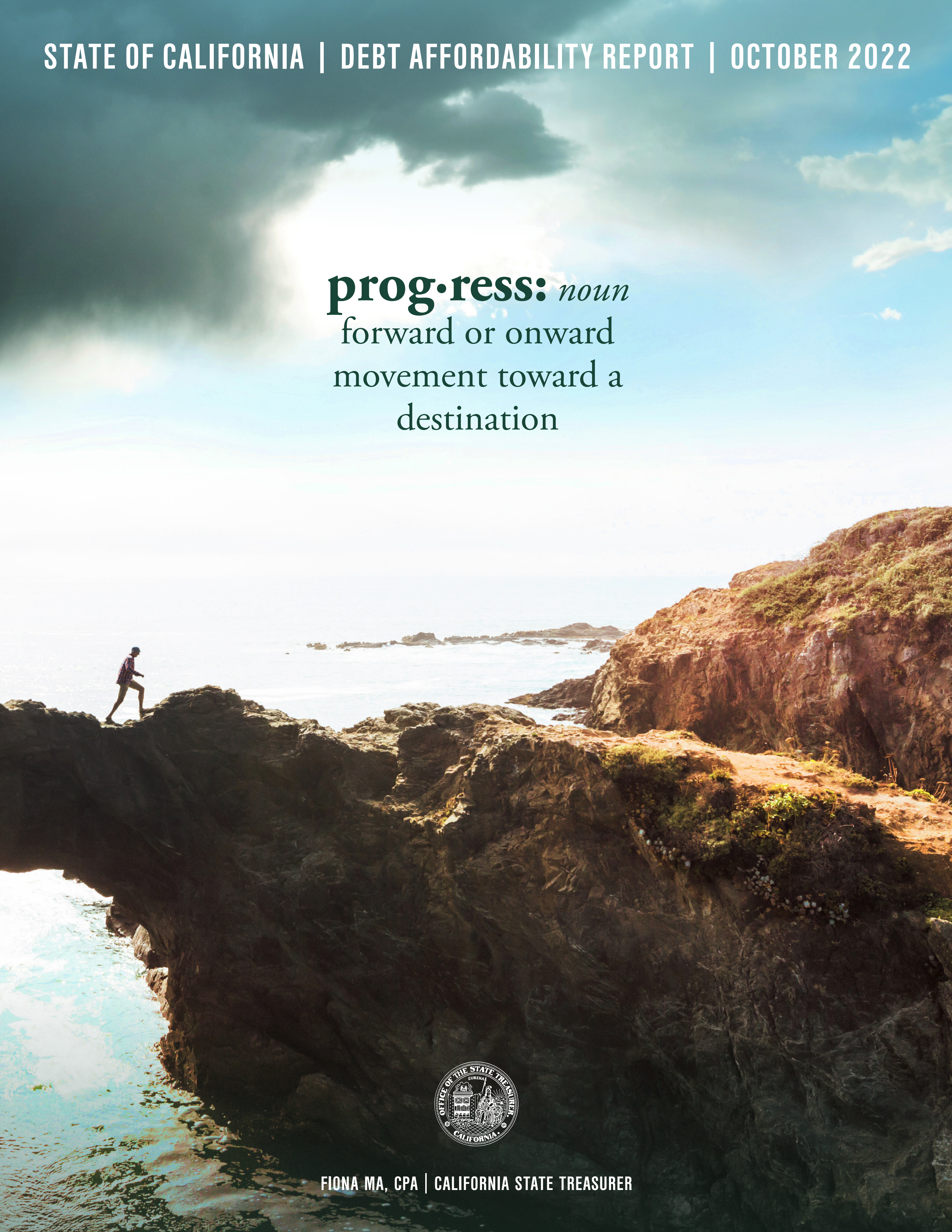
STATE OF CALIFORNIA | DEBT AFFORDABILITY REPORT | OCTOBER 2022

prog·ress: *noun*

forward or onward movement toward a destination



FIONA MA, CPA | CALIFORNIA STATE TREASURER

Fiona Ma, CPA
Treasurer
State of California

October 1, 2022

Dear friends,

The past year has been a year of transitions, including some very significant developments in the interest rate environment. These transitions combined to produce significant headwinds for the financial markets. These included federal monetary policy, U.S. domestic spending, inflation, employment trends, and COVID-19 pandemic management. As you may have guessed, this includes our state.

Until early 2022, persistent and historically low interest rates resulted in the ability to borrow long-term at extremely attractive interest rates. This reduced the expense of financing major projects, projects that provided a public benefit to 40 million Californians. Lower interest rates also presented opportunities to save the public considerable sums in interest cost by refinancing older debt issues with higher interest rates. The interest rate environment is rapidly changing.

These fiscal and financial matters and geopolitical strife were primary drivers of increasing inflation as 2022 began and the Federal Reserve responded by aggressively raising interest rates. The effects of rising rates will test California's financial resilience. Thankfully, through its improved financial performance over the last several years—and across several fronts—California is well positioned to meet these challenges.

In November 2014, voters approved Proposition 2, which institutionalized stronger financial management by creating a more meaningful "rainy day fund" and establishing a protocol for its use. Along with the passage of Proposition 2, many aspects of the state's credit profile have also improved, including an increase in its budgetary reserves, a reduction in the use of budgetary deferrals, and a reduced dependence on cash flow borrowing.

The state has consistently used surplus revenues primarily for one-time, non-recurring expenditures to maintain structurally balanced budgets over the long-term. For example, the 2022-23 annual Budget Act, passed in June, earmarked 93% of surplus revenues to one-time expenditures. The state's total budgetary reserves increased from $3.06 billion at the end of 2014-15 to $46.68 billion by the end of 2021-22, a 1,427% increase. These actions have well positioned California to meet the immediate future.

California has long enjoyed widespread interest in our debt offerings from both retail and institutional investors. Our experience over the past year confirms that this phenomenon is still present.

I encourage you to carefully review the data contained in this annual Debt Affordability Report (DAR). California's data is presented in ways that compare key indicators of our debt position with peer governments, in areas such as the degree to which our debt burden lays claims to our state's economic resources, and the share of the state's General Fund receipts dedicated to repayment of our debt.

In Peace and Friendship,

FIONA MA, CPA
California State Treasurer

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PREFACE

California Government Code Section 12330 requires the State Treasurer to submit an annual Debt Affordability Report (DAR) to the Governor and Legislature. The report must provide the following information:

- A listing of authorized but unissued debt the Treasurer intends to sell during the current year (2022-23) and the following year (2023-24), and the projected increase in debt service as a result of those sales.
- A description of the market for state bonds.
- An analysis of state bonds' credit ratings.
- A listing of outstanding debt supported by the General Fund and a schedule of debt service requirements for the debt.
- A listing of authorized but unissued debt that would be supported by the General Fund.
- Identification of pertinent debt ratios, such as debt service to General Fund revenues, debt to personal income, debt to estimated full value of property and debt per capita.
- A comparison of the pertinent debt ratios for the state with those of the 10 most populous states.
- The percentage of the state's outstanding general obligation (GO) bonds comprised of fixed rate bonds, variable rate bonds, bonds that have an effective fixed interest rate through a hedging contract and bonds that have an effective variable interest rate through a hedging contract.
- A description of any hedging contract, the outstanding face value, the effective date, the expiration date, the name and ratings of the counterparty, the rate or floating index paid by the state and the counterparty, and an assessment of how the contract met its objectives.

NOTES ON TERMINOLOGY

- This report frequently uses the words "bonds" and "debt" interchangeably, even when the underlying obligation securing the bonds does not constitute debt subject to limitation under California's constitution. This conforms to the municipal market convention that applies the terms "debt" and "debt service" to a wide variety of instruments, regardless of their precise legal status.
- The report references fiscal years without using the term "fiscal year" or "fiscal." For example, 2022-23 means the 2022-23 fiscal year ending June 30, 2023.

SECTION 1 MARKET FOR STATE BONDS

California is one of the largest issuers in the $4 trillion U.S. municipal bond market. Over the last five fiscal years, the state has issued an average of $7.3 billion of General Obligation (GO) bonds annually. In 2021-22, the state issued $6.6 billion of GO bonds. Of that total, $2.4 billion was sold in 2021-22 and $1.07 billion was sold in 2020-21 on a forward delivery basis but issued in September 2021 to refinance outstanding fixed rate GO bonds to produce debt service savings. In addition, $486 million converted outstanding variable rate GO bonds into fixed rate GO bonds.

The market and price for the state's bonds are affected by factors specific to the state as well as overall conditions in the financial markets. These factors include the economy, significant global events, general market interest rates, national and state personal income tax rates, the supply of and demand for municipal bonds, investor perception of the state's credit, and the performance of alternative investments, such as equities or other debt capital.

Since the last DAR was published in October 2021, the municipal bond market has been influenced, by among other things, global inflation, central bank monetary policy changes, and the conflict in Ukraine. These influences on the market combined with the lingering impacts from the COVID-19 pandemic caused market fluctuations, leading to a rise in tax-exempt interest rates; however overall interest rates remained relatively low when compared to long-term trends.

STATE-SPECIFIC FACTORS

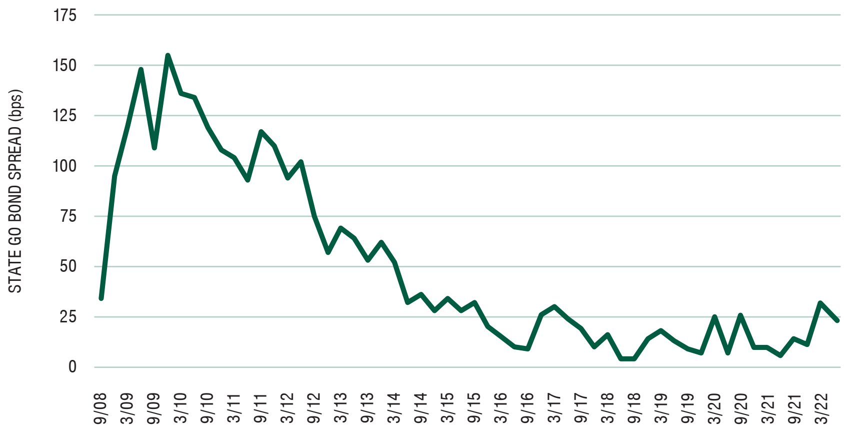
The state continues to prudently address market challenges while effectively managing its debt programs to minimize borrowing costs. The current situation, which combines the highest levels of inflation in decades, a slowing economy, and the lingering impacts of the COVID-19 global pandemic, remains challenging for the people and institutions of the state. Fortunately, California is in a strong fiscal position to help face these challenges. Over the past decade, it has instituted revenue initiatives and expenditure controls, adopted on-time, balanced budgets, implemented structural reforms, demonstrated a commitment to paying down past borrowings and deferrals, and built significant budgetary reserves. The state ended 2021-22 with budgetary reserves that totaled approximately $46.68 billion. The availability of these accumulated reserves, along with the strong economic forecast for 2022-23, has enabled the state to provide broad financial relief to California families, address the impacts of climate change, invest in public health and safety, and address a shortage in housing while maintaining fiscal discipline to guard against future risks.

Reflecting the prudent management of California's finances, the ratings on the state's GO bonds have remained steady at "AA" by Fitch Ratings (Fitch), "Aa2" by Moody's Investors Service (Moody's) and "AA-" by S&P Global Ratings (S&P). S&P has maintained a positive outlook on the state's credit rating since September 2021. The outlook applied to a credit rating generally reflects the rating agency's view that some trends are taking place in the state that could lead to a rating change.

Despite some periods of volatility, the state's credit spreads have generally traded in a relatively narrow range. Credit spreads represent the difference in yield between two bonds of similar maturity but different credit quality. Figure 1 depicts the state's interest rate spreads to the AAA GO Municipal Market Data (MMD) index, and the municipal industry's benchmark of AAA-rated state GO bonds. The state's credit spread on its 30-year bonds to the MMD benchmark has tightened from a high of more than 150 basis points at

FIGURE 1

30-YEAR CALIFORNIA MMD CREDIT SPREADS TO "AAA" MMD



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

the end of 2009 to a low of four basis points in September 2018 and was 24 basis points as of June 2022.

While the fiscal position of the state remains strong, the state faces numerous risks with potentially significant General Fund impacts. These risks include, among other things, elevated inflation, labor force and supply chain disruptions, the threat of a recession, decline in the stock market that impacts the state's revenues derived from taxing capital gains, changes to global relations or federal policies on trade, health care costs, housing constraints, the cost of public employee retirement benefits, energy risks caused by extreme events, impacts of climate change, cybersecurity risks, and further disruptions caused by the COVID-19 pandemic.

OVERALL BOND MARKET CONDITIONS

The discussion below begins with a review of the factors that impacted the larger U.S. bond market that also affected the market for the state's bonds. Initial investor concerns over inflation and potential changes in monetary policy began in 2021 as data on year-to-year price increases became widely available. In early 2022, with the invasion of Ukraine and growing inflation concerns amidst rising energy costs and supply chain disruptions the Federal Reserve began to shift its monetary policy and the anticipation of rate hikes significantly increased. From March through September 2022, the Federal Reserve increased the target range for the federal funds rate by 300 basis points.[1]

Figure 2 depicts the yields of two- and 10-year U.S. Treasuries to illustrate the trend of U.S. bond market interest rates since January 2021. In January 2022, rates begin to rise and by the end of July 2022, the yield curve became inverted with the two-year Treasury yielding higher than the 10-year Treasury.

SUPPLY AND DEMAND

While tax-exempt interest rates generally follow trends set by the overall fixed income market, specific technical and fundamental factors can cause tax-exempt interest rates to behave differently from the trends of the larger market. The major factor is supply and demand, which materially affected the pricing of municipal bonds in 2021-22.

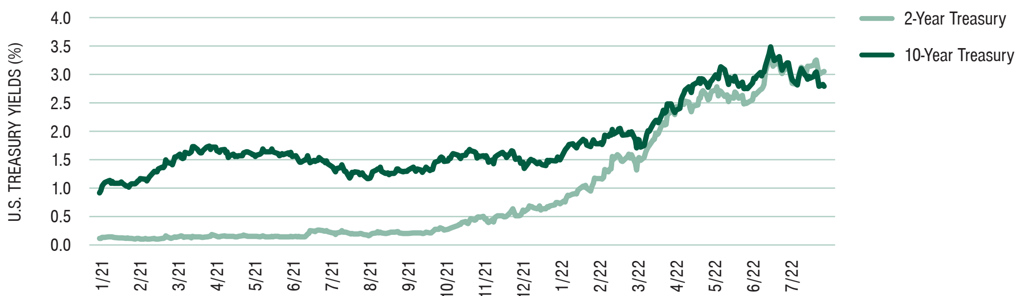
SUPPLY. Total municipal bond issuance volume for 2021-22 was 9.8% lower than in 2020-21, falling to approximately $459 billion. The reduction in activity is largely attributable to the rise in interest rates, which hurt the economics of refundings and reduced the supply of refunding bonds. Figure 3 shows the U.S. municipal bond issuance volume for each of the past five years from July to June.

However, the decreased volume's effect on tax-exempt interest rates was subdued because the lower volume was largely related to a reduction in taxable bond issuance. Taxable bond issuance had become more prominent due to the elimination of tax-exempt advance refundings in the Tax Cuts and Jobs Act of 2017 (Pub.L. 115-97). A large volume of taxable ad-

[1] The federal funds rate is the interest rate associated with overnight borrowing among banks.

FIGURE 2

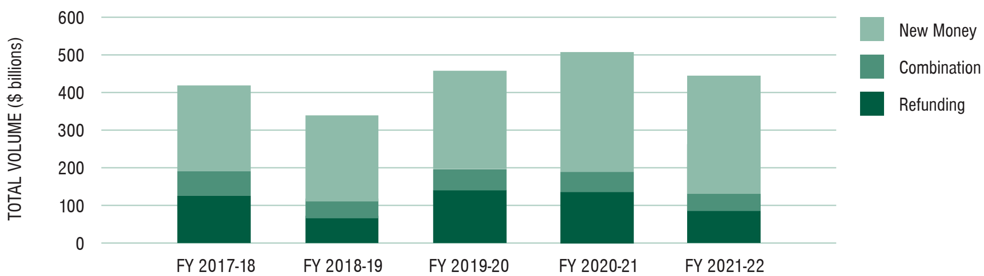
TRENDS OF 2- AND 10-YEAR TREASURY YIELDS



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

FIGURE 3

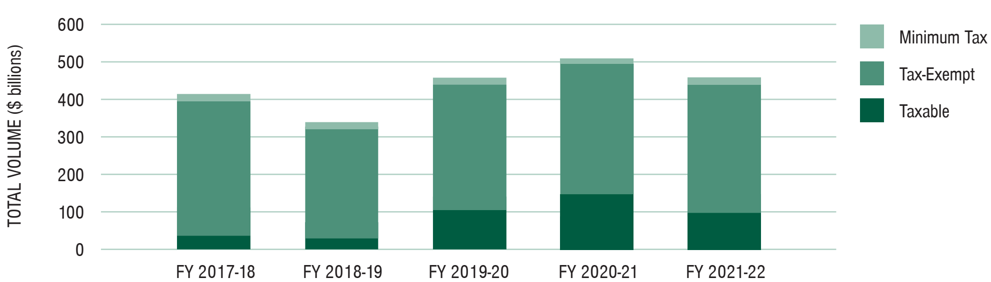
U.S. MUNICIPAL BOND ISSUANCE VOLUME BY PURPOSE



Source: The Bond Buyer

FIGURE 4

U.S. MUNICIPAL BOND ISSUANCE VOLUME BY TAX STATUS



vance refunding bonds was being issued, allowing issuers to lock in savings when rates were near historic lows. However, the rise in interest rates resulted in such financings becoming less available. Figure 4 shows the total U.S. municipal bond issuance volume by tax status. Overall, total tax-exempt issuance volume for 2021-22 was only 1.3% lower, however taxable issuance volume decreased 34.6%.

DEMAND. Because of their tax advantage, tax-exempt bonds have a more limited universe of investors than taxable bonds. Municipal bond mutual funds represent a significant segment of the investor base for tax-exempt bonds, and these funds' inflows and outflows can materially impact investor demand. As shown in Figure 5, there were net inflows in each month for a 20-month period from May 2020 through December 2021, before reversing course in January 2022. The performance of tax-exempt interest rates as compared to that of taxable interest rates reflected this shift in investor demand for municipal bonds.

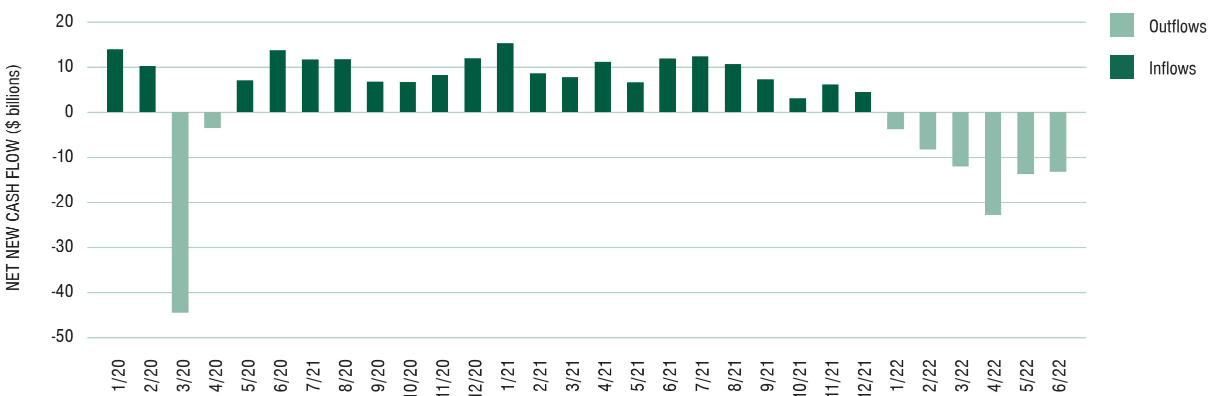
Comparing the ratios of tax-exempt municipal bonds to U.S. Treasury yields is a common metric that investors use to determine relative value. The lower ratios indicate municipal bond outperformance. Figure 6 shows the ratios of AAA GO MMD to U.S. Treasury yields. As a result of sustained investor demand after the outflows in spring of 2020, these ratios moved to their lows of 39% and 64% for the five-year and 30-year ratios, respectively, and remained near these lows until January 2022. (The volatility in the five-year ratio reflected occasional flight-to-quality rallies among the shorter-term U.S. Treasuries.) Thereafter, ratios increased as municipal bond funds experienced net outflows, reaching then year-to-date highs in mid-May before falling sharply for two weeks when fund outflows lessened. Since then, the ratios have continued to fluctuate in response to actual fund flows and the changes in the rates of fund flows.

TAX-EXEMPT INTEREST RATE TRENDS

Tax-exempt interest rates in 2021-22 reflected two very different tales. They started at near historic lows and remained stable for a time, before increasing dramatically. While taxable interest rates had begun to gradually rise starting in October 2021, tax-exempt rates lagged and remained low through the end of December. Starting in January 2022, tax-exempt interest rates began to rise sharply in response to municipal bond fund outflows and the change in Federal Reserve monetary policy direction. Tax-exempt rates did snap back briefly in May and early June, but those gains reversed very quickly. Figure 7 depicts the trend of five- and 30-year

FIGURE 5

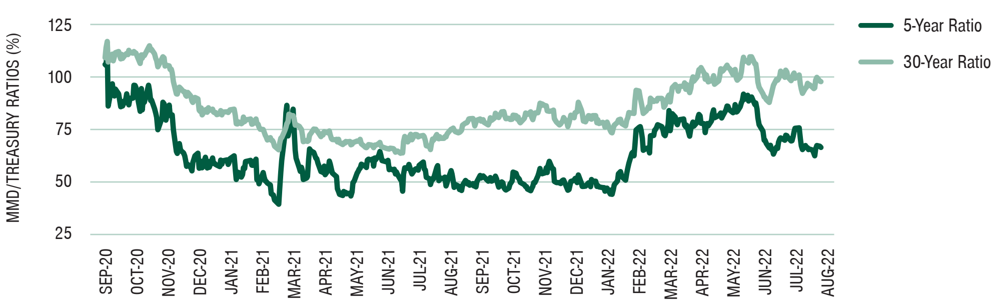
MUNICIPAL BOND MARKET, MONTHLY FUND INFLOWS / OUTFLOWS



Source: Investment Company Institute (ICI)

FIGURE 6

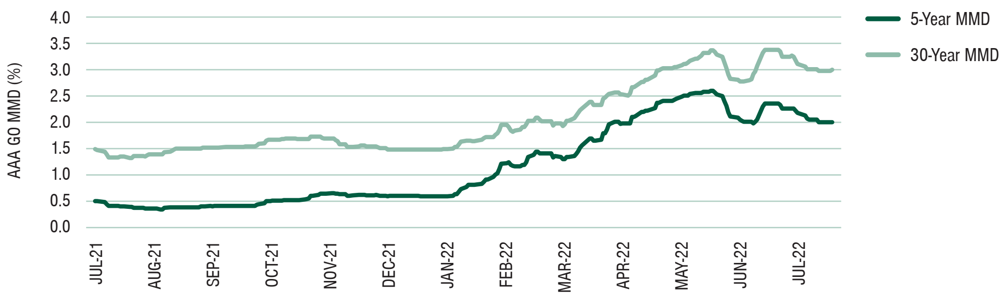
5- AND 30-YEAR AAA GO MMD/TREASURY YIELD RATIOS



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

FIGURE 7

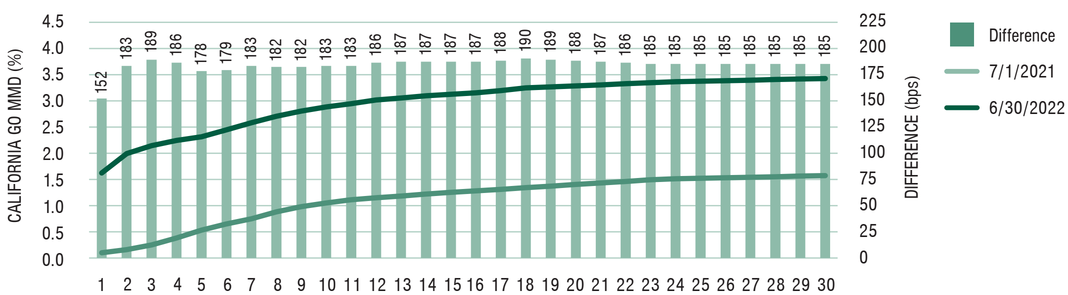
TRENDS OF 5- AND 30-YEAR AAA GO MMD



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

FIGURE 8

CALIFORNIA GO MMD BENCHMARK RATES



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

AAA GO MMD indices. As shown, the indices have varied over time, but remained within a narrow range throughout the first half of 2021-22 at near historically low levels and rose by approximately 2% from January to May 2022.

INTEREST RATES ON THE STATE'S BONDS

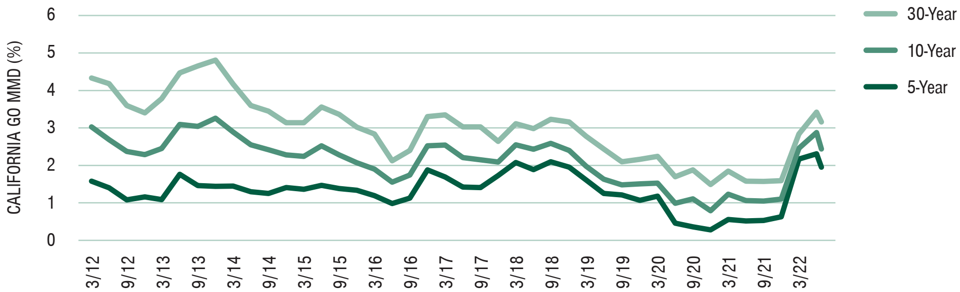
Interest rates on the state's bonds are the product of both state-specific factors and more general market conditions. Over the course of 2021-22, interest rates on the state's GO bonds have largely followed the same trend as national AAA GO MMD Index. Due to the rise in tax-exempt rates, the state's borrowing costs have risen as well. However, with a stable and well-managed credit profile the state has been able to lessen the impact of widening credit spreads. Figure 8 compares California GO MMD benchmark rates at the beginning and at the end of 2021-22. As shown, rates from years one to 30 increased between 152 and 190 basis points. Nevertheless, the 2021-22 rates are still relatively low and generally better than much of the past decade as shown in Figure 9.

Although interest rates have increased this past year, the state was still able to refinance $3.4 billion of its outstanding GO bonds in 2021-22 to reduce debt service costs. These refinancings generated approximately $900 million of total debt service savings over the remaining life of the bonds or approximately $748 million on a present value basis.

In addition to fixed-rate GO bonds, the state has approximately $949 million of variable rate GO bonds outstanding as of the end of 2021-22. Throughout the year, the state's variable interest rates have also risen but continue to be a source of low-cost financing for the state and help to diversify its capital structure. Historically, short-term tax-exempt interest rates have been lower than long-term tax-exempt interest rates. Additionally, as shown in Figure 10, the performance of these variable rate GO bonds in 2021-22 has compared favorably to the short-term Securities Industry and Financial Markets Association swap index, which is a composite index of tax-exempt seven-day high-grade variable rate demand obligations similar to the state's variable rate GO bonds.

FIGURE 9

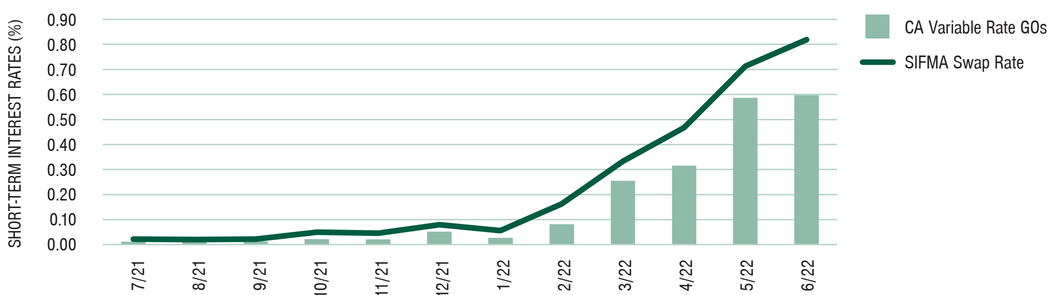
5-, 10- AND 30-YEAR CALIFORNIA GO MMD



Source: Refinitiv/Thomson Municipal Market Monitor (TM3)

FIGURE 10

MONTHLY AVERAGE SHORT-TERM INTEREST RATES



Source: Refinitiv/Thomson Municipal Market Monitor (TM3) and California State Treasurer's Office

SECTION 2 | SNAPSHOT OF THE STATE'S DEBT

OVERVIEW

Figure 11 summarizes the state's long-term debt as of June 30, 2022. This summary of state debt includes General Fund-supported GO bonds approved by voters and lease revenue bonds (LRBs) authorized by the Legislature, as well as self liquidating GO bonds. Self liquidating GO bonds receive revenues from specified sources so that money from the General Fund is not expected to pay debt service. However, the General Fund is obligated to pay debt service should the revenues to support repayment not be sufficient. The figures include bonds the state has sold (outstanding) and bonds authorized but not yet sold. A detailed list of the state's outstanding bonds, and their debt service requirements, can be found in Appendices A and B.

FIGURE 11

SUMMARY OF THE STATE'S DEBT (a)
AS OF JUNE 30, 2022 (DOLLARS IN BILLIONS)

	OUTSTANDING	AUTHORIZED BUT UNISSUED	TOTAL
GENERAL FUND SUPPORTED ISSUES			
General Obligation Bonds	$69.22	$31.01	$100.23
Lease Revenue Bonds	8.39	6.95	15.34
TOTAL GENERAL FUND SUPPORTED ISSUES	$77.61	$37.96	$ 115.57
SELF LIQUIDATING GENERAL OBLIGATION BONDS			
Veterans General Obligation Bonds	$0.53	$0.80	$1.33
California Water Resources Development General Obligation Bonds	0.00	0.17	0.17
TOTAL SELF LIQUIDATING GENERAL OBLIGATION BONDS	0.53	0.97	1.50
TOTAL	$78.14	$38.93	$117.07

(a) Debt obligations not included in Figure 11: Any short-term obligations, such as commercial paper or revenue anticipation notes; revenue bonds issued by state agencies that are repaid from specific revenues outside the General Fund; and "conduit" bonds, such as those issued by state financing authorities on behalf of other governmental or private entities whose obligations secure the bonds. LBRs that were sold on a forward delivery basis but not issued as of June 30, 2022, are not reflected in outstanding amounts.

- Approximately 1.4% of the state's outstanding GO bonds carry variable interest rates, which is lower than the statutorily authorized maximum of 20%. The State Treasurer has adopted a Debt Management Policy that, as of the date hereof, further reduces this limitation on variable rate indebtedness to 10% of the aggregate amount of long-term GO bonds outstanding. The remaining 98.6% of the state's outstanding GO bonds have fixed interest rates.
- The state has no interest rate hedging contracts on any debt discussed in this report.

INTENDED ISSUANCE OF GENERAL FUND-SUPPORTED BONDS

The State Treasurer's Office's (STO) estimates of intended issuance are based on the Department of Finance's projections of state departments' funding needs. Projections for new-money debt issuance are based on a variety of factors and are periodically updated. Factors that could affect the amount of issuance include actual spending by departments, revised funding needs, overall budget constraints, use or repayment of commercial paper, general market conditions and other considerations. Actual issuance amounts often vary significantly from initial estimates.

Figure 12 shows the STO's estimated issuance of new-money General Fund-supported bonds over the current and next fiscal years. Only currently authorized but unissued GO bonds are reflected in Figure 12. The estimated issuance may increase should new bond programs be approved.

As shown in Figure 12, the STO preliminarily estimates the state will issue a combined $11.4 billion of new money General Fund-supported bonds in 2022-23 and 2023-24. Using these assumptions for debt issuance, the STO estimates debt service payments from the General Fund will increase by $63.7 million in 2022-23 and $618.6 million in 2023-24.[2] A detailed list of the estimated debt service requirements can be found in Appendix B.

FIGURE 12

ESTIMATED ISSUANCE, GENERAL FUND-SUPPORTED BONDS (a) (DOLLARS IN MILLIONS)

	2022-23	2023-24	TOTAL
General Obligation Bonds (b)	$5,900	$4,700	$10,600
Lease Revenue Bonds	501	271	772
TOTAL GENERAL FUND-SUPPORTED BONDS	$6,401	$4,971	$11,372

(a) Debt issuances not included in Figure 12: Any refunding bonds; short-term obligations, such as commercial paper or revenue anticipation notes; revenue bonds issued by state agencies that are repaid from specific revenues outside the General Fund; and "conduit" bonds, such as those issued by state financing authorities on behalf of other governmental or private entities whose obligations secure the bonds.

(b) The initial issuance of GO bonds may be in the form of commercial paper notes.

[2] Figures reflect debt service from only a portion of the bond sales listed in Figure 12. For example, $2.6 billion of the $5.9 billion in GO bonds and $0 of the $501 million in LRBs planned for 2022-23 are expected to be sold during the first half of the fiscal year. These bonds if issued as planned are expected to have interest payments in the second half of the fiscal year. The remaining GO bonds and LRBs expected to be sold in the second half of 2022-23 will not have a debt service payment during 2022-23. The first interest payment for these bonds will be in 2023-24.

SECTION 3 | MEASURING DEBT BURDEN

DEBT RATIOS

Measuring California's debt level with various ratios – while not particularly helpful in assessing debt affordability – does provide a way to compare the state's burden to that of other borrowers. The three most commonly used ratios are: debt service as a percentage of General Fund revenues; debt as a percentage of personal income; and debt per capita. A fourth ratio – debt as a percentage of state gross domestic product (GDP) – also can be a useful comparison tool.

DEBT SERVICE AS PERCENTAGE OF GENERAL FUND REVENUES

Because debt service is a fixed part of a budget, credit analysts compare General Fund-supported debt service to General Fund revenues to measure a state's fiscal flexibility. California's ratio of General Fund-supported debt service to General Fund revenues was 3.42%[3] in 2021-22. That figure is based on $7.76 billion[4] of GO and LRB debt service payments versus $227.1 billion of General Fund revenues (less transfers to the Budget Stabilization Account/Rainy Day Fund).[5] The STO estimates this ratio will be 3.50%[6] in 2022-23. That estimate is based on an expected $7.69 billion of debt service payments versus $219.7 billion of General Fund revenues (less transfers to the Budget Stabilization Account/Rainy Day Fund).[5]

DEBT AS PERCENTAGE OF PERSONAL INCOME

Comparing a state's level of debt to the total personal income of its residents is a way to measure a state's ability to generate revenues and repay its obligations. In Moody's U.S. States Liabilities report dated September 7, 2022 ("Moody's September 2022 Report"), Moody's lists the state's ratio of net tax-supported debt to personal income at 3.2%.[7]

DEBT PER CAPITA

Debt per capita measures residents' average share of a state's total outstanding debt. It does not account for the employment status, income, or other financial resources of residents. As a result, debt per capita does not reflect a state's ability to repay its obligations as well as other ratios, such as debt service as a percentage of General Fund revenues or debt as a percentage of personal income. In Moody's September 2022 Report, Moody's lists the state's net tax-supported debt per capita at $2,458.

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3 Does not reflect offsets due to expected subsidy payments from the federal government for Build America Bonds (BABs) or transfers from special funds. When debt service is adjusted to account for approximately $1.9 billion of estimated offsets, the 2021-22 debt service decreases to $5.9 billion, and the ratio of debt service to General Fund revenues drops to 2.58%.

4 Excludes enterprise fund bonds, for which debt service each year is paid from dedicated funds.

5 Source: Department of Finance Summary Charts, 2022 Budget Act.

6 Does not reflect offsets due to expected subsidy payments from the federal government for BABs or transfers from special funds. When debt service is adjusted to account for approximately $1.7 billion of estimated offsets, the 2022-23 debt service decreases to $6.0 billion and the ratio of debt service to General Fund revenues drops to 2.72%.

7 Moody's calculation of net tax-supported debt includes GO bonds (non-self liquidating); LRBs, GO commercial paper notes; tobacco securitization bonds with a General Fund backstop; various regional center bonds; a P3 financing for the Long Beach Courthouse; and State Building Lease Purchase bonds.

FIGURE 13

DEBT TO PERSONAL INCOME OF 10 MOST POPULOUS STATES

STATE	MOODY'S/S&P/ FITCH (a)	DEBT TO PERSONAL INCOME (b)
Texas	Aaa/AAA/AAA	1.10%
Florida	Aaa/AAA/AAA	1.20%
North Carolina	Aaa/AAA/AAA	1.20%
Michigan	Aa1/AA/AA+	1.50%
Georgia	Aaa/AAA/AAA	2.00%
Pennsylvania	Aa3/A+/AA-	2.50%
Ohio	Aa1/AA+/AA+	3.00%
California	*Aa2/AA-/AA*	*3.20%*
Illinois	Baa1/BBB+/BBB+	4.40%
New York	Aa1/AA+/AA+	5.10%
MOODY'S MEDIAN ALL STATES		2.10%
MEDIAN FOR THE 10 MOST POPULOUS STATES		2.25%

(a) Moody's, S&P, and Fitch ratings as of August 2022.

(b) Figures as reported by Moody's September 2022 Report. Figures reflect fiscal 2021 data except for California, figures reflect fiscal 2020 data due to the unavailability of fiscal 2021 audited financial statements at the time of publication.

DEBT AS PERCENTAGE OF STATE GDP

Debt as a percentage of GDP generally is used to measure the financial leverage provided by an issuer's economy. Specifically, this debt ratio compares what an issuer owes versus what its economy produces. California has one of the largest economies in the world and one of its most diverse. In Moody's September 2022 Report, Moody's lists the state's net tax-supported debt as percentage of GDP at 2.9%.[7]

DEBT RATIOS OF THE 10 MOST POPULOUS STATES

In Moody's September 2022 Report, Moody's calculates for each state the ratios of debt to personal income, debt per capita, and debt as a percentage of GDP and provides the median ratios across all states. It is useful to compare California's debt levels with those of its "peer group" of the 10 most populous states. As shown in the tables, the median debt to personal income (Figure 13); debt per capita (Figure 14); and debt as a percentage of GDP (Figure 15) of these 10 states are, on average, in line with Moody's median for all states combined. California's ratios, however, rank above the medians for the 10 most populous states.

FIGURE 14

DEBT PER CAPITA OF 10 MOST POPULOUS STATES

STATE	MOODY'S/S&P/ FITCH(a)	DEBT PER CAPITA(b)
Texas	Aaa/AAA/AAA	$682
North Carolina	Aaa/AAA/AAA	686
Florida	Aaa/AAA/AAA	756
Michigan	Aa1/AA/AA+	833
Georgia	Aaa/AAA/AAA	1,087
Pennsylvania	Aa3/A+/AA-	1,616
Ohio	Aa1/AA+/AA+	1,718
California	*Aa2/AA-/AA*	*2,458*
Illinois	Baa1/BBB+/BBB+	2,958
New York	Aa1/AA+/AA+	3,871
MOODY'S MEDIAN ALL STATES		$1,179
MEDIAN FOR THE 10 MOST POPULOUS STATES		$1,352

(a) Moody's, S&P. and Fitch ratings as of August 2022.

(b) Figures as reported by Moody's September 2022 Report. Figures reflect fiscal 2021 data except for California, figures reflect fiscal 2020 data due to the unavailability of fiscal 2021 audited financial statements at the time of publication.

FIGURE 15

DEBT AS A PERCENTAGE OF STATE GDP OF 10 MOST POPULOUS STATES

STATE	MOODY'S/S&P/ FITCH(a)	DEBT AS % OF STATE GDP(b)(c)
Texas	Aaa/AAA/AAA	1.00%
North Carolina	Aaa/AAA/AAA	1.10%
Florida	Aaa/AAA/AAA	1.30%
Michigan	Aa1/AA/AA+	1.50%
Georgia	Aaa/AAA/AAA	1.70%
Pennsylvania	Aa3/A+/AA-	2.50%
Ohio	Aa1/AA+/AA+	2.70%
California	*Aa2/AA-/AA*	*2.90%*
Illinois	Baa1/BBB+/BBB+	4.00%
New York	Aa1/AA+/AA+	4.10%
MOODY'S MEDIAN ALL STATES		2.10%
MEDIAN FOR THE 10 MOST POPULOUS STATE		2.10%

(a) Moody's, S&P, and Fitch ratings as of August 2022.

(b) Figures as reported by Moody's September 2022 Report. Figures reflect fiscal 2021 data except for California, figures reflect fiscal 2020 data due to the unavailability of fiscal 2021 audited financial statements at the time of publication.

(c) State GDP numbers have a one-year lag.

SECTION 4 | ANALYSIS OF THE STATE'S CREDIT RATINGS

The state's current GO bond ratings are "AA" from Fitch, "Aa2" from Moody's, and "AA-" from S&P. A summary of the latest rating agencies' actions on the state's GO bonds is presented in Figure 16.

Since the last DAR a year ago, the ratings on the state's GO bonds remain unchanged. Both Fitch and Moody's have maintained a stable outlook on the state's credit rating while S&P has had a positive outlook on the state's credit rating since September 2021. A brief listing of the rating agencies' opinion of the state's credit strengths and challenges is presented in Figure 17.

FIGURE 16

LATEST RATING ACTIONS

RATING AGENCY	ACTION	DATE
Fitch	Affirmed "AA" rating (stable)	August 2022
Moody's	Affirmed "Aa2" rating (stable)	August 2022
S&P	Affirmed "AA-" rating (positive)	August 2022

FIGURE 17

STATE OF CALIFORNIA GENERAL OBLIGATION RATING AGENCY COMMENTARY

	FITCH	MOODY'S	S&P
RATING STRENGTHS	• State's large and diverse economy • Strong budget management that materially improved financial position enhancing ability to address future fiscal challenges	• State's massive economy and wealth • Healthy budget reserves and liquidity	• Strong economy, high income levels, and economic diversity • Strong financial reserves and overall liquidity • Moderate and stable net debt ratios
RATING CHALLENGES	• In the absence of policy action, expects spending to be somewhat above expected revenue growth over time driven by health and social services • Net pension liabilities above median for US states	• High revenue volatility given the state's heavy reliance on income taxes • Lower flexibility to adjust spending and raise taxes compared to other states • Above average leverage and fixed cost burdens	• Volatile revenues due to reliance on progressive tax structure and capital gains tax • High cost of housing and high social service spending • Minimal prefunding of retiree health care benefits • Chronically late release of financial audits

APPENDIX A | THE STATE'S DEBT

AUTHORIZED AND OUTSTANDING NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 2022 (DOLLARS IN THOUSANDS)

	GENERAL FUND BONDS	VOTER AUTHORIZATION DATE	AUTHORIZATION AMOUNT	LONG TERM BONDS OUTSTANDING (h)	COMMERCIAL PAPER OUTSTANDING (a)	UNISSUED
	1988 School Facilities Bond Act (b)	11/08/88	$797,745	$16,595	$-	$-
	1990 School Facilities Bond Act (b)	06/05/90	797,875	13,660	-	-
	1992 School Facilities Bond Act (b)	11/03/92	898,211	61,220	-	-
	California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002 (f)	03/05/02	2,596,643	1,640,440	23,090	114,883
	California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018	06/05/18	4,100,000	465,535	187,670	3,387,410
	California Library Construction and Renovation Bond Act of 1988 (b)	11/08/88	72,405	3,870	-	-
*	California Park and Recreational Facilities Act of 1984 (b)	06/05/84	368,900	3,485	-	-
*	California Parklands Act of 1980	11/04/80	285,000	480	-	-
	California Reading and Literacy Improvement and Public Library Construction and Renovation Bond Act of 2000	03/07/00	350,000	193,960	-	5,040
*	California Safe Drinking Water Bond Law of 1976 (b)	06/08/76	172,500	1,160	-	-
*	California Safe Drinking Water Bond Law of 1984	11/06/84	75,000	630	-	-
*	California Safe Drinking Water Bond Law of 1986	11/04/86	100,000	7,110	-	-
	California Safe Drinking Water Bond Law of 1988	11/08/88	75,000	13,135	-	-
	California Stem Cell Research and Cures Bond Act of 2004	11/02/04	3,000,000	960,155	30,685	102,890
	California Stem Cell Research, Treatments, and Cures Bond Act of 2020	11/03/20	5,500,000	180,635	-	5,319,365
*	California Wildlife, Coastal, and Park Land Conservation Act (b)	06/07/88	768,670	36,720	-	-
	Children's Hospital Bond Act of 2004	11/02/04	750,000	526,000	-	1,530
	Children's Hospital Bond Act of 2008	11/04/08	980,000	765,590	17,750	42,895
	Children's Hospital Bond Act of 2018	11/06/18	1,500,000	67,195	77,150	1,341,600
	Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 (Hi-Ed)	11/03/98	2,500,000	1,184,150	-	-

AUTHORIZED AND OUTSTANDING
NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS
AS OF JUNE 30, 2022 (DOLLARS IN THOUSANDS) CONTINUED

	GENERAL FUND BONDS	VOTER AUTHORIZATION DATE	AUTHORIZATION AMOUNT	LONG TERM BONDS OUTSTANDING (h)	COMMERCIAL PAPER OUTSTANDING (a)	UNISSUED
	Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 (K-12)	11/03/98	6,700,000	2,419,060	-	100
*	Clean Air and Transportation Improvement Bond Act of 1990	06/05/90	1,990,000	301,280	-	-
*	Clean Water Bond Law of 1984	11/06/84	325,000	1,565	-	-
*	Clean Water and Water Conservation Bond Law of 1978	06/06/78	375,000	1,545	-	-
	Clean Water and Water Reclamation Bond Law of 1988	11/08/88	65,000	5,315	-	-
*	Community Parklands Act of 1986	06/03/86	100,000	415	-	-
*	County Correctional Facility Capital Expenditure Bond Act of 1986	06/03/86	495,000	2,075	-	-
	County Correctional Facility Capital Expenditure and Youth Facility Bond Act of 1988	11/08/88	500,000	15,215	-	-
	Disaster Preparedness and Flood Prevention Bond Act of 2006 (e)(h)	11/07/06	3,960,560	2,709,390	194,265	351,957
	Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990 (g)	06/05/90	292,510	10,510	-	-
*	Fish and Wildlife Habitat Enhancement Act of 1984	06/05/84	85,000	2,650	-	-
	Higher Education Facilities Bond Act of 1988	11/08/88	600,000	7,150	-	-
	Higher Education Facilities Bond Act of June 1990	06/05/90	450,000	13,440	-	540
	Higher Education Facilities Bond Act of June 1992	06/02/92	900,000	87,690	-	-
	Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006	11/07/06	19,925,000	14,178,860	101,565	710,205
	Housing and Emergency Shelter Trust Fund Act of 2002	11/05/02	2,100,000	102,485	5,550	65,845
	Housing and Emergency Shelter Trust Fund Act of 2006	11/07/06	2,850,000	830,700	46,290	233,025
	Housing and Homeless Bond Act of 1990	06/05/90	150,000	190	-	-
	Kindergarten Through Community College Public Education Facilities Bond Act of 2016 (CCC)	11/08/16	2,000,000	434,510	11,610	1,504,170
	Kindergarten Through Community College Public Education Facilities Bond Act of 2016 (K-12)	11/08/16	7,000,000	4,863,120	23,385	1,459,985
	Kindergarten-University Public Education Facilities Bond Act of 2002 (Hi-Ed)	11/05/02	1,650,000	1,028,215	-	-
	Kindergarten-University Public Education Facilities Bond Act of 2002 (K-12)	11/05/02	11,400,000	6,702,775	-	5,455
	Kindergarten-University Public Education Facilities Bond Act of 2004 (Hi-Ed)	03/02/04	2,300,000	1,524,515	-	58,019
	Kindergarten-University Public Education Facilities Bond Act of 2004 (K-12)	03/02/04	10,000,000	6,247,650	3,460	16,160
	Kindergarten-University Public Education Facilities Bond Act of 2006 (Hi-Ed)	11/07/06	3,087,000	2,386,810	-	38,775
	Kindergarten-University Public Education Facilities Bond Act of 2006 (K-12)	11/07/06	7,329,000	5,126,605	1,560	168,560
*	New Prison Construction Bond Act of 1986	11/04/86	500,000	895	-	-
	New Prison Construction Bond Act of 1988	11/08/88	817,000	2,195	-	1,245
	New Prison Construction Bond Act of 1990	06/05/90	450,000	585	-	605
	Passenger Rail and Clean Air Bond Act of 1990	06/05/90	1,000,000	935	-	-

AUTHORIZED AND OUTSTANDING NON-SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 2022 (DOLLARS IN THOUSANDS) CONTINUED

	GENERAL FUND BONDS	VOTER AUTHORIZATION DATE	AUTHORIZATION AMOUNT	LONG TERM BONDS OUTSTANDING (h)	COMMERCIAL PAPER OUTSTANDING (a)	UNISSUED
	Public Education Facilities Bond Act of 1996 (Higher Education)	03/26/96	975,000	280,580	-	4,650
	Public Education Facilities Bond Act of 1996 (K-12) (c)	03/26/96	2,012,035	411,350	-	-
	Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act (e)	03/07/00	1,884,000	1,016,745	-	43,346
	Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (e)(f)	11/07/06	5,266,357	3,201,415	103,555	780,452
	Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000	03/07/00	2,100,000	962,685	10,980	17,925
	Safe, Clean, Reliable Water Supply Act (e)	11/05/96	969,500	336,715	-	62,915
	Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century	11/04/08	9,950,000	2,679,535	165,835	5,193,945
*	School Building and Earthquake Bond Act of 1974	11/05/74	150,000	5,320	-	-
	School Facilities Bond Act of 1990	11/06/90	800,000	19,535	-	-
	School Facilities Bond Act of 1992	06/02/92	1,900,000	89,205	-	10,280
	Seismic Retrofit Bond Act of 1996	03/26/96	2,000,000	685,785	-	-
*	State, Urban, and Coastal Park Bond Act of 1976	11/02/76	280,000	1,275	-	-
	Veterans Homes Bond Act of 2000	03/07/00	50,000	30,055	-	975
	Veterans Housing and Homeless Prevention Bond Act of 2014	06/03/14	600,000	148,270	59,440	377,160
	Veterans and Affordable Housing Bond Act of 2018	11/06/18	3,000,000	169,150	126,120	2,703,680
	Voting Modernization Bond Act of 2002	03/05/02	200,000	41,365	1,355	12,670
	Water Conservation Bond Law of 1988 (g)	11/08/88	54,765	7,610	-	-
*	Water Conservation and Water Quality Bond Law of 1986 (e)	06/03/86	136,500	9,360	-	230
	Water Quality, Supply, and Infrastructure Improvement Act of 2014 (f)	11/04/14	7,465,000	1,773,040	218,885	5,221,440
	Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (e)	11/05/02	3,345,000	2,196,740	38,525	204,039
	TOTAL GENERAL FUND BONDS		$158,222,176	$69,215,805	$1,448,725	$29,563,966

(a) A total of not more than $2.3 billion of commercial paper principal plus accrued interest may be owing at one time. Bond acts marked with an asterisk (*) are not legally permitted to utilize commercial paper.

(b) SB 1018 (06/27/2012) reduced the voter authorized amount.

(c) SB 1018 (06/27/2012) and SB 71 (06/27/2013) reduced the voter authorized amount.

(d) AB 639 (10/10/2013) reduced the voter authorized amount.

(e) AB 1471 (11/04/2014) reduced the voter authorized amount.

(f) SB 5 (6/5/2018) reduced the voter authorized amount.

(g) AB 92 (6/29/2020) reduced the voter authorized amount.

(h) The original voter authorized amount has been reduced in accordance with section 5096.828 of the Public Resources Code of the State of California.

AUTHORIZED AND OUTSTANDING SELF LIQUIDATING GENERAL OBLIGATION BONDS AS OF JUNE 30, 2022 (DOLLARS IN THOUSANDS)

	ENTERPRISE FUND BONDS (SELF LIQUIDATING)	VOTER AUTHORIZATION DATE	AUTHORIZATION AMOUNT	LONG TERM BONDS OUTSTANDING	COMMERCIAL PAPER OUTSTANDING (a)	UNISSUED
*	California Water Resources Development Bond Act	11/08/60	$1,750,000	$205	$-	$167,600
	Veterans Bond Act of 1986	06/03/86	850,000	3,465	-	-
	Veterans Bond Act of 1988	06/07/88	510,000	6,240	-	-
	Veterans Bond Act of 1990	11/06/90	400,000	14,335	-	-
	Veterans Bond Act of 1996	11/05/96	400,000	30,560	-	-
	Veterans Bond Act of 2000	11/07/00	500,000	114,555	-	-
	Veterans Bond Act of 2008 (b)	11/04/08	300,000	177,900	-	-
	Veterans and Affordable Housing Bond Act of 2018 (CalVet)	11/06/18	1,000,000	178,435	-	803,365
	TOTAL ENTERPRISE FUND BONDS		$5,710,000	$525,695	$-	$970,965

(a) Bond acts marked with an asterisk (*) are not legally permitted to utilize commercial paper.

(b) AB 639 (10/10/2013) reduced the voter authorized amount.

AUTHORIZED AND OUTSTANDING LEASE REVENUE BONDS AS OF JUNE 30, 2022 (DOLLARS IN THOUSANDS)

GENERAL FUND SUPPORTED ISSUES (a)	OUTSTANDING (b)	AUTHORIZED BUT UNISSUED
STATE PUBLIC WORKS BOARD ISSUES (BY FACILITY LESSEE)		
Air Resources Board	$294,990	$-
Board of State and Community Corrections	74,765	940,133
California Community Colleges	94,735	-
California Department of Corrections and Rehabilitation	3,431,685	664,433
California Department of Forestry and Fire Protection	211,515	159,604
California Department of Veterans Affairs	229,800	324,933
Department of Developmental Services	72,490	-
Department of Education	110,055	-
Department of General Services	1,381,890	2,997,495
Department of Public Health	54,510	-
Department of State Hospitals	242,975	22,024
Judicial Council	1,822,370	1,401,734
Other State Facilities	239,940	444,512
Trustees of the California State University	96,805	-
TOTAL STATE PUBLIC WORKS BOARD ISSUES	$8,358,525	$6,954,868
TOTAL NON-STATE PUBLIC WORKS BOARD STATE FACILITIES ISSUES (c)	$29,605	$-
TOTAL GENERAL FUND SUPPORTED ISSUES	$8,388,130	$6,954,868

(a) Lease payments that secure each of these issues are payable from the operating budget of the respective lessees. The operating budgets of the lessees are primarily, but not exclusively, derived from the General Fund.

(b) Does not include $299,085,000 of SPWB Lease Revenue Refunding Bonds 2022 Series C (Various Capital Projects) sold on October 6, 2021 (the "2022C Bonds"), and expected to be issued on September 29, 2022; the proceeds from the SPWB 2022C Bonds are expected to refund $372,040,000 of outstanding SPWB bonds.

(c) Includes $11,695,000 Sacramento City Financing Authority Lease Revenue Refunding Bonds State of California - Cal/EPA Building, 2013 Series A, which are supported by lease payments from the California Environmental Protection Agency; these lease payments are subject to annual appropriation by the State Legislature.

APPENDIX B | THE STATE'S DEBT SERVICE

SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR GENERAL FUND NON-SELF LIQUIDATING BONDS FIXED RATE, AS OF JUNE 30, 2022

FISCAL YEAR ENDING JUNE 30	CURRENT DEBT INTEREST (a)	CURRENT DEBT PRINCIPAL	CURRENT DEBT TOTAL (b)
2023 (c)	$3,354,411,020.46	$3,350,005,000.00	$6,704,416,020.46
2024	3,205,873,649.30	3,185,230,000.00	6,391,103,649.30
2025	3,064,316,048.01	3,197,035,000.00	6,261,351,048.01
2026	2,916,298,689.84	3,253,005,000.00	6,169,303,689.84
2027	2,758,230,380.36	3,304,395,000.00	6,062,625,380.36
2028	2,609,402,896.54	3,662,145,000.00	6,271,547,896.54
2029	2,451,326,006.54	3,357,160,000.00	5,808,486,006.54
2030	2,293,521,675.29	3,311,015,000.00	5,604,536,675.29
2031	2,145,582,040.29	3,418,435,000.00	5,564,017,040.29
2032	1,997,703,031.54	3,164,045,000.00	5,161,748,031.54
2033	1,847,997,537.79	3,175,730,000.00	5,023,727,537.79
2034	1,717,410,437.76	3,561,770,000.00	5,279,180,437.76
2035	1,480,793,455.82	3,033,090,000.00	4,513,883,455.82
2036	1,323,948,428.91	3,070,090,000.00	4,394,038,428.91
2037	1,179,410,701.41	3,038,390,000.00	4,217,800,701.41
2038	1,015,531,452.64	2,973,490,000.00	3,989,021,452.64
2039	899,983,305.12	3,389,725,000.00	4,289,708,305.12
2040	616,350,288.87	2,041,660,000.00	2,658,010,288.87
2041	454,510,237.54	2,179,625,000.00	2,634,135,237.54
2042	356,489,687.54	1,188,165,000.00	1,544,654,687.54
2043	308,510,387.54	1,326,325,000.00	1,634,835,387.54
2044	232,276,478.16	1,039,660,000.00	1,271,936,478.16
2045	195,074,343.78	893,925,000.00	1,088,999,343.78
2046	151,318,468.78	850,000,000.00	1,001,318,468.78
2047	112,734,093.78	887,500,000.00	1,000,234,093.78
2048	76,713,971.90	650,000,000.00	726,713,971.90
2049	57,778,225.02	490,000,000.00	547,778,225.02
2050	35,653,225.02	675,000,000.00	710,653,225.02
2051	13,718,750.02	250,000,000.00	263,718,750.02
2052	8,234,375.01	350,000,000.00	358,234,375.01
TOTAL	$38,881,103,290.58	$68,266,615,000.00	$107,147,718,290.58

(a) The amounts do not reflect any interest subsidy under the Build America Bonds program. Subsidy not pledged to the repayment of debt service.

(b) Includes scheduled mandatory sinking fund payments. Does not include outstanding commercial paper.

(c) Represents the debt service requirements from July 1, 2022 through June 30, 2023.

SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR GENERAL FUND NON-SELF LIQUIDATING BONDS VARIABLE RATE, AS OF JUNE 30, 2022

FISCAL YEAR ENDING JUNE 30	CURRENT DEBT		
	INTEREST (a)	PRINCIPAL	TOTAL (b)
2023 (c)	$6,909,842.75	$22,600,000.00	$29,509,842.75
2024	6,810,394.88	57,900,000.00	64,710,394.88
2025	6,422,265.64	38,800,000.00	45,222,265.64
2026	6,202,080.22	67,900,000.00	74,102,080.22
2027	5,867,388.82	13,300,000.00	19,167,388.82
2028	5,796,634.58	13,900,000.00	19,696,634.58
2029	5,691,921.18	19,600,000.00	25,291,921.18
2030	4,898,901.11	209,290,000.00	214,188,901.11
2031	3,618,417.40	116,800,000.00	120,418,417.40
2032	2,734,288.47	167,800,000.00	170,534,288.47
2033	1,542,919.28	120,600,000.00	122,142,919.28
2034	784,258.30	300,000.00	1,084,258.30
2035	782,730.09	-	782,730.09
2036	786,122.51	-	786,122.51
2037	779,337.60	-	779,337.60
2038	782,730.08	-	782,730.08
2039	782,730.10	-	782,730.10
2040	783,752.67	400,000.00	1,183,752.67
2041	783,024.47	-	783,024.47
2042	777,863.04	-	777,863.04
2043	777,863.03	-	777,863.03
2044	768,036.38	20,000,000.00	20,768,036.38
2045	609,751.09	20,000,000.00	20,609,751.09
2046	454,750.69	20,000,000.00	20,454,750.69
2047	299,605.48	20,000,000.00	20,299,605.48
2048	142,182.01	20,000,000.00	20,142,182.01
TOTAL	$66,589,791.87	$949,190,000.00	$1,015,779,791.87

(a) The estimate of future interest payments is based on rates in effect as of June 30, 2022. The interest rates for the daily and weekly rate bonds range from 0.48-1.34%.

(b) Includes scheduled mandatory sinking fund payments. Does not include outstanding commercial paper.

(c) Represents the estimated debt service requirements from July 1, 2022 through June 30, 2023.

SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR ENTERPRISE FUND SELF LIQUIDATING BONDS FIXED RATE, AS OF JUNE 30, 2022

FISCAL YEAR ENDING JUNE 30	CURRENT DEBT		
	INTEREST	PRINCIPAL	TOTAL (a)
2023 (b)	$16,430,257.54	$3,200,000.00	$19,630,257.54
2024	16,409,452.54	2,145,000.00	18,554,452.54
2025	16,340,152.54	7,770,000.00	24,110,152.54
2026	16,247,827.54	4,380,000.00	20,627,827.54
2027	15,895,091.29	23,855,000.00	39,750,091.29
2028	15,291,876.91	21,005,000.00	36,296,876.91
2029	14,638,336.90	26,325,000.00	40,963,336.90
2030	13,583,430.02	41,405,000.00	54,988,430.02
2031	12,237,015.02	40,880,000.00	53,117,015.02
2032	11,125,122.52	25,865,000.00	36,990,122.52
2033	10,162,131.27	30,790,000.00	40,952,131.27
2034	9,188,661.27	27,330,000.00	36,518,661.27
2035	8,547,475.02	13,280,000.00	21,827,475.02
2036	8,171,223.77	13,800,000.00	21,971,223.77
2037	7,774,291.27	14,345,000.00	22,119,291.27
2038	7,355,693.14	14,920,000.00	22,275,693.14
2039	7,001,898.76	9,910,000.00	16,911,898.76
2040	6,717,625.01	10,300,000.00	17,017,625.01
2041	6,321,268.76	16,570,000.00	22,891,268.76
2042	5,752,698.76	20,095,000.00	25,847,698.76
2043	5,081,906.26	21,800,000.00	26,881,906.26
2044	4,335,216.26	23,235,000.00	27,570,216.26
2045	3,522,991.88	23,885,000.00	27,407,991.88
2046	2,668,407.50	24,795,000.00	27,463,407.50
2047	1,833,950.00	22,420,000.00	24,253,950.00
2048	1,085,240.00	19,700,000.00	20,785,240.00
2049	534,550.00	11,135,000.00	11,669,550.00
2050	229,875.00	6,370,000.00	6,599,875.00
2051	62,775.00	4,185,000.00	4,247,775.00
TOTAL	$244,546,441.75	$525,695,000.00	$770,241,441.75

(a) Includes scheduled mandatory sinking fund payments.

(b) Represents the debt service requirements from July 1, 2022 through June 30, 2023.

SCHEDULE OF DEBT SERVICE REQUIREMENTS
FOR LEASE-REVENUE DEBT
FIXED RATE, AS OF JUNE 30, 2022

FISCAL YEAR ENDING JUNE 30	CURRENT DEBT (a) INTEREST (b)	PRINCIPAL	TOTAL (c)
2023 (d)	$404,555,153.17	$490,965,000.00	$895,520,153.17
2024	382,902,750.62	487,040,000.00	869,942,750.62
2025	358,630,659.86	511,340,000.00	869,970,659.86
2026	332,985,457.35	525,360,000.00	858,345,457.35
2027	306,541,097.60	555,465,000.00	862,006,097.60
2028	278,712,378.69	570,020,000.00	848,732,378.69
2029	250,062,057.82	541,505,000.00	791,567,057.82
2030	223,010,523.87	535,450,000.00	758,460,523.87
2031	196,802,139.32	530,775,000.00	727,577,139.32
2032	169,625,909.06	545,550,000.00	715,175,909.06
2033	141,331,813.14	494,545,000.00	635,876,813.14
2034	115,928,579.42	481,400,000.00	597,328,579.42
2035	90,710,549.06	446,185,000.00	536,895,549.06
2036	70,755,418.76	308,950,000.00	379,705,418.76
2037	56,627,493.76	299,310,000.00	355,937,493.76
2038	43,830,800.01	239,385,000.00	283,215,800.01
2039	33,068,537.51	186,320,000.00	219,388,537.51
2040	25,369,668.76	146,430,000.00	171,799,668.76
2041	20,504,690.63	67,360,000.00	87,864,690.63
2042	17,600,921.88	70,270,000.00	87,870,921.88
2043	14,594,818.76	73,265,000.00	87,859,818.76
2044	11,358,281.26	76,515,000.00	87,873,281.26
2045	7,976,193.76	79,885,000.00	87,861,193.76
2046	4,663,771.88	71,505,000.00	76,168,771.88
2047	1,557,625.00	53,335,000.00	54,892,625.00
TOTAL	$3,559,707,290.95	$8,388,130,000.00	$11,947,837,290.95

(a) Does not include debt service on $299,085,000 of SPWB Lease Revenue Refunding Bonds 2022 Series C (Various Capital Projects) sold on October 6, 2021 (the "2022C Bonds"), and expected to be issued on September 29, 2022; the proceeds from the SPWB 2022C Bonds are expected to refund $372,040,000 of outstanding principal (plus accrued interest to the redemption date) of SPWB lease revenue debt.

(b) The amounts do not reflect any interest subsidy under the Build America Bonds program. Subsidy not pledged to the repayment of debt service.

(c) Includes scheduled mandatory sinking fund payments.

(d) Represents the debt service requirements from July 1, 2022 through June 30, 2023.

ESTIMATED DEBT SERVICE REQUIREMENTS ON INTENDED SALES OF AUTHORIZED BUT UNISSUED BONDS DURING FISCAL YEARS 2022-23 AND 2023-24 (a)

FISCAL YEAR ENDING JUNE 30	FY 2022-23 GO SALES DEBT SERVICE	FY 2023-24 GO SALES DEBT SERVICE	FY 2022-23 LRB SALES DEBT SERVICE	FY 2023-24 LRB SALES DEBT SERVICE	TOTAL DEBT SERVICE ALL SALES
2023	$63,700,000.00	$ -	$ -	$ -	$63,700,000.00
2024	493,543,326.83	75,600,000.00	41,842,800.00	7,591,500.00	618,577,626.83
2025	483,576,660.49	411,746,660.09	41,833,330.00	25,461,900.00	962,618,550.58
2026	473,609,994.15	403,159,993.79	41,841,200.00	25,467,480.00	944,078,667.94
2027	463,643,327.81	394,573,327.49	41,843,170.00	25,453,200.00	925,513,025.30
2028	453,676,661.47	385,986,661.19	41,837,080.00	25,457,100.00	906,957,502.66
2029	443,709,995.13	377,399,994.89	41,835,770.00	25,456,660.00	888,402,420.02
2030	433,743,328.79	368,813,328.59	41,831,270.00	25,449,920.00	869,837,847.38
2031	423,776,662.45	360,226,662.29	41,845,880.00	25,449,500.00	851,298,704.74
2032	413,809,996.11	351,639,995.99	41,840,550.00	25,447,740.00	832,738,282.10
2033	403,843,329.77	343,053,329.69	41,843,120.00	25,451,840.00	814,191,619.46
2034	393,876,673.19	334,466,663.39	41,839,810.00	25,449,000.00	795,632,146.58
2035	383,910,006.36	325,879,997.09	41,837,380.00	25,451,280.00	777,078,663.45
2036	373,943,339.53	317,293,330.79	41,837,050.00	25,460,180.00	758,533,900.32
2037	363,976,672.70	308,706,664.49	41,834,770.00	25,462,340.00	739,980,447.19
2038	354,010,005.87	300,119,998.19	41,841,490.00	25,449,820.00	721,421,314.06
2039	344,043,339.04	291,533,331.89	22,647,350.00	25,444,120.00	683,668,140.93
2040	334,076,672.21	282,946,665.59	22,649,560.00	3,862,640.00	643,535,537.80
2041	324,110,005.38	274,359,999.29	22,647,620.00	3,861,880.00	624,979,504.67
2042	314,143,338.55	265,773,332.99	22,644,640.00	3,863,560.00	606,424,871.54
2043	304,176,671.72	257,186,666.69	22,643,460.00	3,862,260.00	587,869,058.41
2044	294,210,004.89	248,600,000.39	22,651,650.00	3,862,560.00	569,324,215.28
2045	284,243,338.06	240,013,353.82	22,641,240.00	3,863,900.00	550,761,831.88
2046	274,276,671.23	231,426,686.42	22,655,610.00	3,860,860.00	532,219,827.65
2047	264,310,004.40	222,840,019.02	22,640,710.00	3,858,020.00	513,648,753.42
2048	254,343,337.57	214,253,351.62	22,645,190.00	3,859,680.00	495,101,559.19
2049	244,376,670.74	205,666,684.22	-	3,860,140.00	453,903,494.96
2050	234,410,003.91	197,080,016.82	-	-	431,490,020.73
2051	224,443,337.08	188,493,349.42	-	-	412,936,686.50
2052	214,476,670.25	179,906,682.02	-	-	394,383,352.27
2053	204,510,003.42	171,320,014.62	-	-	375,830,018.04
2054	-	162,733,347.22	-	-	162,733,347.22
TOTAL	$10,534,500,049.10	$8,692,800,110.00	$854,051,700.00	$428,019,080.00	$20,509,370,939.10

(a) Estimated issuance figures above are as of August 1, 2022. Estimated debt issuance amounts are updated throughout the fiscal year. The actual amount of bonds sold will depend on factors such as overall budget constraints, market conditions and other considerations. The state also expects to issue refunding bonds as market conditions warrant. The actual amount of bonds and refunding bonds sold will have a direct impact on the accuracy of the figures presented.

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