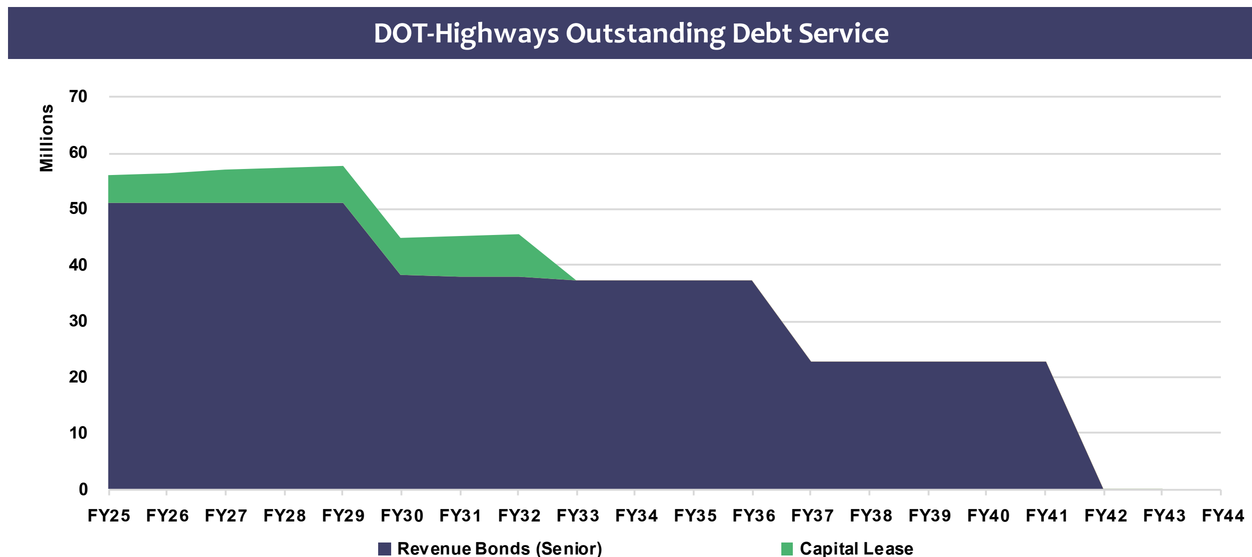
A. Debt Profile

DOT-Highways currently has seven series of highway revenue bonds outstanding for a total par of $451.3 million. It also has a $40 million capital lease outstanding, the proceeds of which were used to fund energy conservation projects. Energy and cost savings from the project are typically sufficient to cover the lease payments.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Call Date	Callable Par
Revenue Bonds							
Series 2014A	Tax-Exempt	103,375,000	8/14/14	1/1/34	64,305,000	7/1/2024	64,305,000
Series 2014B	Tax-Exempt	32,285,000	8/14/14	1/1/26	7,735,000	7/1/2024	7,735,000
Series 2016A	Tax-Exempt	103,395,000	9/8/16	1/1/36	73,200,000	7/1/2026	63,520,000
Series 2016B	Tax-Exempt	101,090,000	9/8/16	1/1/30	75,400,000	7/1/2026	52,080,000
Series 2019A	Tax-Exempt	81,835,000	12/11/19	1/1/40	75,715,000	1/1/2029	58,005,000
Series 2021	Tax-Exempt	137,205,000	6/9/21	1/1/41	137,205,000	1/1/2031	125,360,000
Series 2019B	Tax-Exempt	23,130,000	10/7/21	1/1/32	17,715,000	NA	-
Sub-Total	-	-	-	-	**451,275,000**	-	**371,005,000**
Capital Lease							
Capital Lease	-	-	7/8/15	8/1/31	39,995,695	-	-
Total	-	-	-	-	**491,270,695**	-	**371,005,000**

B. Debt Service Chart

DOT-Highways' aggregate debt service structure is level for the next few years with periodic step-downs in FY2030 and FY2037. DOT-Highways structures bonds with level debt service except for refunding bonds which are structured to generate level savings. The principal amortization of revenue bonds is above average with nearly 65% of principal being amortized over the next ten years.



C. Credit Ratings

The DOT-Highways' revenue bonds carry strong credit ratings in the 'AA' category from all three rating agencies. DOT-Highways rating is linked with (and equal to) the State's GO credit ratings which were recently affirmed by all three rating agencies at the levels shown in the table below. For a more detailed discussion on the State's rating please refer to Section II Subsection C of this report.

Department of Transportation Highways Credit Ratings			
	Moody's	**S&P**	**Fitch**
Revenue Bonds	Aa2 Stable	AA+ Stable	AA Stable

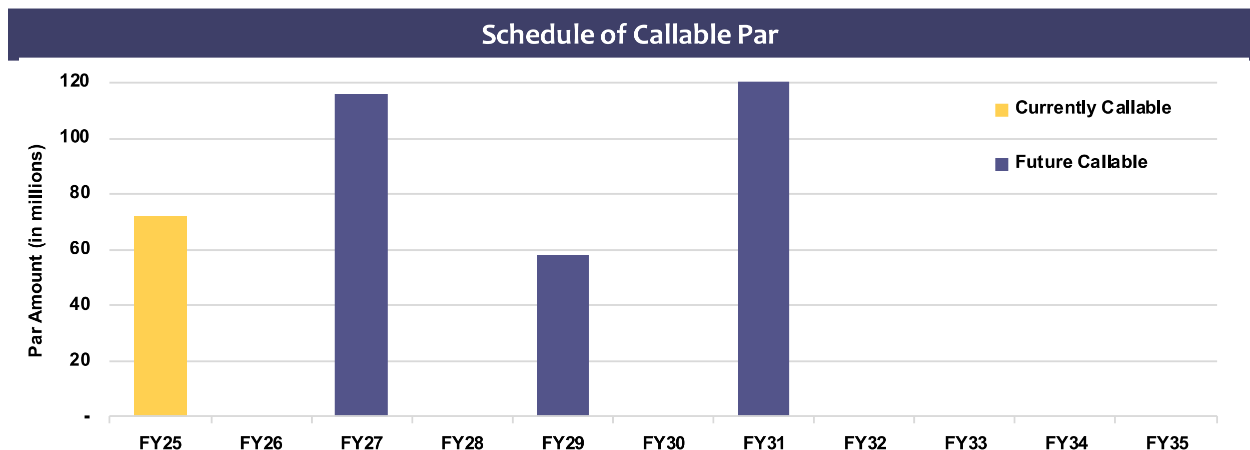
Credit strengths include strong senior lien debt service coverage, the diversity of the pledged revenue stream, the state legislature's demonstrated willingness to add new pledged revenues as needed to fund the state's highway program, a 100% fixed-rate debt portfolio, strong additional bonds test that provides bondholders protection against overleveraging in the future, strong demographics and a healthy rental car market, and prudent management.

Credit challenges include volatility of pledged revenues driven by economic considerations, dependence on tourism and the high proportion of car rental surcharges, stagnant fuel taxes which are a significant portion of pledged revenues, and transfers from the highway fund to the general fund, as had occurred in the past, although none are anticipated at this time.

Per the indenture, DOT-Highways funds a debt service reserve sized at one-half of maximum annual debt service for its revenue bonds. However, DOT-Highways, through a supplemental indenture, will eliminate the debt service reserve fund requirement pending consent of 100% of bondholders which has not been attained yet. Rating agencies are aware of the potential change and have not indicated any potential impact to DOT-Highways' credit ratings as their methodologies do not place too much emphasis on reserve funds for special tax credits like DOT-Highways.

D. Schedule of Callable Bonds

The following chart provides a summary of callable highway revenue bonds. About $371.0 million of the outstanding debt is callable in advance of final maturity. About $72.0 million of that is currently callable,

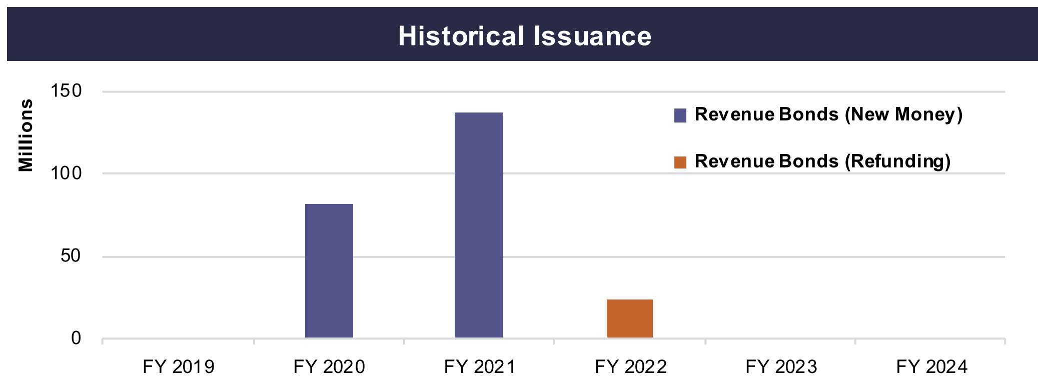


represented by the yellow bar in the chart below. Future call dates for the remaining par are in FY2027, FY2029 and FY2031. Pursuant to the criteria outlined in the Debt Management Policy, DOT-Highways may pursue opportunities to refund callable bonds when appropriate.

E. Multi-Year Program Anticipated/Intended Debt Issuance

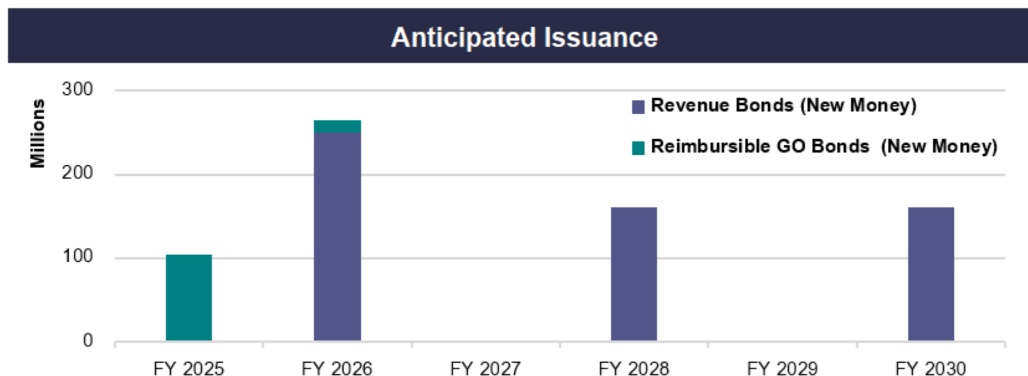
Existing Debt

DOT-Highways has accessed capital markets for both new money and refunding bonds every two to three years with the last issuance in June 2021. New money issuance has been in the range of $50 million to $150 million, with the latest issuance of $137 million in FY2021. Series 2019B bonds (forward delivery contract to refund Series 2011A) were delivered in October 2021.



Anticipated Debt

As of October 31, 2024, DOT-Highways anticipates issuing $570 million of highway revenue bonds and another $118.7 million in reimbursable GO bonds (to be issued by B&F for the benefit of DOT-Highways) over the next five years.



Authorized but Unissued Debt

DOT-Highways does not have authorized but unissued revenue bonds remaining. DOT-Highways has received allotment for the reimbursable GO bond appropriation.

F. Measuring Debt Burden

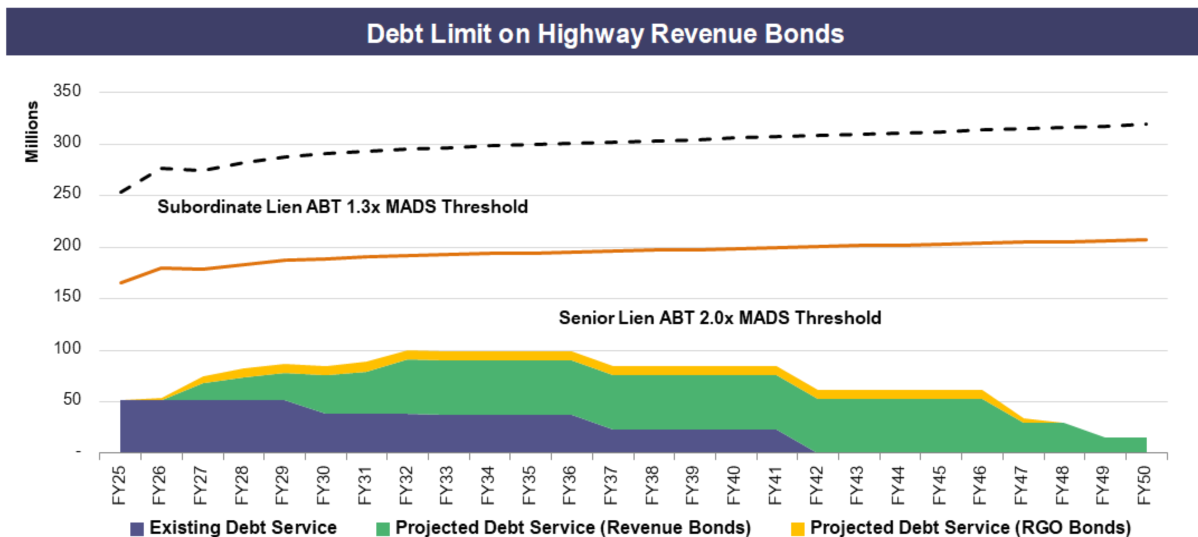
Last Full Fiscal Year and Projected (six-years) Metrics

AFFORDABILITY METRICS	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	15.6%	14.2%	15.4%	21.3%	22.6%	23.4%	22.8%
Annual debt service to annual appropriations	17.7%	19.8%	20.8%	27.2%	28.7%	29.5%	27.8%
Debt service coverage (Gross-Revenue Bonds)	6.41x	7.04x	6.97x	5.38x	5.07x	4.87x	5.02x
Debt service coverage (Gross-w/ RGO Bonds)	6.41x	7.04x	6.51x	4.69x	4.42x	4.27x	4.39x
Debt service coverage (Net)	1.77x	3.00x	2.71x	2.02x	1.94x	1.88x	1.79x
Liquidity – days' cash on hand	337 days	381 days	375 days	344 days	336 days	331 days	319 days

Note: Projected metrics, except gross debt service coverage, assume issuance of $570 million of revenue bonds and another $119 million of additional reimbursable GO bonds (see anticipated debt above)

Relevant Affordability Metrics

1. Master Certificate Limitations: As per the Master Certificate of the Director of Transportation dated August 1, 1993, DOT-Highways' revenue bonds are subject to a rate covenant that requires setting appropriate rates, rentals, fees, and charges so as to generate sufficient revenues to cover all of DOT-Highway' obligations including but not limited to operating expenses and debt service on all outstanding bonds including reimbursable GO bonds. In other words, DOT-Highways is required to maintain 1.0 times coverage on all bonds. Over and above that, should DOT-Highways want to issue additional senior lien debt, the Certificate dictates an ABT test of 2.0 times coverage (orange line in the chart) on projected maximum annual debt service (MADS) payment from pledged revenues for any 12 consecutive calendar month period out of the last 18 consecutive calendar month preceding the date of issuance. If DOT-Highways were to issue new bonds on a subordinated lien to currently outstanding debt which are all senior lien bonds, the ABT requirement is 1.3 times MADS (black line in the chart). There is no ABT requirement for issuing reimbursable GO bonds.



As reflected in the chart, there is significant debt capacity for revenue bonds and reimbursable GO debt even with the rate covenant and ABT limitations. DOT-Highways can fund its projected capital needs with additional revenue bonds and reimbursable GO bonds within indenture limits and in compliance

with the rate requirement. While DOT-Highways has sufficient senior lien capacity and does not intend to leverage the subordinate lien at this time, that option remains available and provides additional borrowing capacity if needed. These legal limits are based on gross revenues before payment of operating expenses which is typical for state highway DOTs.

2. Annual debt service payments to annual revenues or annual debt service payments to annual appropriations: These ratios measure the financial flexibility available to DOT-Highways by analyzing the fixed costs embedded in the budget. Debt service, which is a fixed cost, accounts for 15.6% of FY2024 revenues which is a significant improvement from about 22% prior to FY2019 owing to a strong growth in operating revenues driven by rental vehicle surcharge revenues. Not only did the tourism increase during the time but the surcharge was raised by $2.00 to $5.00 per day right before the COVID-19 pandemic in FY2020 and is set to increase further by $0.50 per day every year starting in 2022 through 2027. The growth in base revenues has placed DOT-Highways in a favorable position to be able to execute its planned borrowing without any adverse budgetary impact. The debt service is 17.7% of FY2024 expenditures. The debt service fixed cost ratios are expected to rise during the Projection Period after accounting for the planned debt issuance, reaching a maximum of 23% of revenues and 30% of expenditures in FY2029. Revenue projections are very conservative resulting in the very gradual improvement from the peak years. Including pension and OPEB contributions along with annual debt service, total fixed costs accounts for about one-third of revenues.

3. Gross debt service coverage: Gross debt service coverage is computed based on gross pledged revenues before payment of any operating expenses. Based on conservative revenue estimates for FY2024, the coverage on *revenue bonds* is very strong at 6.4 times. Gross coverage has also improved significantly since FY2019 on account of the revenue growth discussed above. With the planned issuance of additional revenue bonds over the next six years, the coverage is expected to drop to about 4.25 times, which is still considered very strong, and still well above the 2.0 times ABT requirement discussed above. Including the future *reimbursable GO bond* debt service, the gross revenue coverage is expected to be about 3.9 times. It should be noted that while there is capacity to issue debt, each proposed issuance must be reviewed in the broader revenue and credit rating context.

4. Net debt service coverage: Legally, debt service is payable before operating expenses reflecting the strength of the gross revenue pledge. However, it is important to evaluate debt service coverage based on net revenues (after operating expenses) and including all debt that is the reimbursable GO bonds apart from the revenue bonds. This ratio is a better measure and reflection of self-sustainability and overall affordability. Net debt service coverage is based on net revenues which are available for debt service after payment of necessary operating costs. Over the next six years DOT-Highways is projecting a healthy surplus after operations. The projected coverage using such net revenues on all debt, including the projected reimbursable GO debt, is expected to be above 1.5 times. Any, such excess revenues will help bolster DOT-highways bottom line and cash position.

5. Liquidity – days' cash on hand: DOT-Highways' liquidity levels are projected to be stable in the 320-380 days range, which is roughly one year's operating expenses.

Peer Comparisons

We compare DOT-Highways with other similarly rated state transportation agencies across the nation, namely, Arizona Transportation Board, Missouri Highways and Transportation Commission, Kansas DOT, Oregon DOT and Nevada DOT. As reflected in the table, the gross coverage of MADS maintained by DOT-Highways on its senior lien bonds is better than all selected peers in the sector. DOT-Highways' debt service as a percentage of operating expenditures is also 7.9%, much favorable compared to peer agencies.

DEBT METRICS		STATE DEPARTMENT OF TRANSPORTATION PEERS				
FY2023	DOT-Highways	Missouri	Nevada	Oregon	Arizona	Kansas
Lien	Senior	Third	Senior	Subordinate	Subordinate	Senior
Credit Ratings	Aa2/AA+/AA	Aa1/AA+/AAA	Aa1/AAA/AA+	Aa2/AA+/AA+	Aa2/AA+/-	Aa2/AA/AA
Par Outstanding	$479.4 million	$1.48 billion	$630.34 million	$2.66 billion	$1.56 billion	$1.60 billion
Additional Bonds Test	2x MADS	2x MADS	3x MADS	2x MADS	3x MADS	3x MADS
Gross Coverage	6.39x	5.14x	4.51x	4.40x	6.00x	6.24x
Debt Service to OpEx*	7.9%	9.6%	9.1%	13.7%	9.1%	13.8%

Source: Audit Reports for FY2023 **Operating Expenditures*

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

DOT-Highways' financial position is significantly improved compared to past years. The revenue capacity has been meaningfully enhanced due to higher rental vehicle surcharge rates. The rate increases will help offset volatility in tourism as well as supplement declining fuel taxes with the rise in electric vehicles. Gross debt service coverage is stronger, exceeding 6.0 times, as a result. The net debt service coverage after payment of operating expenses is also solid, above 1.5 times. These coverage levels are projected to remain above 3.75 times on a gross revenue basis and 1.5 times on a net revenue basis, after accounting for estimated debt service on the anticipated highway revenue bonds and RGO borrowing. A part of the planned borrowing is anticipated to be RGO debt, instead of highway revenue bonds, which does not have an ABT requirement. From that perspective it is a more flexible borrowing tool and cost effective in terms of issuance costs. DOT-Highways' liquidity position is also level which provides more budgetary stability going forward. Given robust revenues projections and available cash balance there are no affordability concerns, with regards to the size of the borrowing plan, at present.

VI. University of Hawaii

The State of Hawaii University System (UH) is a multi-institutional system comprised of a major research university (the University of Hawaii at Manoa), two baccalaureate campuses (Hilo and West Oahu), seven community colleges (Hawaii, Honolulu, Kapiolani, Kauai, Leeward, Maui, and Windward) and nine educational centers distributed across the State. UH is the sole public higher education system within the State and, therefore, has a unique competitive position and value in Hawaii. Furthermore, the UH system is the only truly integrated higher education system in the country that seamlessly arranges its universities and community colleges into one system. Other public higher education systems in the country are typically separate and distinct systems defined by the type of system (community colleges, junior colleges and universities).

In addition to being an integrated higher education system, the UH system distinguishes itself through its Hawaiian, Asian and Pacific orientation and its position as one of the world's foremost multicultural centers for global and indigenous studies. Students are members of a population in which no one ethnic group constitutes a majority, and the educational experience is enriched by the diversity of cultures represented. UH's fall 2024 enrollment totaled 50,418 (90% undergraduate and 10% graduate students) which is a 3% increase from Fall 2023. Hawaii residents comprised 80% of all enrolled students, nearly 16% were from the U.S. mainland, and the remaining 4% of students were international students from over 100 countries. Of UH's total enrollment, 49% were enrolled at the community colleges, and 51% were primarily enrolled at the 4-year (baccalaureate and doctoral) campuses.

Major UH operating revenue sources include State operating support, net tuition and fee revenue, and federal funding of research. UH also receives significant State capital support. Net tuition revenue has improved modestly over the last three audited fiscal years largely on account of slight pick-up in enrollment. Enrollment increased in two of the last three fiscal years after several years of decline on account of several measures taken to stabilize the trend, including three-year tuition freeze from 2021 to 2023, focus on underserved regions and population, and scholarship programs. Enrollment is anticipated to remain strong since UH offers Hawaii residents a strong local opportunity to remain close to home to advance their education offering both 4-year and community college formats. In January 2023, the Board of Regents approved a new four-year tuition schedule from 2024 to 2027, which largely holds tuition rates flat. All community college tuition and all graduate student tuition (except UH-Manoa William S. Richardson School of Law) will remain frozen over the entire 4-year period. Undergraduate tuition will also remain frozen for the first two years followed by 2% increase in 2026 and 2027, each. Non-resident tuition rates at these campuses will also increase by equivalent percentages over the same period.

UH's primary financing program consists of university revenue bonds which are generally secured by income derived by UH from its ownership and management of the Network including housing and auxiliary activities and moneys in any special fund or revolving fund, which include tuition and fees. Certain revenue bonds series are additionally secured by other revenues such as cigarette tax revenues or appropriations from the Hawaii Tobacco Settlement Special Fund.

In certain cases, B&F may issue reimbursable GO bonds on behalf of UH, repayment of which is entirely the responsibility of UH. Repayment of reimbursable GO bonds is subordinate to payment of UH's revenue

bonds. As described above, UH receives significant operating and capital support from the State's general fund – including non-reimbursable GO bond funding.

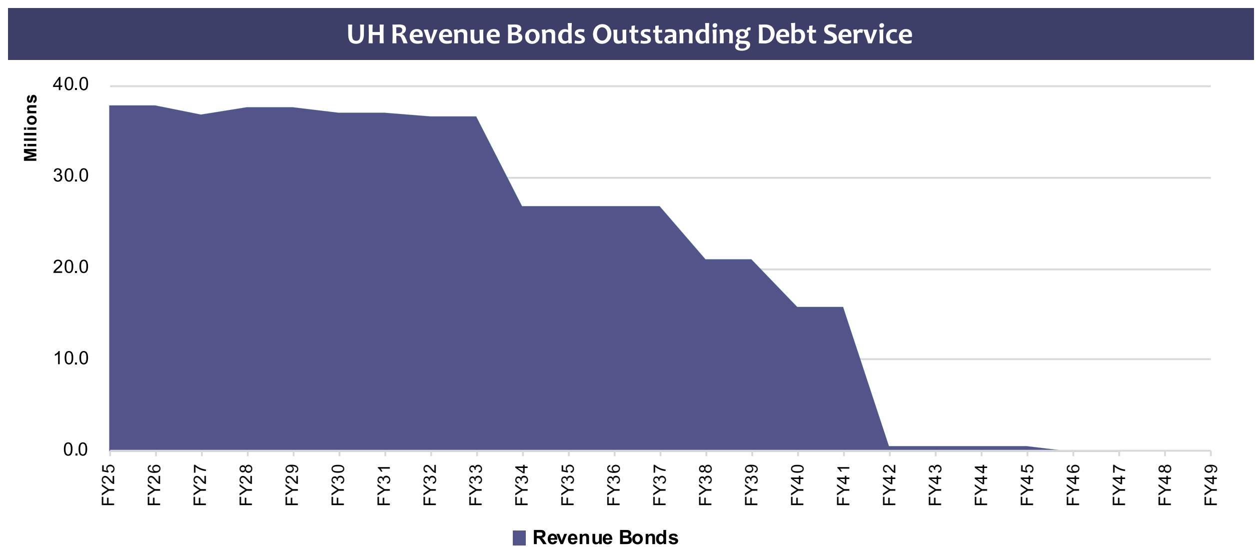
A. Debt Profile

UH currently has 15 series of bonds outstanding for a total par amount of $373.5 million. UH paid down all equipment finance lease obligations in FY2023.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Call Date	Callable Par
				Revenue Bonds			
Series 2015A	Taxable	8,575,000	9/24/15	10/1/44	6,850,000	10/1/2025	6,630,000
Series 2015B	Tax-Exempt	47,010,000	9/24/15	10/1/36	38,185,000	10/1/2025	34,610,000
Series 2015E	Tax-Exempt	67,400,000	4/20/16	10/1/32	47,880,000	10/1/2026	34,200,000
Series 2017A	Tax-Exempt	3,990,000	12/28/17	10/1/32	2,425,000	10/1/2027	1,610,000
Series 2017B	Tax-Exempt	12,040,000	12/28/17	10/1/28	12,040,000	10/1/2027	6,110,000
Series 2017C	Taxable	4,110,000	12/28/17	10/1/28	4,110,000	10/1/2027	2,090,000
Series 2017D	Tax-Exempt	13,185,000	12/28/17	10/1/30	13,185,000	10/1/2027	3,250,000
Series 2017E	Taxable	4,450,000	12/28/17	10/1/30	4,450,000	10/1/2027	3,390,000
Series 2017F	Tax-Exempt	52,275,000	12/28/17	10/1/38	40,200,000	10/1/2027	33,110,000
Series 2017G	Taxable	20,745,000	12/28/17	10/1/38	15,200,000	10/1/2027	12,325,000
Series 2020A	Taxable	10,045,000	10/28/20	10/1/40	8,330,000	10/1/2030	5,575,000
Series 2020B	Tax-Exempt	44,555,000	10/28/20	10/1/31	31,470,000	10/1/2030	4,655,000
Series 2020C	Taxable	54,300,000	10/28/20	10/1/40	54,300,000	10/1/2030	54,300,000
Series 2020D	Tax-Exempt	77,135,000	10/28/20	10/1/36	63,705,000	10/1/2030	35,190,000
Series 2020E	Taxable	31,130,000	10/28/20	10/1/40	31,130,000	10/1/2030	31,130,000
Total					**373,460,000**		**268,175,000**

B. Debt Service Chart

UH's debt service is fairly level with $37 to $38 million annual payments through FY2033. Thereafter, debt service gradually steps down until all debt is repaid in FY2045. UH typically issues 30-year revenue bonds. Approximately 65% of outstanding principal will be paid down in the next ten years.



C. Credit Ratings

UH's credit ratings are split among the rating agencies on account of different methodologies and evaluation of UH's credit profile. UH's revenue bonds carry AA-category ratings as reflected below.

University of Hawaii Credit Ratings		
	Moody's	**Fitch**
Revenue Bonds	Aa3 Stable	AA Stable

Moody's affirmed its Aa3 rating level most recently in September 2024. Fitch also affirmed UH's 'AA' rating and stable outlook recently, in September 2024, with the expectation that UH's financial profile will continue to weather near-term economic pressures as enrollment challenges persist and as it manages extensive renewal and maintenance needs under its capital improvement program over the next several years. The stable outlook was predicated on continued State support, effective cost management and willingness to raise tuition in the future, as recently approved, to preserve balanced operations.

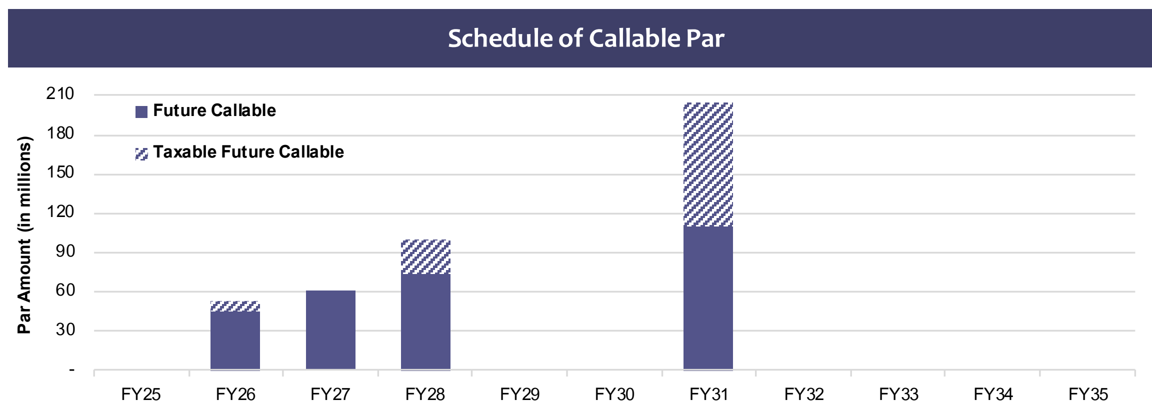
Credit strengths include UH's essential role as the State's only public system of higher education and an economic driver within the State, continued support from the State for capital and operations and GO debt issuances, large scale and scope of operations with strategically important research enterprise, diverse revenue sources including the willingness to raise tuition rates, reserve and liquidity levels that have grown over time providing operating cushion and a manageable debt profile.

Credit challenges include continuing enrollment challenges and rising capital needs across UH's multi-campus system, vulnerability to reductions in State support, weak operations and flat projected net tuition revenues, rigidity in labor structure lacking flexibility to make independent budget reductions, and very high pension and OPEB obligations.

D. Schedule of Callable Bonds

The following chart provides a summary of callable university revenue bonds and par amounts along with their call dates. The total callable par in UH's debt portfolio is $416.8 million. UH does not have any currently callable bonds. The earliest call date is October 1, 2025, at which time $52.15 million is callable. Future call dates are in FY2027, FY2028 and FY2031. A portion of the callable debt is taxable as shown below.

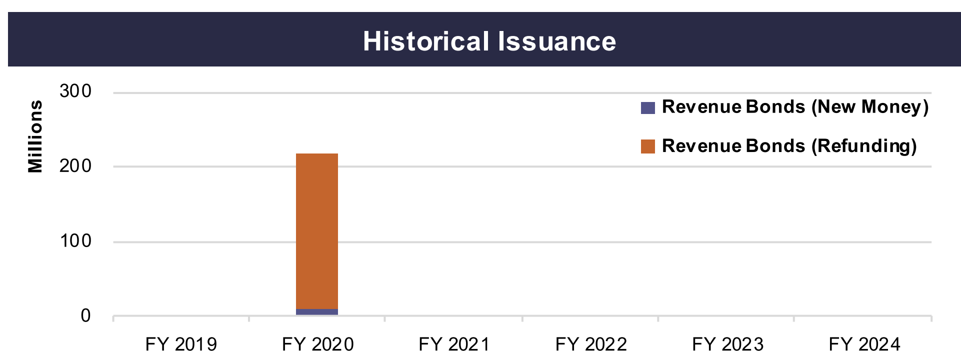
Pursuant to the criteria outlined in its Debt Management Policy, UH may pursue opportunities to refund callable bonds.



E. Multi-Year Program Anticipated/Intended Debt Issuance

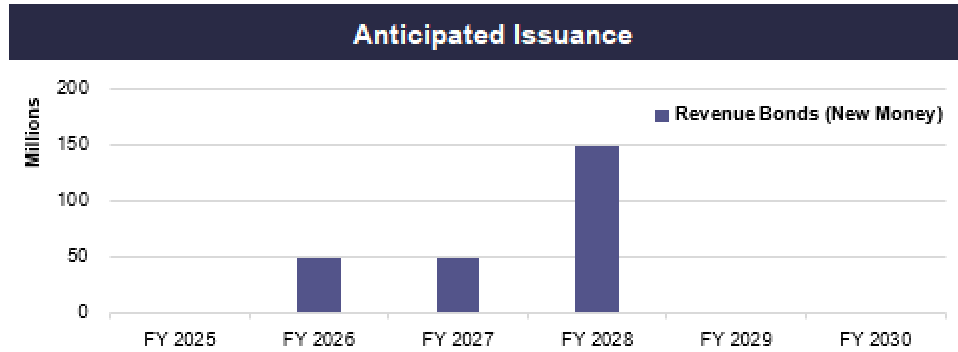
Existing Debt

UH's last sizeable new money issuance was in FY2011, with the most recent issuance in October 2020 largely comprised of refunding bonds.



Anticipated Debt

Over the next six years, UH plans to issue additional revenue bonds for student housing and a research facility, totaling $250 million in par. These issuances are currently structured as $50 million in FY2026, $50 million in FY2027, followed up by a larger issuance of $150 million in FY2028. UH's updated 6-year $2.351 billion capital improvement projects plan for FY2026-31 focuses on improving facility utilization and addressing the systemwide $986 million deferred maintenance. UH received $361.88 million of capital appropriations for FY2024 and FY2025. At this time, any additional spending in the capital improvement projects plan is not anticipated to be funded with UH revenue bonds, but with other sources including non-reimbursable GO Bonds (subject to approval). UH forecasts that it will continue its approach to meet some of its capital funding needs through alternative funding strategies such as P3 housing projects as alternatives to additional debt.



Authorized but Unissued Debt

UH has no authorized but unissued revenue bonds remaining.

F. Measuring Debt Burden

Last Full Fiscal Year and Projected (six-years) Metrics

AFFORDABILITY METRICS	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	4.4%	4.2%	4.0%	4.0%	4.4%	4.9%	5.3%
Pension pay-go to annual revenues	17.2%	17.0%	16.8%	16.7%	16.8%	16.7%	16.7%
OPEB pay-go annual revenues	17.7%	17.2%	16.7%	16.4%	16.1%	15.7%	15.5%
All annual obligations to annual revenues	39.2%	38.3%	37.5%	37.1%	37.3%	37.3%	37.5%
Annual debt service to annual appropriations	2.1%	1.9%	1.9%	1.9%	2.0%	2.3%	2.4%
Pension pay-go to annual appropriations	8.4%	7.9%	8.2%	8.1%	8.0%	7.9%	7.8%
OPEB pay-go annual appropriations	8.6%	8.0%	8.1%	7.9%	7.7%	7.5%	7.2%
All annual obligations to annual appropriations	19.1%	17.7%	18.3%	17.9%	17.7%	17.6%	17.5%
Debt service coverage	8.46x	7.82x	7.74x	7.60x	4.48x	3.84x	1.64x
Operating margin(1)	-104.9%	-115.6%	-105.0%	-106.9%	-110.1%	-111.2%	-113.8%
Operating margin(2)	18.5%	10.5%	14.8%	9.6%	3.9%	-0.7%	-6.0%
Liquidity – days' cash on hand	184 days	169 days	171 days	164 days	158 days	151 days	145 days
Total cash & investments to total debt	2.63x	2.78x	2.60x	2.43x	1.89x	1.98x	2.10x
Debt to operating revenues	0.20x	0.18x	0.19x	0.20x	0.26x	0.24x	0.23x
Debt to net cash flow from operations	(0.43x)	(0.36x)	(0.41x)	(0.41x)	(0.51x)	(0.46x)	(0.41x)

(1) Excluding State support for operations (2) Including State support for operations

Note: Projected metrics assume issuance of $250 million of additional revenue bonds during the projection period (see anticipated debt above)

Relevant Affordability Metrics

1. Indenture Limitations: UH's revenue bonds do not have legal covenants limiting the issuance of additional bonds nor a rate covenant required to maintain revenues at a certain level.
2. Annual debt service payments to annual revenues or annual debt service payments to annual appropriations: This ratio is a measure of budgetary flexibility afforded to UH by evaluating how much of UH's budget is tied up in fixed costs such as debt service. UH's debt service payments account for 5% of revenues and 2% of UH expenditures. However, including pension and OPEB contributions UH's fixed costs are anticipated to be a sizeable 38%-40% of revenues.

3. Debt service coverage: While legally only a part of UH operating revenue defined as ‘network revenues’ are pledged for any specific series; in the context of affordability, we look to all available revenues of the university system to evaluate debt service coverage. Debt service coverage after payment of all operating expenses and including debt service on proposed borrowing is projected to remain adequate at or above 1.64 times. Additionally, about half of the debt service is covered by cigarette tax and tobacco securitization funds which are pledged to specific bonds series.
4. Operating margin: This is a ratio of net income from operating activities to operating revenue. It is a basic ratio used to gauge profitability of operations. UH’s operating margin is negative as it relies on grants, contributions and State support for its operations. UH reports a positive operating margin in FY2024, after accounting for the State support it receives for operations, but it reverts back to the former trend over the projection period wherein operating margin is slightly negative or near break-even. UH’s reliance on State support for operations is largely attributable to its broader scope and functions which include community colleges.
5. Liquidity – days’ cash on hand: For FY2024, UH estimates having adequate liquidity with about 184 days’ cash on hand.
6. Balance sheet leverage – expendable resources to debt: The ratio measures the resources available to UH to repay debt in case of short-to-medium term volatility in operations. UH’s expendable resources are negative limiting its ability to respond to operational volatility.
7. Income statement leverage – expendable resources to operations: This ratio evaluates the ability to operate relying on wealth that can be accessed over time without earning additional revenue and is discussed in the following section on peer comparison.
8. Debt to operating revenues: The ratio is a balance sheet ratio which measures the coverage of debt from annual revenues. UH’s debt-to-operating ratio is 0.20 times for FY2024 which is considered low. It has been gradually decreasing over the last five years and is projected to continue to decrease through FY2025. It is projected to peak at 0.26 times in FY2028 on account of the additional debt planned.
9. Debt to cashflow: This ratio measures the ability of UH to repay its debt from the profitability of its current operations and is a good measure of debt affordability. UH’s operating margin has been negative for several years resulting in a negative debt-to-cashflow. It is reflective of UH’s reliance on State transfers for operations.

Peer/Median Comparisons

It is important to note that UH is unique in that it is a system of university campuses, community colleges, and educational centers. As such, it is challenging to compare UH against peer universities and university systems based on UH's specific characteristics. Moody's publishes a median ratios report for public universities analyzing various financial metrics relevant to the sector, some of which were discussed in the affordability metrics section.

DEBT AND OPERATING METRICS (2022)	UH*	MOODY'S UNIVERSITY MEDIANS			
Rating Level	**Aa3**	**Aa1**	**Aa2**	**Aa3**	**A1**
Capital Ratios					
Spendable Cash & Investments to Total Debt (x)	**2.5**	2.6	1.8	1.5	1.7
Total Cash & Investments to Total Debt (x)	**3.2**	3.5	2.3	2.2	2.0
Total Debt to Operating Revenue (x)	**0.3**	0.4	0.7	0.5	0.5
Debt Service to Operating Expenses (%)	**2.1**	2.9	4.3	4.4	4.4
Balance Sheet Ratios					
Spendable Cash & Investments to Operating Expenses (x)	**2.1**	1.1	0.8	0.8	0.9
Operating Ratios					
Moody's Operating Margin (%)	**6.9**	6.4	5.4	6.2	4.4
Annual Debt Service Coverage (x)	**8.1**	5.1	3.4	3.9	3.3

*US Public Universities 2022 Moody's Medians; *UH data from Moody's Financial Ratios Analysis*

In the adjoining tables, in addition to comparing UH's metrics to FY2022 sector medians, we analyze UH against specific credits rated in the 'Aa' category like UH. These peers include the University of Utah, Texas Tech University System, University of Colorado, University of Kentucky, University of Arizona and University of New Mexico.

DEBT AND OPERATING METRICS (FY 2023)	University of Hawaii	University of Utah	University of Colorado	Texas Tech Univ. System	University of Kentucky	University of Arizona	University of New Mexico
Rating	**Aa3**	**Aa1**	**Aa1**	**Aa2**	**Aa2**	**Aa2**	**Aa3**
Capital Ratios							
Spendable Cash & Investments to Total Debt (x)	**2.5**	1.7	3.1	1.2	2.6	0.7	1.7
Total Cash & Investments-to-Total Debt (x)	**3.2**	2.0	3.6	1.4	3.1	1.4	2.3
Total Debt to Operating Revenue (x)	**0.3**	0.3	0.3	0.7	0.2	0.6	0.2
Debt Service to OpEx* (%)	**2.1**	1.8	2.8	7.1	2.2	5	1.8
Balance Sheet Ratios							
Spendable Cash & Investments to OpEx* (x)	**2.1**	1.8	2.8	7.1	2.2	5	1.8
Operating Ratios							
Moody's Operating Cashflow Margin (%)	**6.9**	4.1	3.4	4.7	11.6	-1.3	2.3
Annual Debt Service Coverage (x)	**8.1**	5.3	3.5	2.5	8.6	1.7	4.1

Moody's Financial Ratios Analysis   **Operating Expenditure*

UH's debt service coverage levels, have improved substantially over the past two years, and now rank near the top of their peer list at 8.1x. Its operating margin, at 6.9%, is slightly above 6.2% sector median for 'Aa3' rated universities. This is indicative of UH's improving operating performance, despite continued significant reliance on State support. Some of its capital ratios which compare liquidity and spendable resources against debt burden are better than 'Aa2' sector medians and similarly rated peers and line up closely with

‘Aa1’ medians. UH’s debt service expenditure is low, accounting for about 2.1% of operations and compares favorably with AA-category medians and peers.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

UH’s revenues and coverage levels are adequate, stabilized by State support received for operations and capital purposes. Additionally, net tuition revenue growth is projected to be limited given the desire to maintain affordable tuition rates for students. State support was constrained at the onset of the COVID-19 pandemic but in light of the State’s strong revenue performance in the past couple of years, UH does not anticipate reduction in appropriations arising from fiscal pressure. As reflected in the affordability metrics, projected revenues are sufficient to cover existing and additional debt service from future debt over the projection period.

On a broad level, UH’s debt affordability is constrained by a lack of strong enrollment growth, budgetary fixed costs including labor and post-retirement benefits, and its reliance on State support for operations and capital needs. Pension and OPEB contribution make up a significant portion of UH’s expenses. As the funding requirements for these liabilities ramp up, UH should preserve budgetary flexibility and financial capacity in consideration of any future debt issuances. While state support for university systems across the nation is not atypical, it will be crucial for UH to secure necessary appropriations to fulfill debt obligations, address the capital backlog, and maintain operations in the long-term. Increased fixed costs (pension and OPEB) pressure UH’s budgetary requirements and continued reliance on State support limit progress towards department self-sustainability.

As UH addresses its capital plan needs, it may decide to seek solutions and alternative funding strategies (similar to the P3 housing project) which minimize reliance on UH operating revenues. A strategic focus on securing funding or partnerships with stakeholders has the potential to gradually improve financial metrics, credit quality and ultimately debt affordability.

VII. Hawaiian Home Lands

The Department of Hawaiian Home Lands (DHHL) is responsible for the management and disposition of the 'Hawaiian Home Lands' which are lands set aside for rehabilitation of native Hawaiians by the Hawaiian Home Commission Act (HHCA). DHHL's primary mission is to provide qualified native Hawaiians the opportunity to own homes on the trust's lands. DHHL performs various functions including administering the homestead lease program, providing direct loans to lessees for construction and repairs, undertaking infrastructure development for the homestead lands, administering other general leases, licenses and permits and managing the overall land inventory system. Major DHHL revenue sources include general lease revenues, and income derived from DHHL's loans made to native Hawaiian lessees.

DHHL primarily issues revenue bonds and COPs. The revenue bonds are secured by a gross pledge on general lease and license and permit fee revenues with debt service having priority over operating costs. DHHL has the flexibility to revise rates, rentals, fees and charges to ensure sufficiency of revenues for payment of debt service on its revenue bonds. DHHL's COPs are payable from funds appropriated by the State for DHHL.

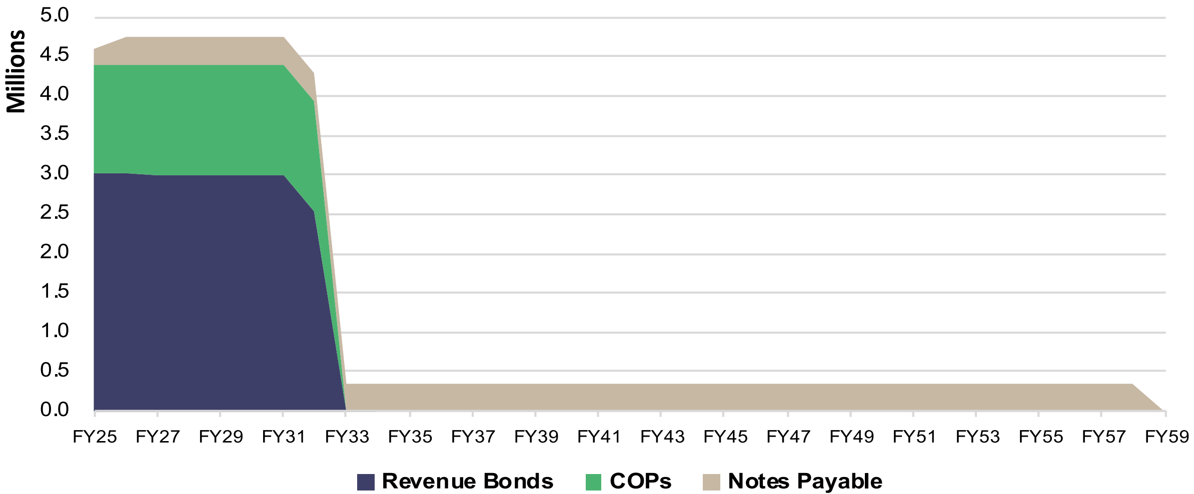
A. Debt Profile

DHHL currently has one revenue bond series outstanding for a total par of $19.3 million. DHHL also has COPs outstanding in the amount of $8.3 million. In December 2022 DHHL entered into a note payable in the amount of $7.5 million with U.S. Department of Agriculture (USDA) in connection with capital improvements to water systems. For the purpose of this Study, only the "available lands" (as defined in Section 207(a) of the Hawaiian Homes Commission Act, 1920) related debt is evaluated.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Par Call Date	Callable Par
			Revenue Bonds				
Series 2017	Tax-Exempt	30,940,000	8/25/17	4/1/32	19,280,000	4/1/2027	12,755,000
			COPs				
Series 2017A	Tax-Exempt	15,125,000	8/25/17	11/1/31	8,250,000	11/1/2027	5,065,000
			Notes Payable				
Note Payable 2022	Tax-Exempt	7,455,000	12/28/22	12/28/57	7,455,000	N/A	N/A
Total	-	-	-	-	**34,985,000**	-	**17,820,000**

B. Debt Service Chart

DHHL's debt service structure consists of level annual debt service payments on all debt including the revenue bonds, COPs and notes payable. Aggregate annual debt service is approximately $4.7 million through FY2032 and only about $347,000 thereafter through final maturity in FY2058. All outstanding revenue bonds and COPs will be repaid within the next ten years.



C. Credit Ratings

DHHL's revenue bonds and COPs are rated 'Aa3'.

Department of Hawaiian Home Lands Credit Ratings			
	Moody's	**S&P**	**Fitch**
Revenue Bonds	Aa3 Stable	NR	NR
Certificates of Participation	Aa3 Stable	NR	NR

The Moody's rating on DHHL's debt was upgraded by one notch in November 2024, back in line with its pre-COVID rating level, following an affirmation of the State's 'Aa2' GO rating in advance of their 2024 GO Bond issuance. Moody's maintained a stable outlook for both the GO and DHHL revenue bond ratings. For a detailed discussion on the State's GO rating please refer to Section II of this report for B&F.

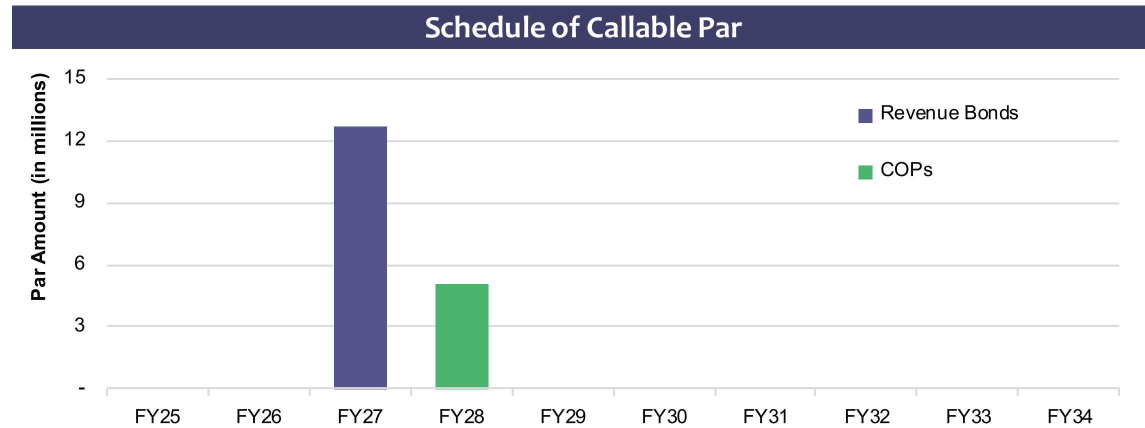
The rating on the revenue bonds is dependent on the State's economy and therefore the State's rating and is one notch below the State's current 'Aa2' GO rating. The one notch upgrade reflects the DHHL's consistent practice of paying the majority of annual debt service from monies received from Office of Hawaiian Affairs (OHA) and the expectation of long-lasting partnership between DHHL and OHA. The availability of OHA revenue offsets the inherent volatility and lessee concentration of the real estate derived revenues pledged to outstanding bonds. The revenue bonds' other credit strengths include DHHL's and the State's commitment to develop homesteads for native Hawaiians, increasing income from non-homestead trust lands, adequate debt service coverage supported by availability of OHA payments and no future debt plans. Credit challenges include concentration of revenues from top lessees and non-payment risk from lessees.

The COP rating is driven by the State's GO rating and is one notch below the State's 'Aa2' reflecting the limited, subject-to-appropriation nature of a lease security; the essentiality of the leased asset; and the

State's obligation to fund administrative and operating costs of the department, including lease payments, from its general fund. As such the strengths and weaknesses for the credit are also driven by the State's credit characteristics.

D. Schedule of Callable Bonds

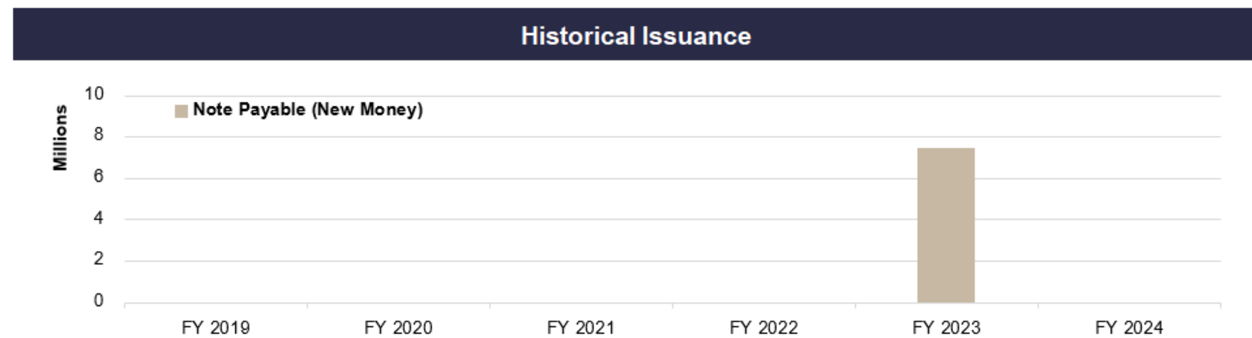
Both the revenue bonds and COPs have a 10-year call option. Approximately $12.8 million of the revenue bonds outstanding and $5.0 million of the COPs outstanding are callable in April and November of 2027, respectively. There is no call option on the note payable obligation.



E. Multi-Year Program Anticipated/Intended Debt Issuance

Existing Debt

DHHL last issued a small amount debt in FY2023 in the form of a note payable.



Anticipated Debt

DHHL may enter into another small USDA loan in the near future, however the exact amount and timing is not determined at this time.

Authorized but Unissued Debt

DHHL does not have any unissued bond authorization remaining.

F. Measuring Debt Burden

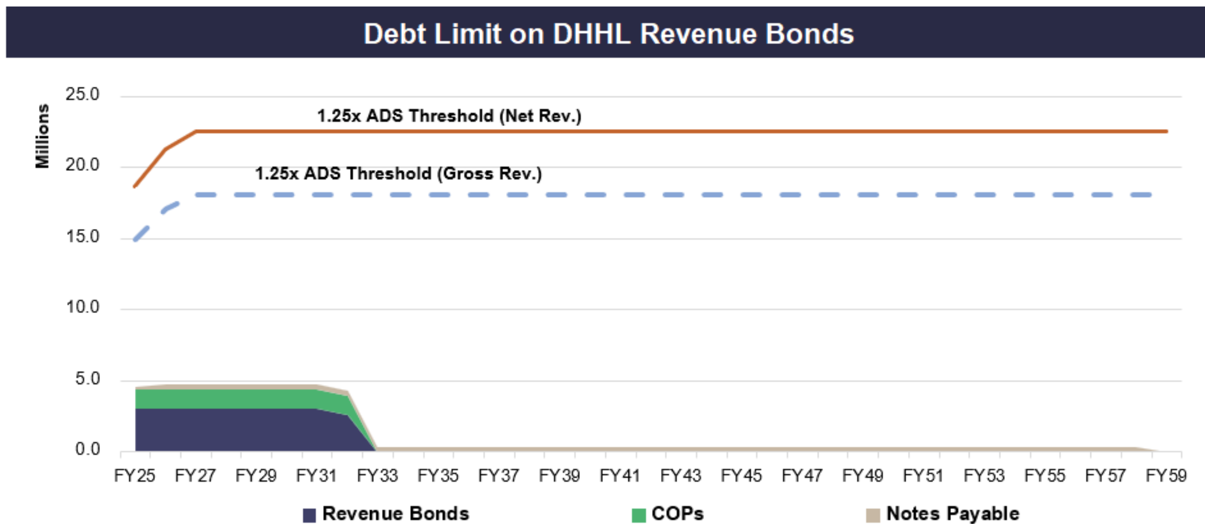
Last Full Fiscal Year and Projected (six-years) Metrics

AFFORDABILITY METRICS	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	4.3%	4.3%	4.4%	4.4%	4.4%	4.4%	4.4%
All annual obligations to annual revenues	8.2%	8.2%	8.4%	8.4%	8.4%	8.4%	8.4%
Annual debt service to annual appropriations	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
All annual obligations to annual appropriations	6.0%	6.0%	6.1%	6.1%	6.1%	6.1%	6.1%
Gross Debt Service Coverage (Revenue Bonds)	7.74x	8.84x	9.36x	9.37x	9.36x	9.36x	9.37x
Net Debt Service Coverage (Revenue Bonds)	6.21x	7.09x	7.50x	7.51x	7.51x	7.51x	7.51x
Net Debt Service Coverage (All debt)	4.05x	4.63x	4.75x	4.76x	4.76x	4.76x	4.76x
Liquidity – days' cash on hand	1,334 days	1,334 days	1,333 days	1,333 days	1,333 days	1,333 days	1,333 days

Relevant Affordability Metrics

1. Indenture Limitations: DHHL's revenue bonds are subject to a rate covenant to maintain rates, rentals, fees, and charges of at least 1.25 times aggregate annual debt service on revenue bonds and at least 1.0 times debt service on the notes. In addition, the indenture includes a twofold ABT test – a forward looking test requiring projected revenues for the next six years to provide a coverage of at least 1.25 times on projected debt service including debt service on the proposed issuance, and a historical test requiring revenues in the most recent fiscal to provide coverage of at least 1.25 times on the maximum aggregate debt service, including the debt service on the proposed issuance. The COPs are lease obligations payable from appropriations and such structures typically do not have debt limitations in the indenture like those with revenue bonds. The debt service on outstanding revenue bonds is significantly lower than the legal maximum allowable debt service while maintaining 1.25 times coverage (orange line in the chart). The legal requirements are based on gross revenues pledged in the indenture (instead of net revenues after operating expenditures). However, the rate covenants are

met even on a net revenue basis after incorporating debt service on the COPs and notes payable. There is capacity under these legal limits to issue additional debt, if required.



2. Annual debt service payments to annual revenues or annual debt service payments to annual appropriations: Both of these ratios give an indication of the amount of fixed costs that are built into the budget and are a measure of financial/operational flexibility. For FY2024, the estimated debt service on all outstanding debt to total DHHL revenues was 4.3%. Debt service compared to total DHHL expenditures was 2.7% in FY2024. These ratios are expected to remain stable over the projected horizon through FY2030.

3. Gross debt service coverage: Gross debt service coverage is computed based on gross pledged revenues before payment of any operating expenses. Gross coverage has been very strong historically and is projected to remain above 8.0 times.

4. Net debt service coverage: Legally, debt service is payable before operating expenses reflecting the strength of the gross revenue pledge. However, it is important to evaluate debt service coverage based on net revenues (after operating expenses) as a measure of self-sustainability and overall affordability. FY2024 coverage for the revenue bonds was 6.2 times and projected to be strong at over 7.0 times for the next six years. Net debt service coverage including all debt is projected to be over 4.0 times.

5. Liquidity – days' cash on hand: The unrestricted cash balance accessible to DHHL is very strong at approximately 1,334 days of cash in FY2024.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

As reflected in the affordability metrics above, DHHL is projected to generate more than sufficient revenues to pay debt service on all of its obligations. Furthermore, its finances are buoyed by its exceptionally strong cash balances. Current debt service is well under the legal limits dictated by the indenture, with capacity for more debt should DHHL require it. From a broader affordability perspective, net debt service coverage is very strong on existing debt. However, the high coverage levels help balance the risk from the narrow revenue stream and are key to maintaining high coverage. At this time, DHHL has no significant borrowing

plans, other than a small loan from USDA over the next six years, and affordability metrics are expected to remain stable.

VIII. Hawaii Housing Finance and Development Corporation

The Hawaii Housing Finance and Development Corporation (HHFDC) was established with the purpose of amalgamating other housing corporations, authorities and trust funds of the State under one corporation. HHFDC's mission is to advance housing opportunities for the residents of Hawaii.

HHFDC manages two financing programs: Single family mortgage purchase revenue bonds (SF Program), and the multifamily housing revenue bonds. The multifamily housing revenue bonds are conduit issuances and not direct obligations of HHFDC. As a result, detailed affordability discussion on the multifamily housing revenue bonds program is excluded from this Study. The affordability discussion is limited to the SF Program.

SF Program

The SF Program assists eligible borrowers to finance the purchase of single-family homes. HHFDC uses proceeds of these bonds to purchase mortgage loans. The SF Program revenue bonds are pledged by payments on mortgage-backed pass-through securities guaranteed by Ginnie Mae and Fannie Mae.

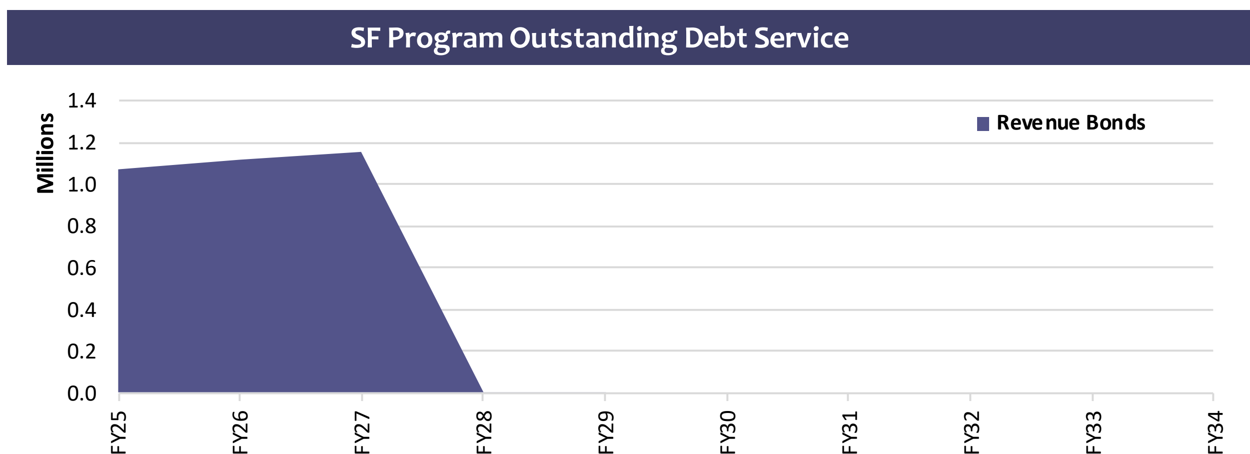
A. Debt Profile

The SF Program has a single series of bonds outstanding for a total outstanding par value of $3.1 million. In prior years, HHFDC has used excess revenues to redeem debt sooner than the scheduled maturity date and continues to do so resulting in very little debt outstanding.

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Call Date	Callable Par
Series 2013A	Taxable	26,309,825	3/28/13	7/1/27	3,075,227	Current	3,075,227
Total	-	-	-	-	**3,075,227**	-	**3,075,227**

B. Debt Service Chart

For the SF Program, annual debt service is about $1.1 million through FY2027. All of this debt is expected to be repaid in the next three years.



C. Credit Ratings

The SF Program carries the ratings and outlook of the U.S. government as shown in the table below. Credit strengths include high level of security provided by pledged indenture assets consisting of mortgage-backed pass-through securities guaranteed by Ginnie Mae and Fannie Mae, sound legal structure including a debt service reserve fund and a mortgage loan reserve fund and fixed-rate debt portfolio.

Hawaii Housing Finance and Development Corporation SF Program Credit Ratings			
	Moody's	**S&P**	**Fitch**
Revenue Bonds	Aaa Stable	AA+ Stable	AAA Stable

D. Schedule of Callable Bonds

All of the bonds currently outstanding can be called and repaid anytime. As mentioned earlier, HHFDC uses excess revenues to repay debt in advance of scheduled maturity date. Very little debt remains outstanding and is expected to be fully repaid within the next three years.

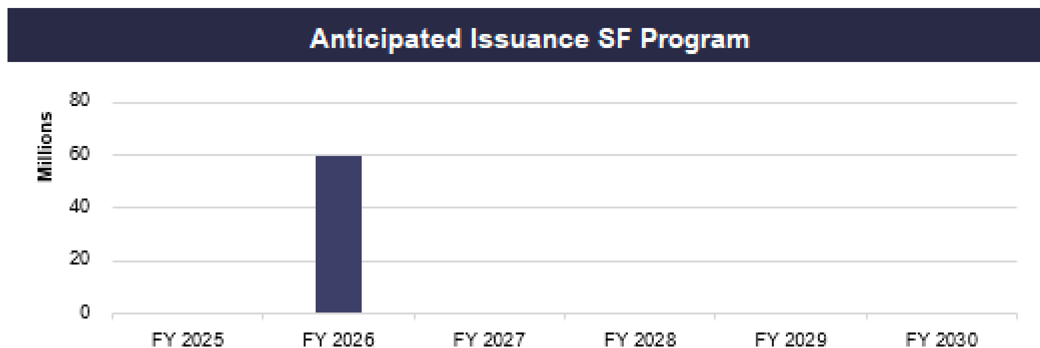
E. Multi-Year Program Anticipated/Intended Debt Issuance

Existing Debt

No new money debt has been issued under the SF Program in the last five years; however, HHFDC has issued refunding bonds on occasion. The last refunding series was issued in FY2013.

Anticipated Debt

HHFDC considers issuances of revenue bonds under the SF program to mitigate homeownership constraints due to adverse local housing and mortgage market conditions. With interest rates expected to decline slowly over the next few years, and the barriers for first-time homebuyers persisting, HHFDC anticipates issuing $60 million in revenue bonds during FY2026. This is the only anticipated debt issuance for HHFDC over the next five years at this time.



Authorized but Unissued Debt

HHFDC has $326.95 million in revenue bonds authorized but unissued under the SF Program.

F. Measuring Debt Burden

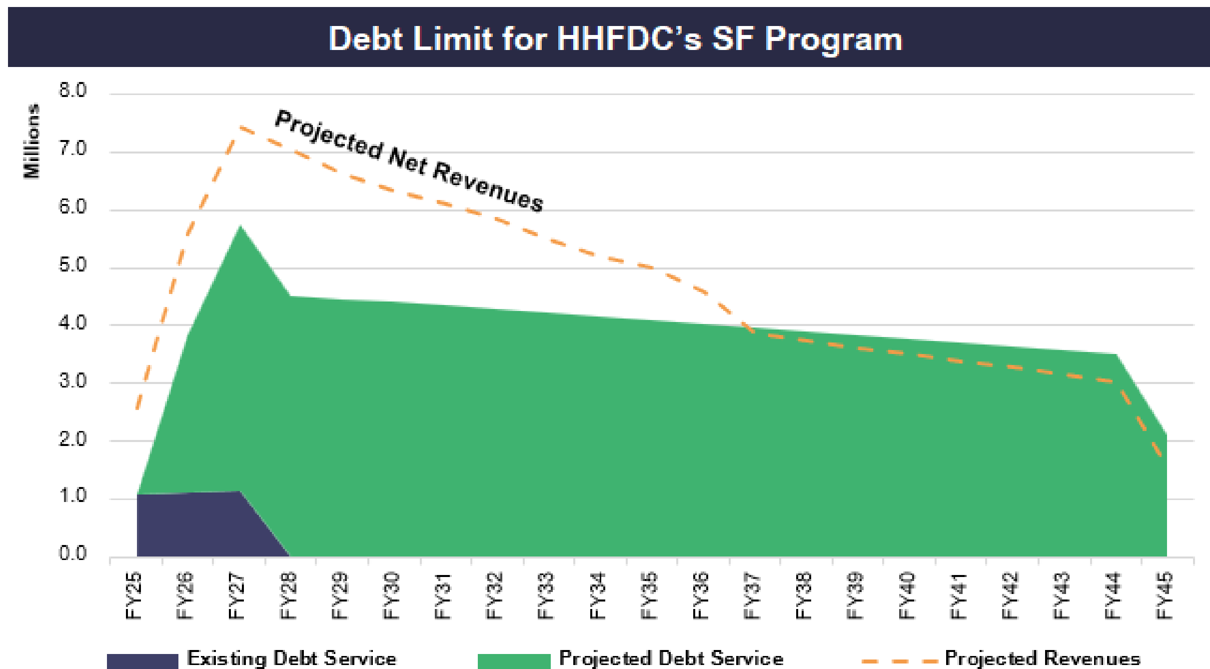
Last Full Fiscal Year and Projected (six-years) Metrics: SF Program

AFFORDABILITY METRICS	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Annual debt service to annual revenues	16.9%	38.1%	65.3%	74.4%	61.7%	64.6%	66.3%
Annual debt service to annual appropriations	66.7%	81.0%	93.6%	95.5%	94.1%	93.8%	93.5%
Debt service coverage (Net)	5.41x	2.39x	1.46x	1.30x	1.56x	1.48x	1.44x

Note: Projected metrics assume issuance of $60 million in FY2026. Debt service estimates provided by HHFDC.

Relevant Affordability Metrics

1. Indenture Limitations: There are no legal limitations in the bond indenture for SF Program revenue bonds. However, if market conditions are conducive to additional borrowings, HHFDC would need to structure the program such that sufficient revenues are available to pay debt service. The debt is secured by mortagage-backed pass-through income and structured to generate sufficient net revenues to pay for debt service without significant excess. For that reason estimated debt service (green area in the chart) and projected revenues (orange line in the chart) track pretty closely in the early years. Any excess when available is used to pay off remaining debt in advance of the *stated* maturity. For that reason projected net revenues do not line up with projected debt service in the final few years. The assumption is that the excess revenues collected in prior years will be utilized to prepay debt. Therefore, the actual debt service requirement in the later years will be lower than the *stated* debt service shown in the chart and will have much better alignment with projected net revenues. Consideration of anticipated debt is contingent on local housing and mortgage market conditions and subject to change both in terms of timing and amount.



2. Annual debt service payments to annual revenues and annual debt service payments to annual appropriations: These ratios are used to measure the fixed costs in a budget to evaluate the degree of flexibility in the budget. These metrics are more meaningful when evaluated for a department as a whole. Usually at a program level, a majority of the revenues are dedicated towards debt service, with little being assigned to ongoing costs and administrative expenses. For this reason, the high debt service ratios (debt service of about 38% to 100% of the program budget) for the SF Program are not atypical.
3. Net debt service coverage: The net debt service coverage on currently outstanding SF Program revenue bonds is expected to be adequate at or above 2.0 times debt service in FY2025. When factoring in anticipated revenue bonds, the projected coverage remains above 1.0 times over the Projection Period, based on conservatively forecasted net revenues.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

For the SF Program, the projected revenues are sufficient to pay debt service on existing debt. A single series remains outstanding and is expected to be repaid soon. During the projection period, HHFDC may issue a modest amount of new money debt under the SF Program. However, there are no affordability concerns with regards to such additional debt. The outstanding as well as proposed bonds are secured by payments on mortgage-backed pass-through securities guaranteed by Ginnie Mae and Fannie Mae. Therefore, in the event of non-payment by borrowers, the program will continue to receive its principal and interest payments from the Ginnie Mae insurance or Fannie Mae guaranty. Despite these guarantees, when new debt is being planned, HHFDC considers interest rates in the bond and mortgage markets to determine if a bond issue is financially feasible. HHFDC also assesses the local housing and mortgage markets to ascertain adequate demand for a proposed mortgage lending program. HHFDC's current debt plans under the SF program are very modest. HHFDC is exploring expansion of the SF programs to address market constraints on homeownership.

IX. Department of Business, Economic Development, and Tourism

The Department of Business, Economic Development, and Tourism (DBEDT) is Hawaii's resource center for economic and statistical data, business development opportunities, energy and conservation information, and foreign trade advantages. DBEDT's mission is to achieve a Hawaii economy that embraces innovation and is globally competitive, dynamic, and productive, providing opportunities for all Hawaii's citizens. Through its attached agencies, DBEDT fosters planned community development, creates affordable workforce housing units in high-quality living environments, and promotes innovation sector job growth.

The State acting through DBEDT issued Green Energy Market Securitization (GEMS) Bonds to fund the Hawaii Green Infrastructure Loan Program which is administered by Hawaii Green Infrastructure Authority (HGIA). The Loan Program finances the purchase or installation of green infrastructure equipment for clean energy technology, energy use reduction, demand side management infrastructure among other related purposes as authorized by the public utilities commission highlighted in the statute (HRS §39A, HRS §196 Part IV and HRS §269 Part X).

A. Debt Profile

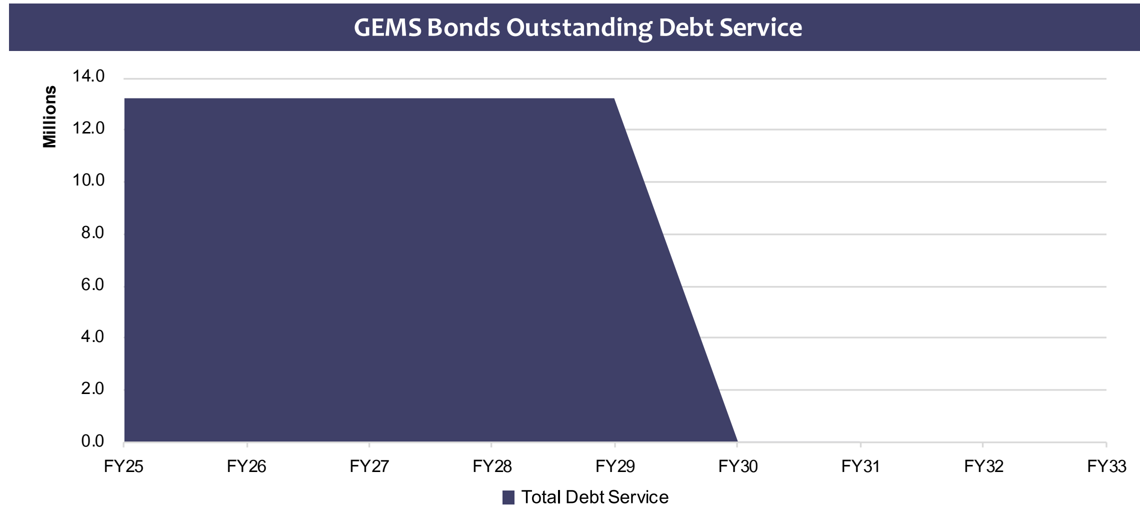
The GEMS Bonds 2014 Series A were issued in two tranches totaling $150 million in paramount; the A-1 tranche has been retired and $92.4 million is currently outstanding under the A-2 tranche. The HGIA was approved for a $20.0 million loan with USDA. However, the Solar for All program under the Greenhouse Gas Reduction Fund from the Inflation Reduction Act awarded HGIA $64.45 million to recapitalize its loan fund and as such, to date, DBEDT has not drawn on the USDA loan.

Debt	Issue Size	Delivery Date	Final Maturity	Outstanding Par
GEMS Series 2014 A-2 Bonds	100,000,000	11/1/14	1/1/29	54,897,769
Total				**54,897,769**

Debt	Approved Amount	Delivery Date	Final Maturity	Outstanding Amount
2022 USDA Loan	20,000,000	10/1/22	10/1/42	-
Total				**-**

B. Debt Service Chart

GEMS Bond annual debt service is approximately $13.2 million through FY2029.



C. Credit Ratings

The GEMS Bonds carry the highest credit ratings.

Department of Business, Economic Development & Tourism Credit Ratings			
	Moody's	**S&P**	**Fitch**
Green Energy Market Securitization Bonds	Aaa Stable	AAA Stable	AAA Stable

Credit strengths include the State's legislative non-impairment pledge, the size, stability and diversity of the service area, and the statutory true-up mechanism which adjusts the charges to ensure sufficient collections for payment of debt service.

D. Schedule of Callable Bonds

The GEMS Bonds are not subject to optional redemption prior to maturity. As such, there are no refunding opportunities associated with the GEMS Bonds.

E. Multi-Year Program Anticipated/Intended Debt Issuance

Existing Debt

DBEDT issued $150 million of GEMS Bonds 2014 Series A as reflected in the debt profile above.

Anticipated Debt

DBEDT does not have any plans for additional Green Infrastructure debt over the next six years.

Authorized but Unissued Debt

DBEDT does not have any authorized but unissued debt.

F. Measuring Debt Burden

The GEMS Bond structure is unique in the strength of the security and pledge to bondholders. Per the Certificate of the Director of the DBEDT, the GEMS bonds are supported by green infrastructure property and DBEDT's irrevocable right to impose, collect, and adjust non-by-passable securitization charges from all existing and future electric service customers of Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited. A statutorily uncapped true-up mechanism mandatorily adjusts the securitization charges to ensure sufficient collections for timely payments on the bonds.

The GEMS Bond's unique structure ensures that sufficient revenues will be generated, along with available funds, to cover all operating expenses and debt service payments. As such current year and projected years' coverage (revenues plus available funds) is greater than or equal to 1.00 times debt service in every year.

G. Discussion on Debt Affordability, Potential Concerns and Recommendations

The GEMS Bond true-up mechanism adjusts the securitization charges to ensure sufficient collections for timely payments on the bonds. With the strength of the credit and structure in place, it is clear that sufficient revenues will be available to pay existing debt service on the GEMS Bonds.

Appendix

A. Debt Service Assumptions

New Money Assumptions

Department	Credit Ratings (M/S/F)	Coupon	First Principal	Final Maturity
B&F	Aa2/AA+/AA	6.75%	year 1	20
DOT-Airports (GARB)	A1 (P) /AA-/AA-	6.75%	year 1	30
DOT-Airports (CFC)	A2/A+/A+		n/a - no bonds anticipated	
DOT-Harbors*	Aa3/--/AA-	3.00%	year 1	50
DOT-Highways	Aa2/AA+/AA	6.75%	year 1	20
DOT-Highways (RGO)	Aa2/AA+/AA	6.75%	year 1	20
University of Hawaii	Aa3/-/AA	6.50%	year 1	30
DHHL (Revenue Bonds)	Aa3/--/--		n/a - no bonds anticipated	
DHHL (COPs)	Aa3/--/--		n/a - no bonds anticipated	
HHFDC - Single Family	Aaa/AA+/AAA		Debt service and assumptions provided by HHFDC	
DBEDT (GEMS)	Aaa/AAA/AAA		n/a - no bonds anticipated	

(P) indicates positive outlook

* Rural TIFIA Loan

B. General Fund Debt Outstanding by Series

Series Name	Tax Status	Issue Size	Delivery Date	Final Maturity	Outstanding Par	Next Call Date	Callable Par
				GO Bonds			
Series DX	BAB	500,000,000	2/18/10	2/1/30	232,835,000	MWC	-
Series EG	Taxable	26,000,000	12/4/12	11/1/32	14,370,000	11/1/2022	17,460,000
Series EM	Taxable	25,000,000	11/21/13	8/1/33	15,930,000	8/1/2023	17,355,000
Series EN	Taxable	29,795,000	11/21/13	8/1/33	16,740,000	8/1/2023	18,605,000
Series EO	Tax-Exempt	575,000,000	11/25/14	8/1/34	347,320,000	8/1/2024	347,320,000
Series EQ	Taxable	25,000,000	11/25/14	8/1/34	17,125,000	MWC	-
Series ET	Tax-Exempt	190,000,000	10/29/15	10/1/35	81,360,000	10/1/2025	71,665,000
Series EU	Tax-Exempt	35,000,000	10/29/15	10/1/35	23,425,000	10/1/2025	21,600,000
Series EX	Tax-Exempt	25,035,000	10/29/15	10/1/25	3,905,000	NC	-
Series EY	Tax-Exempt	212,120,000	10/29/15	10/1/27	89,625,000	10/1/2025	61,230,000
Series EZ	Tax-Exempt	215,590,000	10/29/15	10/1/28	47,180,000	10/1/2025	24,180,000
Series FA	Taxable	25,000,000	10/29/15	10/1/35	16,980,000	10/1/2025	15,695,000
Series FB	Tax-Exempt	500,000,000	4/14/16	4/1/36	374,325,000	4/1/2026	323,515,000
Series FE	Tax-Exempt	219,690,000	4/14/16	10/1/28	101,135,000	10/1/2026	53,095,000
Series FF	Taxable	119,730,000	4/14/16	10/1/28	51,290,000	10/1/2026	26,345,000
Series FG	Tax-Exempt	375,000,000	10/13/16	10/1/36	283,660,000	10/1/2026	246,845,000
Series FH	Tax-Exempt	379,295,000	10/13/16	10/1/31	264,410,000	10/1/2026	197,840,000
Series FI	Tax-Exempt	2,710,000	10/13/16	10/1/33	2,015,000	10/1/2026	1,635,000
Series FK	Tax-Exempt	575,000,000	5/24/17	5/1/37	457,860,000	5/1/2027	374,315,000
Series FN	Tax-Exempt	229,355,000	5/24/17	10/1/31	160,105,000	10/1/2027	98,275,000
Series FP	Taxable	7,500,000	5/24/17	5/1/37	5,810,000	5/1/2027	4,685,000
Series FS	Tax-Exempt	275,363,064	12/21/17	10/1/33	214,067,832	10/1/2028	125,201,985
Series FT	Tax-Exempt	631,215,000	2/14/18	1/1/38	553,435,000	1/1/2028	430,720,000
Series FW	Tax-Exempt	431,665,000	2/21/19	1/1/39	396,855,000	1/1/2029	271,915,000
Series FZ	Taxable	995,000,000	8/12/20	8/1/40	995,000,000	8/1/2030	653,280,000
Series GB	Taxable	600,000,000	10/29/20	10/1/25	150,000,000	NC	-
Series GC	Taxable	400,000,000	10/29/20	10/1/40	400,000,000	10/1/2030	264,610,000
Series GD	Taxable	700,000,000	10/12/21	10/1/41	611,100,000	10/1/2031	387,380,000
Series GE	Taxable	200,000,000	10/12/21	10/1/41	174,225,000	10/1/2031	110,400,000
Series GJ	Taxable	629,705,000	10/12/21	8/1/33	629,705,000	MWC	-
Series GK	Taxable	740,000,000	11/2/22	10/1/41	692,025,000	10/1/2032	445,695,000
Series GM	Taxable	750,000,000	12/19/23	10/1/42	679,935,000	10/1/2033	415,795,000
Sub-Total	**-**	**10,644,768,064**	**-**	**-**	**8,103,752,832**	**-**	**5,026,656,985**
				Capital Lease			
DAGS Facilities I	-	12,377,000	9/3/09	6/1/26	3,023,725	NA	NA
DAGS Facilities II	-	25,512,000	4/14/11	11/1/30	14,340,444	NA	NA
Public Safety Div.	-	18,835,000	8/1/13	9/20/33	13,206,000	NA	NA
Sub-Total	**-**	**56,724,000**	**-**	**-**	**30,570,169**	**-**	**-**
Grand Total	**-**	**10,701,492,064**	**-**	**-**	**8,134,323,001**	**-**	**5,026,656,985**

Glossary

Advance Refunding: When bonds are refunded more than 90 days prior to their express call date, the refunding is said to be an advance refunding. It should be noted that not all callable bonds are eligible for advance refunding. Only bonds, the proceeds of which are applied to projects, or bonds issued for current refundings may be advance refunded. Tax-exempt advance refundings were eliminated in December 2017.

Build America Bonds or BABs: BABs are taxable municipal securities issued through December 31, 2010, under the American Recovery and Reinvestment Act of 2009 (ARRA). BABs may be direct pay subsidy bonds, wherein the issuer would receive a direct payment from federal government equal to about 35% of the interest costs or they may be tax credit bonds wherein the issuer may offer a tax credit to the buyer.

Current Refunding: When bonds are refunded no sooner than 90 days before their call date, the refunding is said to be a current refunding.

Forward Refunding: When bonds are priced to refund bonds more than 90 days prior to their express call date, with delivery within 90 days of the call date, the refunding is said to be a forward refunding.

Make Whole Call (MWC): A type of call option that is designed to protect the investor from losses as a result of the earlier call. In order to exercise the call, the issuer must make a lump sum payment (referred to as a "make-whole-call premium") derived from a formula based on the net present value of future interest payments that will not be paid as a result of the call. Because the cost can often be significant, such a call option is rarely exercised.

Net Revenues: Net Revenues are the total operating revenues net of any operations and maintenance cost for the department, program, project or undertaking as the case may be.

Optional Call or Redemption: The terms of the bond contract, sometimes referred to as "call or prepayment provisions," giving the issuer the right to redeem or call, all or a portion of an outstanding issue of bonds prior to its stated date of maturity. Optional redemptions often can be exercised only on or after a specified date (referred to as the "call date"), typically for a municipal security beginning approximately ten years after the issue date.

Present Value Savings: It is the difference, expressed in current dollars, between the debt service on a refunded bond (or maturity) and debt service on the refunding bond (or maturity). It is calculated by discounting the difference in the future debt service payments at an appropriate discount rate.

Reimbursable General Obligation Bonds (RGO Bonds): Bonds issued by B&F on behalf of other revenue Departments, the debt service for which is allocated to the benefiting Department and is reimbursed by said Department.