

## Matt Fong

State Treasu:er

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## CHAPTER I: EXECUTIVE SUMMARY

This 1998 debt affordability study provides a framework for determining both the affordability and the funding priorities of the State's infrastructure needs. By providing financial ratios using outstanding and projected levels of indebtedness, this report evaluates the debt position of the State's General Fund relative to its historic equivalents and to those of its peer group states. The trends exhibited in these debt ratios are routinely applied by the municipal bond market as a factor in determining credit ratings on general obligation debt. Lower credit ratios relative to other borrowers indicate a greater likelihood of debt repayment which translates into reduced borrowing costs for an issuer. The most widely used debt ratios are: debt to personal income, debt per capita and debt service to revenues.

## State Treasurer's Cautionary Borrowing Zone

The debt affordability report presented to the Legislature and Governor by the State Treasurer on October l, 1997 met the requirements of SB 2009 by formulating an answer to the question, "How much debt can the State afford?" The 1997 report articulated the need to establish a ceiling, not a target, on the amount of debt that can be authorized and issued to avoid impairing the State's credit ratings and other spending priorities. The 1997 report set the maximum borrowing amount at 6 percent, as measured by the ratio of annual General Fund debt service to General Fund revenues. Because General Fund revenue is subject to fluctuation as the economy changes, the 1997 report further advocated the concept of a cautionary zone of borrowing. To avoid exceeding the maximum of 6 percent, policymakers should carefully monitor debt ratios so that debt service as a percentage of General Fund revenues remains below the 6 percent maximum.

## Cautionary Zone of Borrowing Concept Adopted by State Legislature

Since release of the 1997 report, the $6.0 \%$ cautionary zone of borrowing developed by the State Treasurer has been accepted and exercised by the Legislature in determining capital spending priorities. Recently, the Legislature approved SB 50 (Greene) which would enact the Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 upon approval by the State electorate on November 3, 1998. In SB 50 (Greene) the State Legislature stated: "This bill would declare that it is the policy of the state to exercise prudence in undertaking the sale of bonds otherwise authorized for sale by this bill or any other act, and would encourage undertaking the sale of bonds not to exceed a cumulative debt service to General Fund revenue ratio of $6 \%$ unless the sale is in the best fiscal interest of the state."

## | Trends in Credit Ratios and Relation to State Medians/Peer Group

The State General Fund's ratios of debt per capita, debt to personal income and annual debt service to General Fund revenue should be annually compared to both Moody's medians and the debt ratios of the ten most populous states in the nation. A multi-year comparison of the State's debt ratios is necessary to produce a trend which accurately reflects the debt burden of the General Fund relative to its peer group states.

Matnagement of the State's General Fund indebtedness has improved since its high in fiscal year 1994-95. As is illustrated by the comparisons with Moody's medians, the State has reduced it: debt burden over the last three fiscal years and placed itself in position for upgrades of its credit ratings. Of most relevance to the debt affordability concept is the three-year annual improvement in the ratio of annual debt service to General Fund revenues. The State's current ratio of annual debt service to General Fund revenues is 4.4\%.

## Debt Affordability Concept to Establish Spending Priorities

The annual debt affordability study is a financial tool to assist State policymakers in setting priorities for capital spending and borrowing so that the highest priority needs can be met within the available inscal resources. Striking a balance between fiscal resources and capital needs in the short-term is essential to the long-term financial success of the State. By analyzing prospective debt issuances with a focus on future financial resources, a satisfactory compromise between the infrastructure needs of the present generation and the repayment obligations of future generations can be achieved. The alternatives of future Californians having substandard infrastructure or conversely being highly burdened by debt are both unattractive prospects for the State.

To the extent projected General Fund revenues are insufficient to maintain a ratio of annual debt service to General Fund revenues of less than 6.0\%, policymakers should consider addiiional debt a required exception and provide a fiscal plan to reduce the ratio below the caurionary zone.

## Capacity for Additional Debt within Cautionary Zone

Using the State Department of Finance's current General Fund revenue projections, we calculated the current debt affordability level of the General Fund. Our calculations indicate that the State's General Fund can support a maximum of $\$ 49.0$ billion in total new bond issuances from fiscai years 1998-99 through 2007-08, or a maximum of $\$ 4.9$ billion per year, without exceeding the $6.0 \%$ borrowing ceiling.

The current ten-year debt affordability level is a larger amount than the State Treasurer's Office determined to be affordable in its 1997 Debt Affordability Report. This increase is primarily due to the improving State economy and the higher level of General Fund revenues this economic growth has produced. While this higher level of debt affordability is good news for Californians, the dramatic improvement in just one year reflects the volatility of debt affordability projections and the importance of preparing this analysis on an annual basis. The record growth now present in the State's economy and tax base cannot be expected to continue indefinitely, therefore, the debt levels currently affordable will vary in the coming fiscal years.

## Debt Position to Reduce Borrowing Costs

Governmental entities that have incorporated the debt affordability concept into the capital planning process have benefited in terms of credit ratings upgrades. These improvements in credit quality allow governmental entities to issue debt at lower yields to investors and lower costs to taxpayers.

## CHAPTER 2: INTRODUCTION

## History of Debt Affordability Report

## Legislative Requirements of SB 2009

Sirce 1997, the State Treasurer has prepared a report analyzing the indebtedness of the State's General Fund. This annual analysis has included various indicators of fiscal health, such as the ratios of General Fund debt per capita and General Fund debt to personal income and annual General Fund debt service to General Fund revenues. These credit ratios are routinely applied by the municipal bond market as a factor in determining credit ratings on general obligation debt. Lower credit ratios relative to other borrowers indicate a greater likelihood of debt repayment which translates into reduced borrowing costs for an issuer. Thus, the conclusions drawn by this report are available to serve as a framework for determining both the affordability and funding priority of the State's current and future infrastructure needs.

Under the sponsorship of State Treasurer Matt Fong, SB 2009 (Killea) was approved by the Legislature and signed into law by Governor Pete Wilson in 1996. This legislation requiring the State Treasurer to prepare an annual debt affordability report to be presented to the Legislature and Governor by October $1^{\text {st }}$ of each year, formalized the importance of an annual assessment of General Fund supported debt in relation to funding decisions for essential capital projects. Listed below are the information requirements requested of the State Treasurer under SB 2009.

- A listing of authorized but unissued debt that the Treasurer intends to sell during the current fiscal year and the budget year and the projected increase in debt service as a result of those sales.
- A description of the market for State bonds.
- An analysis of the ratings of State bonds.
- A listing of outstanding debt supported by the General Fund.
- A listing of authorized but unissued debt that would be supported by the General Fund.
- A schedule of debt service requirements for the outstanding debt of 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 prepared debt ratios with the comparable debt ratios for the ten most populous states.


## Summary of 1997 Debt Affordability Report

The debt affordability report presented to the Legislature and Governor by the State Treasurer on October 1, 1997 met the requirements of SB 2009 by formulating an answer to the question, "How" much debt can the State afford?" The 1997 report articulated the need to establish a ceiling, not a target, on the amount of debt that can be authorized and issued to avoid
impairing the State's credit ratings and other spending priorities. The 1997 report set the maximum borrowing amount at 6 percent, as measured by the ratio of annual General Fund debt service to General Fund revenues. Because General Fund revenue is subject to fluctuation as the economy changes, the 1997 report further advocated the concept of a cautionary zone of borrowing. To avoid exceeding the maximum of 6 percent, policymakers should carefully monitor debt ratios so that debt service as a percentage of General Fund revenues remains below the 6 percent maximum.

In other words, an increase in annual debt service payments without a concomitant increase in revenues, resulting in a ratio of greater than $6.0 \%$, could reduce investor confidence and increase borrowing costs by placing the State's general obligation bond ratings in jeopardy of downgrades. The State's general obligation bond ratings are currently AA- / A1 / A+ from Fitch Investors Service ("Fitch"), Moody's Investors Service ("Moody's") and Standard \& Poor's Ratings Group ("S\&P"), respectively.

The 1997 report noted that the accelerated debt issuances and declining General Fund revenues from fiscal years 1990-91 through 1993-94 contributed to the State's General Fund ratings dropping from the triple-A level to the single-A level. These ratings reductions in turn increased the State's cost of borrowing by requiring higher interest payments.

Another highlight of the 1997 report was the conclusion that with only $10.0 \%$ of the General Fund budget at the discretion of the State Legislature, maintaining debt service payments below the $6.0 \%$ cautionary level would loosen budgetary constraints on the Legislature and allow them to react to changing policy priorities. The cited example was that an increase in debt service payments from $5.0 \%$ to $7.0 \%$ of General Fund revenues would reduce discretionary spending from $10.0 \%$ of the budget to $8.0 \%$ of the budget, or a $20 \%$ loss in discretionary spending.

Since release of the 1997 report, the $6.0 \%$ borrowing ceiling developed by the State Treasurer has been accepted and exercised by the Legislature in determining capital spending priorities. Recently, the Legislature approved SB 50 (Greene) which would enact the Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 upon approval by the State electorate on November 3, 1998. Voter approval of this act would authorize the issuance of State general obligation bonds in an amount not to exceed $\$ 9.2$ billion for the financing of school district capital improvements and higher education facility building construction. Of particular relevance to a discussion of debt affordability is the State's declaration of the following through SB 50 (Greene): "This bill would declare that it is the policy of the state to exercise prudence in undertaking the sale of bonds otherwise authorized for sale by this bill or any other act, and would encourage undertaking the sale of bonds not to exceed a cumulative debt service to General Fund revenue ratio of $6 \%$ unless the sale is in the best fiscal interest of the state."

## Concept of Debt Affordability

## Balance between Fiscal Resources and Capital Needs

The purpose of this 1998 debt affordability study is to provide a framework for evaluating both the affordability and the funding priorities of the State's infrastructure needs. By analyzing prospective debt issuances with a focus on future financial resources, a satisfactory compromise between the infrastructure needs of the present generation and the repayment obligations of future generations can be achieved. The alternatives of future Californians having substandard schools, parks and roads or conversely being highly burdened by debt are both unattractive prospects for the State. As either of these possibilities would significantly limit the future economic viability of the State relative to its peers, striking a balance between fiscal resources and capital needs is essential to the long-term financial success of the State. This debt affordability report is intended to assist state policymakers in setting priorities for capital spending and borrowing so that the highest priority needs can be met with the limited fiscal resources available.

## Debt Affordability Concept as an Effective Policy Instrument

Many governmental entities have been successful in analyzing future debt issuance in terms of projected financial and economic resources. These analyses have routinely stressed that resources as well as needs should determine a capital program. For example, to demonstrate to municipal credit analysts that it was managing well the often conflicting demands of infrastructure and financial stability, the State of Maryland was the first state to utilize the concept of debt affordability which is credited with helping the state maintain its triple-A ratings.

It is also possible to use the debt affordability concept to prioritize capital spending and borrowing. To the extent that projected resources are insufficient to meet $100 \%$ of a state's projected capital needs, the debt affordability analysis can indicate what percentage can be met so that state policymakers can allocate the borrowing to the highest priority projects.

## Value of Debt Affordability Concept

Governmental entities that have incorporated the debt affordability concept into the capital planning process have often benefited in terms of credit ratings upgrades. These improvements in credit quality allow governmental entities to issue debt at lower yields to investors and lower cost to taxpayers. Conversely, it should be noted that inattention to the affordability of new debt issuances possibly resulting in a ratings downgrade could result in increased borrowing costs to tax payers.

## CHAPTER 3: CURRENT STATE DEBT POSITION

## Net Tax-Supported Debt of General Fund

The net tax-supported debt calculations routinely included in the official statements of the State's bond offerings are consistent with the methodology used by the bond rating agencies. Specifically, Moody's excludes both borrowings with final maturities of less than one year, such as commercial paper and revenue anticipation notes, and long-term obligations issued by the State's agencies or authorities which have self-supporting forms of repayment and no recourse to
!' General Fund revenues. After an examination of each item of indebtedness as of June 30, 1998, the General Fund's net tax-supported debt was calculated to be $\$ 21,572,386,000$.

|  | Authorized | Outstanding | AUTHORLZED AND Unissted* |
| :---: | :---: | :---: | :---: |
| General Obligation Bonds (Non-Self Liquidating) |  |  |  |
| Clean Air, Clean Water, Passenger Rail \& Transportation | \$ 5,460,000 | \$ 2,126,395 | \$ 1.926.210 |
| Earthquake Safety | 2.450 .000 | 484.745 | 1.899.995 |
| Fish. Wildife \& Coastal | 861.000 | 599.095 | 43,480 |
| Hazardous Substances | 100,000 | 44.600 |  |
| Higher Education | 2,350.000 | 1.631,635 | 139.325 |
| Housing \& Homeless | 450,000 | 202.985 |  |
| Library Construction | 75.000 | 53.350 | .8.625 |
| Park, Parklands. Beach. Recreational \& Historical | 1,370.000 | 435.825 | 3.550 |
| Prison, Jail \& Correctional | $4,087.000$ | 2.356 .825 | 84.600 |
| Public Education \& School Facilities/Building | 10.790.000 | 6,741.431 | 1,702.344 |
| Safe Drinking Water | 425.000 | 235.880 | 28.765 |
| Senior Center | $50,000$ | $20,000$ |  |
|  | $28.468 .000$ | $14.932 .766$ | 5,836.894 |
| Enterprise Fund Bonds (Self Liquidating) 285 |  |  |  |
| Harbor Development | 60,000 | 285 | - |
| School Building Aid/Earthquake Reconstruction | 110.000 | 3.750 | $30150{ }^{-}$ |
| Veterans | 5.610.000 | 2.881 .565 | 301.500 |
| Water Resources | $\frac{1,750,000}{7,530,000}$ | 1,021,350 | $\frac{167,600}{469.100}$ |
|  | 7,530,000 | 3,906,950 | 469.100 |
| Total General Fund General Obligation Debt | \$ 35,998,000 | \$ 18,839,716 | \$ 6,305,994 |
| Lease-Purchase Bonds |  |  |  |
| California Community Colieges | \$ 688.079 | \$ 646.230 | \$ 41.849 |
| California State University | $769.580$ | $769.580$ |  |
| Department of Corrections | $2.886,013$ | $2.830 .744$ | 55.269 |
| Energy Efficiency Program | 421.200 | 141.980 | 279.220 |
| Other State Building | N/A | 770.230 | N/A |
| State Office Buildings | 1.474 .549 | . 324.105 | 1,150.444 |
| University of California | 1.156 .751 | 1.156 .751 | - |
| East Bay State Building Authority (Special Fund Supported) | N/A | 88,960 | N/A |
| San Bernardiao JPFA (Special Fund Supported) | N/A | 63.755 | N/A |
| San Francisoo State: Building Authority (Special Fund Supported) | $\frac{\mathrm{N} / \mathrm{A}}{}$ | - 54,270 | N/A |
|  | 7.396.172 | 6.846 .605 | 1.526 .782 |
| Total General Fund Debt | \$ 43.394.172 | \$ 25,686.321 | \$ 7,832,776 |
| GROSS TAX-SUPPORTED DEBT |  | \$ 25,686,32! |  |
| LESS |  |  |  |
| Enterprise Fund Bonds (Self Liquidating) |  | \$ 3.906 .950 |  |
| Lease-Purchase Bonds (Special Fund Supponed) |  | 206, 28.5 |  |
|  |  | \$ $\downarrow .113,935$ |  |
| NKT TAX-SUPPORTED DEBT |  | \$ 21,572,386 |  |
|  Sinerce: Shute al Cillifurnib. Offict of the 7 recusurer |  |  |  |

## Debt Ratios

## Value of Key Debt Ratios

In evaluating debt position, credit analysts calculate and compare an entity's debt ratios relative to its historic equivalents and to those of its peer group states. These ratios taken in tandem with the computation of net tax-supported debt can have an impact on bond ratings, which in turn affect borrowing costs. The most widely used debt ratios are: debt to personal income, debt per capita and annual debt service to revenues.

The ratio of debt to personal income reflects the potential reserves available for repayment of an issuer's debt. The ability of governments to transform this income into revenues through taxation makes personal income a strong indicator of a borrower's ability to repay its obligations. The ratio of debt per capita is a relative measure useful for comparing issuers with varying wealth levels, given that the demands for governmental services and facilities made of a public entity generally move in correlation with the size of its populace. Calculation of the ratio of net tax-supported debt service to general fund revenues is particularly relevant to the debt affordability concept. This ratio reflects the degree of flexibility the issuer has within its budget and thus the ability to adjust expenditures for unanticipated contingencies.

As indicated, in the past Moody's has calculated median debt ratios for all states. In 1998, the median debt per capita ratio for states as calculated by Moody's was $\$ 446$. The Moody's state median for debt to personal income was $1.9 \%$ for 1998. Please see Appendix I for detail on Moody's 1998 median ratios for all states. Moody's has not published a median for annual debt service to revenues since 1996; however, the comparison of state debt ratios continues to be used by rating agencies and investors.

## Trend in General Fund Debt Ratios

The following three tables demonstrate the trend in California General Fund ratios of debt per capita, debt to personal income and annual debt service to General Fund revenue over the ten-year period from fiscal year 1987-88 through fiscal year 1997-98. Please note that although SB 2009 (Killea) requires computation of the ratio of debt to estimated full-value of property, the disparities between assessed and market valuations of property makes this ratio an inaccurate indicator of the State's fiscal position.

Also shown below are the historic Moody's medians for these three ratios as well as the performance of the Gieneral Fund relative to these medians. It should be acknowledged that the comparison of any one debt ratio at one point in time cannot fully describe the debt affordability of an issuer's obligations relative to those of another. Only when considered concurrently do the historic trends in all three of these debt ratios serve to capture the variability that existed among these peer group members. An annual comparison of the State's debt ratios to the Moody's medians is necessary to produce a trend which accurately reflects the debt burden of the General Fund relative to its peer group.

As is shown below, the ratio of General Fund debt per capita grew rapidly from fiscal year 1987-88 to fiscal year 1994-95, but has since moderated. At the end of fiscal year 1997-98, the State's debt per capita ratio was 1.47 times greater than Moody's 1998 median of $\$ 446$. This is an improvement over fiscal year 1994-95 when the State's debt per capita ratio was 1.57 times greater than Moody's median.

| GENERAL FUND DEBT PER CAPITA (FY 1987-88 through FY 1997-98) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fiscal | GF Net Tax | State | Debt per | MOODY'S | State Ratio |
| Year | SUPPORTED DEBT | population | Capita | Median | Relative to Median |
| $1987-88$ | \$4,704.817,000 | 28.323.000 | \$166 | \$300 | 0.55x |
| 1988-89 | 5,603,652,000 | 29.063.000 | 193 | 339 | 0.57x |
| 1989-90 | 6,615.190,000 | 29.142.000 | 227 | 349 | 0.65 x |
| 1990-91 | 9,651,951,000 | 29,976,100 | 322 | 345 | 0.93 x |
| 1991-92 | 14,283,908,000 | 30,565,000 | 467 | 364 | 1.28x |
| 1992-93 | 17,334.904.000 | 31,188,000 | 556 | 391 | 1.42x |
| 1993-94 | 19,465,014,000 | 31.517.000 | 618 | 399 | 1.55x |
| 1994-95 | 20,468,488.000 | 31,790,000 | 644 | 409 | 1.57x |
| 1995-96 | 20,167.323.000 | 32,063,000 | 629 | 431 | 1.46x |
| 1996-97 | 20,425,580,000 | 32,383,000 | 631 | 422 | 1.49x |
| 1997-98 | 21,572.386,000 | 32,957,000 | 655 | 446 | 1.47x |
| Sources: Stute of California. Office of the State Treasurer; State of California, Department of Finance; Moodv's Investors Service |  |  |  |  |  |

Similar to the trend in the State's debt per capita ratio, the ratio of debt to personal income rose to a high of $2.7 \%$ in fiscal year 1994-95, but has since improved to $2.3 \%$ in fiscal year 1997-98. This $2.3 \%$ ratio is 1.22 times greater than Moody's 1998 median of $1.9 \%$.

| GENERAL FUND DEBT TO PERSONAL INCOME (FY 1987-88 through FY 1997-98) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fiscal | GF Net Tax | State | DEBTTO | MOODY'S | State Ratio |
| Year | Supported Debt | Personal income | Personal Income | MEdian | Relative to Median |
| 1987-88 | \$4,704.817.000 | \$530.968.000.000 | 0.9\% | 2.3\% | 0.39 x |
| 1988-89 | 5,603,652.000 | 571.119.000,000 | 1.0 | 2.3 | 0.43 x |
| 1989-90 | 6,615,190,000 | 573,300,000,000 | 1.2 | 2.2 | 0.52x |
| 1990-9] | 9,651,951.000 | 617.700,000,000 | 1.6 | 2.2 | 0.71 x |
| 1991-92 | 14,283, 908.000 | 635.000,000,000 | 2.2 | 2.2 | 1.02x |
| 1992-93 | 17,334,904,000 | 697.911,000.000 | 2.5 | 2.2 | 1.13x |
| 1993-94 | 19,465,014.000 | 722,002,000,000 | 2.7 | 2.1 | 1.28x |
| 1994-95 | 20,468,488.000 | 764,435.000,000 | 2.7 | 2.1 | 1.28 x |
| 1995-96 | 20,167,323.000 | 807.975.000.000 | 2.5 | 2.1 | 1.19 x |
| 1996-97 | 20,425,580,000 | 867.200.000.000 | 2.4 | 2.1 | 1.12x |
| 1997-98 | 21,572,386,000 | 929.400,000.000 | 2.3 | 1.9 | 1.22x |
| Sources: State of California, Office of the State Treasurer: State of California. Department of Finance: UCLA Anderson School Forecast. September 1998; Mood''s Investors Service |  |  |  |  |  |

Shown on the following page are historic ratios of annual General Fund debt service to General Fund revenues. At 4.4\%, the fiscal year 1997-98 annual debt service to revenues ratio is a continuing improvement over the $5.2 \%$ recorded in fiscal year 1994-95. Unfortunately, Moody's only calculated the median for this ratio from fiscal year 1993-94 to fiscal year 1995-96. In fiscal year 1995-96, the State's ratio of $5.3 \%$ was 1.51 times greater Moody's median.

## CENERAL FUND DEBT SERVICE TO GENERAL FUND REVENUES <br> (FY 1987-88 through FY 1997-98)

| FISCAL YEAR | (ifineral Fund) Debt Service | Genfral Fund Revenuts | Debt Service <br> to Revenues | Mondy's <br> Meidian | State Ratio <br> Relative to Meidian |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1987-88 | \$598.049.304 | \$3.3,041,398,000 | 1.8\% | $n / a$ | $n / a$ |
| 1988-89 | 598.664 .860 | 37,651,878,000 | 1.6 | $n / a$ | $n / a$ |
| 1989-90) | 755,505.089 | 38,546,178,000 | 2.0 | $n / a$ | $n / a$ |
| 1990.91 | 953,231,464 | 40,563,04 1,000 | 2.4 | $n / a$ | $n / a$ |
| 1991-92 | $1.369 .328,841$ | 42,925.671,(0)0 | 3.2 | $n / a$ | $n / a$ |
| 1992-93 | 1,748,798.519 | 42.757,910,000 | 4.1 | $n / a$ | $n / a$ |
| 1993-94 | 2,111.494,8.37 | 40,527,732,000 | 5.2 | 3.6\% | 1.45x |
| 1994-95 | 2,329.850,568 | 42,690,000,000 | 5.5 | 3.4 | 1.61 x |
| 1995-96 | 2,444,036,7,39 | 46,296,000,000 | 5.3 | 3.5 | 1.51 x |
| 1996-97 | 2,481.594,607 | 49,210,000,000 | 5.0 | $n / a$ | $n / a$ |
| 1997-98 | 2,416.062,610 | 54,824,000,000 | 4.4 | $n / a$ | $n / a$ |

Sources: State of California. Office of the State Controller: State of California. Department of Finance: Moodv's Investors Service

Management of the State's General Fund indebtedness has improved since its high of , fiscal year 1994-95. As is illustrated by the comparisons with Moody's medians, the State has reduced its debt burden over the last three fiscal years and placed itself in position for upgrades of its credit ratings. Of most relevance to the debt affordability concept is the threeyear annual improvement in the ratio of annual debt service to General Fund revenues. It should be noted, however, that a reduction in revenues or increase in borrowing will adversely affect this ratio.

## Rapidity of Retirement of General Fund Debt

In assessing debt burden, credit analysts also examine the rapidity at which long-term obligations are repaid as it measures the extent to which repayments create capacity for future debt issuance. The rule-of-thumb for this ratio is the retirement of $25.0 \%$ of principal in 5 years and $50.0 \%$ of principal retired in 10 years. With the General Fund's June 30, 1998 net taxsupported debt of $\$ 21.6$ billion, $\$ 5.4$ billion and $\$ 10.8$ billion of principal should be retired within 5 and 10 years, respectively. Based on current schedules, the General Fund will amortize $\$ 6.5$ billion, or $30.1 \%$, by fiscal year 2002-03 and $\$ 12.1$ billion, or $55.9 \%$, by fiscal year 2007-08; in both instances, the State's general obligation debt is repaid more quickly than that proscribed by the rule-of-thumb.

The following table illustrates the retirement of General Fund debt every five years, commencing with fiscal year 1998-99. This above average rapidity of repayment is not only viewed favorably by municipal credit analysts but also creates greater capacity for the financing of infrastructure improvements through future bond issuances.

|  | General Obligation Bonds |  | Lease Revenue Ronds |  | TOTAL |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Re:Tiktis Wition | Principal ( $\$ 000)$ | Cumulative: \% | Principal $(\$ 000)$ | Cumulative \% | Principal ( $\$ 000)$ ) | Cumulative \% |
| 1 to 5 years | \$5.088.8.34 | 34.1\% | \$1,404,411 | 21.2\% | \$6.493,246 | 30.1\% |
| 6 to 10 years | 4,073,642 | 61.4 | 1,486,874 | 43.5 | 5.560,517 | 55.9 |
| 11 to 15 years | 2.791 .969 | 80.1 | 1,466.774 | 65.6 | 4.258.743 | 75.6 |
| 161020 years | 1,280,410 | 88.6 | 1,457,035 | 87.6 | 2.737.445 | 88.3 |
| 21 to 25 years | 1,207,005 | 96.7 | 819,280 | 99.9 | 2,026,285 | 97.7 |
| 26 to 30 years | 490,905 | 100.0 | 5,245 | 100.0 | 496,150 | 100.0 |
|  | \$14,932,766 |  | \$6,639.620 |  | \$21.572,386 |  |

Source: State of California. Office of the State Treasurer

## Comparison of State General Fund Debt Ratios

An issuer's credit position is not only determined by the trend in its debt ratios but also by comparisons to the debt ratios of those of similar entities. Pursuant to the requirements of SB 2009, the table below contains the debt ratio calculations for the ten most populous states in the nation. The ratios for debt to personal income and debt per capita were obtained from Moody's publication "1998 State Medians"; however, Moody's no longer publishes ratios for debt service to General Fund revenue. The calculations for debt service to General Fund revenue were based on fiscal year 1996-97 data which is the most currently available for all the states. Relative to the ten state medians, the State's ratios of debt per capita and debt to personal income were very favorable. At $4.4 \%$ of revenues, the annual debt service of the General Fund relative to revenues was below the $6.0 \%$ borrowing ceiling and only slightly above the ten state median of 4.1\%.

| State | Debt to <br> Personal Income | DEbT PER CAPITA | Debt Service to GF Revenue | General Obligation Ratings FITCH/MOODY'S/S\& ${ }^{(2)}$ |
| :---: | :---: | :---: | :---: | :---: |
| Californial' | 2.3\% | \$655 | 4.4\% | AA-/AI/A+ |
| Texas | 1.4 | 300 | 1.5 | $\mathrm{AA} / \mathrm{Aa} 2 / \mathrm{AA}$ |
| New York | 6.5 | 1.914 | 9.4 | $\mathrm{A}+/ \mathrm{A} 2 / \mathrm{A}$ |
| Florida | 3.4 | 798 | 5.2 | AA/ Aa $/$ / AA + |
| Pennsylvania | 2.0 | 501 | 2.8 | AA- / AI/ AA- |
| Illinois | 2.7 | 728 | 4.4 | AA / Aas / AA |
| Ohio | 2.5 | 591 | 4.5 | $\mathrm{AA}+/ \mathrm{Aal} / \mathrm{AA}+$ |
| Michigan | 1.6 | 381 | 2.1 | $\mathrm{AA} / \mathrm{Aa} 2 / \mathrm{AA}$ |
| New Jersey | 5.1 | 1.576 | 3.8 | AA / Aal / AA |
| Georgia | 2.9 | 647 | 3.5 | AAA / Aaa / AAA |
| Ten State Median | 2.7 | 650 | 4.1 |  |

Source: "1998 State Debi Medians", Moody's Investors Service, August 1998
${ }^{\text {a }}$ ) Source: 1997 Comprehensive Annual Financial Reports of the States
${ }^{12}$ As of September 1. 1998.
(i1) The 1998 Moody's Medians reflect state net-tax supported debt as of the end of 1997 . estimated population in 1997. and 1996 personal income as reported by the U. S. Deparment of Commerce. Bureou of Ecomomic Anadysis. We have updated the State of Californiat's ratios in this table to reflect the calcalations shown in previous tables which are based on more recent projections of popalation and personat income, and tw include net tax-supported deht as of June 30. 1998.

## analysis of State Credit Ratings

## Rating Agencies' Rationale for State Ratings

In assigning ratings, rating agencies consider four factors contributing to an issuer's ability and willingness to pay debt service: fiscal factors, economic factors, debt factors and administrative/management factors. Weaknesses in one area may be well balanced by strengths in another. These four factors are summarized below.

Fiscal Factors: Rating agencies' examination of the results of operations includes a review of actual fiscal performance versus planned budget performance, with deviations from the plan to be explained. The General Fund financial statement is examined with emphasis on current financial position and fund balances, as well as three- to five-year trends in planning and budgeting procedures. Pension liabilities are also important. Financial results have perhaps the most significant impact on the rating process.

Economic Factors: This evaluation includes the economic strength of the tax base which is reflected in employment and income. Economic vitality and adequate tax structure are key determinants in the ability to repay debt.

Debt Factors: The total overall debt burden, debt history, debt trends and type of security pledged to support debt repayment is considered in this evaluation. States are also evaluated on their ability to effectively plan and implement programs for capital improvements.

Administrative/Management Factors: An examination of the form of government and an assessment of issuer's ability to implement plans as well as fulfill legal requirements are evaluated. The capaioilities of managers are seen as vital ingredients in assessing credit quality. The willingness to make hard decisions, the development of financial policies and the reliability and continuity of accounting and financial information that are regularly updated are key elements.

## State GO Bond Ratings

RATINGS (AS OF SEPTEMBER 1, 1998)

|  |  | MOODY'S |  |
| :---: | :---: | :---: | :---: |
|  | FITCH | INVESTORS | STANDARD |
| ISSUER/TYPE | IBCA | SERVICE | \& POOR'S |
| General Obligation Bonds | AA- | Al | A+ |

## State Lease Revenue Bonds

RATINGS (AS OF SEPTEMBER 1, 1998)

|  |  | MOODY'S |  |
| :--- | :---: | :---: | :---: |
|  | FITCH | INVESTORS | STANIJARD |
| ISSUER/TYPE | IBCA | SERVICE | \& POOR'S |
| Lease Revenue Bonds |  |  |  |
| California Community Colleges | A | A 2 | A |
| Department of Corrections | $\mathrm{A}-$ | A 2 | A |
| Energy Efficiency Programs | A | A 2 | $\mathrm{~A}=$ |
| University of California | $\mathrm{A}+$ | Aa 3 | $\mathrm{~A}+$ |
| Califomia State University | A | A 2 | A |
| State Office Buildings | $\mathrm{A}-$ | A | A |

General obligation bonds are secured by a pledge of the State's full faith and credit to repay and are backed by tax-based revenue streams. Lease revenue bonds, however, are subject to abatement if the asset being financed cannot be used due to damage, destruction, or it is not constructed. The project must provide beneficial use and occupancy in order for lease payments to be made. As a result, in addition to the criteria listed above, rating agencies also assess these possibilities when providing a rating. Therefore, lease revenue bonds are typically rated below general obligation bonds.

## CHAPTER 4: AFFORDABILITY OF FUTURE DEBT <br> Resources Available for Future Debt Service

The State's ability to repay its current and future debt obligations will depend on the financial conditions and other resources available at that time, including personal income and General Fund revenues. To the extent that an improving economy and demographic growth can be captured through increased tax revenues, the capacity of the General Fund to issue and support additional debt is enhanced. Thus, estimations of future increases in debt capacity are direct functions of the accuracy with which projections of the State's population, personal income and General Fund revenues are made.

## Assumed Growth Scenario for State Population, Personal Income and General Fund Revenues

In calculating prospective debt ratios we used the growth scenario for the State's population, personal income and General Fund revenues illustrated in Appendix II. Population projections for fiscal years 1998-99 through 2007-08 were provided by the State Department of Finance. The UCLA Anderson School's September 1998 forecast was used to project annual personal income figures from fiscal year 1998-99 through fiscal year 2007-08. The State Department of Finance's most recent estimates were used to project General Fund revenues for fiscal years 1998-99 through 2007-08.

## State Treasurer's FY 1998-99 and FY 1999-00 Debt Issuance Plans

The General Fund's outstanding net tax-supported debt of $\$ 21.6$ billion currently requires the payment of approximately $\$ 34.1$ billion in debt service from fiscal year 1998-99 through final maturity of fiscal year 2027-28. Appendix III illustrates the annual debt service requirements of State's General Fund outstanding general obligation and lease revenue bonds.

Table 1 of Appendix IV details the prospective ratios of debt per capita, debt to personal income, and debt service to General Fund revenues on this outstanding indebtedness over the ten fiscal years from 1998-99 through 2007-08. The prospective ratios for fiscal years 1998-99, 2002-03 and 2007-08 are summarized in the following table. In preparing these projections of debt service ratios, the assumptions regarding per annum growth in population, personal income and General Fund revenues detailed in Appendix $\amalg$ are applied. As is illustrated, these ratios improve over the period due to the amortization of $\$ 12.1$ billion in outstanding principal through fiscal year 2007-08 and as a result of the aforementioned growth assumptions. Over time, additional capacity is created for the State to undertake new borrowings which meet existing, yet unfulfilled, capital needs. This can be accomplished and still keep the debt levels of the General Fund below the aforementioned $6.0 \%$ borrowing ceiling.

DEBT RATIOS FOR EXISTING GENERAL FU.VI DEBT

| DEBT RATIOS FOR EXISTING GENERAL FU.VI) DEAT |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | FY | FY | FY | Moobry's |
|  | 1998-99 | 2002-03 | 2007-08 | Mtilian* |
| Debt per Capita | \$606 | \$420) | $\$ 243$ | \$446 |
| , Dehe eo Personal Income | 2.1\% | 1.2\% | 0.6\% | $1.9 \%$ |
| Debe Service to General Fund Revenues | 4.4 | 3.1 | 1.8 | 3.5 |

[^0]Detailed below are the State Treasurer's estimates of General Fund supported bond issuances for fiscal years 1998-99 and 1999-00.

| PROPOSED GENERAL FUND SUPPORTED BOND ISSUANCE FY 1998-99 AND FY 1999-00 |  |  |  |
| :---: | :---: | :---: | :---: |
| : | FY 1998-99 | FY 1999-00 | TOTAL |
| General Obligation Bonds (Non-Self Liquidating) | \$2,000,000,000 | \$2,000,000,000 | \$4,000,000,000 |
| Lease Revenue Bonds |  |  |  |
| California Community Colleges | 45,000,000 |  | 45,000,000 |
| Department of Corrections | 34,000,000 |  | 34.000.000 |
| Energy Efficiency Program | 15,000,000 | 15,000,000 | 30,000,000 |
| Other State Building | 60,000,000 | 185.000,000 | 245,000,000 |
| State Office Buildings | 70,000,000 | 79,000,000 | 149,000,000 |
| Veterans | 13,000,000 |  | 13,000,000 |
| Department of Forestry | 11,000,000 |  | 11,000,000 |
| Other | 200,000,000 |  | 200.000.000 |
| SUBTOTAL | 448,000,000 | 279,000,000 | 737,000,000 |
|  |  |  |  |
| TOTAL | \$2,448,000.000 | \$2.279.000,000 | \$4,727,000,000 |
| Source: Siate of California, Office of the State Treasurer |  |  |  |

Following the issuance of these $\$ 4.727$ billion in obligations, total debt service would increase by approximately $\$ 9.2$ billion, from the current $\$ 34.1$ billion to $\$ 43.3$ billion, over fiscal years 1998-99 through 2027-28. Including the State Treasurer's estimates of General Fund supported bond issuances for fiscal years 1998-99 and 1999-00, a maximum ratio of annual debt service to General Fund revenues of $4.42 \%$ is reached in fiscal year 2000-01 and the $6.0 \%$ borrowing ceiling is not exceeded. Table 2 of Appendix IV incorporates this additional $\$ 9.2$ billion in debt service into the three selected ratios; the prospective ratios for fiscal years 1998-99. 2002-03 and 2007-08 are highlighted below.

## DEBT RATIOS FOR EXISTING GENERAL FUND DEBT PLUS

 STATE TREASURER'S PROJECTED BOND ISSUANCES FOR FISCAL YEARS 1998-99 AND 1999-00|  | FY | FY | FY |  | MOODY'S |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1998-99$ | $2002-03$ | $2007-08$ | MAXIMUM | MEDIAN |

* Deht per capita and debt w personal income medians are for 1998; debt service to general fund revemues median is for 1996.


## Capacity for Additional Debt

## Cautionary Zone Concept from 1997 Debt Affordability Report

Using the State Treasurer's estimation of the maximum amount of General Fund debt to be authorized and issued in fiscal years 1997-98 and 1998-99, the concept of a "cautionary zone of borrowing" was developed as a policy guideline for legislators managing the State's General Fund outstanding indebtedness. Applying the ratio of annual General Fund debt service to General Fund revenues, a ceiling of $6.0 \%$ was established. It was anticipated that the application of this concept would avert the issuing of new debt at levels which could place the State's general obligation bond ratings in jeopardy of downgrades and thereby both reduce investor confidence and increase borrowing costs.

## Capacity for Additional Debt within Cautionary Zone

Using the State Department of Finance's projections of General Fund revenues to calculate a maximum prospective ratio of annual debt service to General Fund revenues, we have calculated the current debt affordability level to be a maximum of $\$ 49.0$ billion in new bond issuances ( $\$ 4.9$ billion per year) from fiscal years 1998-99 through 2007-08. These bond issuances assume a thirty year final maturity, $6.0 \%$ true interest cost and level annual principal repayment.

The fiscal year 1998-99, 2002-03 and 2007-08 values for the three debt ratios following $\$ 49.0$ billion in new bond issuances are highlighted below. Please see Table 3 of Appendix IV for supporting computations.

| DEBT RATIOS FOR EXISTING GENERAL FUND DEBT <br> PLUS \$49.0 IN PROJECTED BOND FINANCINGS |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| (COMPLIANCE WITH 6.0\% CAUTIONARY ZONE OF BORROWING) |  |  |  |  |
|  | FY | FY | FY | MOODY's |
| Debt per Capita | $1998-99$ | $2002-03$ | $2007-08$ | MEDIAN $^{*}$ |
| Debt to Personal Income | $2.55 \%$ | $\$ 1,056$ | $\$ 1.308$ | $\$ 446$ |
| Debt Service to General Fund Revenues | 4.4 | $3.05 \%$ | $3.04 \%$ | $1.9 \%$ |
|  |  | 5.7 | 5.9 | 3.5 |

* Debt per capita and debr to personal income medians are for 1998; debt service to general fund revenues median is for 1996.

The current ten-year debt affordability level of $\$ 49.0$ billion is a larger amount than the State Treasurer's Office determined to be affordable in its 1997 Debt Affordability Report. This increase is primarily due to the improving State economy and the higher level of General Fund revenues this economic growth has produced. While this higher level of debt affordability is good news for Californians, the dramatic improvement in just one year reflects the volatility of debt affordability projections and the importance of preparing this analysis on an annual basis. The record growth now present in the State's economy and tax base cannot be expected to continue indefinitely, therefore the future debt levels currently affordable will vary in the coming fiscal years.

Although the issuance of $\$ 49.0$ billion in additional tax-supported debt would permit the State to stay below the $6.0 \%$ borrowing ceiling. the State's key debt ratios would rise over this period to levels much higher than the Moody's 1998 Medians. Depending upon the amounts of
debt issued in other states, the State's relative debt position could change from its current "moderate" level to exceed the medians.

Finally, the ability of the State to maintain its high credit ratings with this higher debt load will depend, in part, on strengths in other areas such as financial results, economic performance and legislative actions. State policymakers must carefully allocate the debt capacity of the General Fund to the highest priority projects and thereby ensure that the needs of California's citizens and its growing economy can be met.

## CHAPTER 5: DESCRIPTION OF MARKET FOR STATE BONDS <br> Borrowing Rates During FY 1997-98

During the twelve months of fiscal year 1997-98, interest rates declined significantly, as illustrated in the chart below of the Bond Buyer 20-Bond General Obligation Bond Index.


The State Treasurer's Office was able to take advantage of the favorable interest rate environment by refinancing outstanding bonds to reduce the State's borrowing cost. These actions by the State Treasurer have saved $\$ 124$ million in general fund future debt service costs and $\$ 178$ million in total State of California future debt service costs. Total savings are detailed in the following table:

| STATE OF CALIFORNIA <br> FY 1997-98 REFUNDING SAVINGS |  |
| :---: | :---: |
| General Fund Debt Service Savings |  |
| General Obligation Debt Service Savings | \$83,801,893 |
| Lease Revenue Debt Service Savings | 40,383,044 |
| SUBTOTAL: | \$124,184,937 |
| Other Debt Service Savings | 53,509,841 |
| TOTAL SAVINGS: | \$177.694,778 |

## Investors in State General Obligation Bonds

The investor base for the State's tax-exempt bonds include the following categories of investors: (1) individuals living in California; (2) tax-exempt mutual funds; (3) casualty insurance companies; (4) other corporations and (5) other individuals. The State Treasurer's Office has initiated an active investor relations program including a monthly newsletter The Treasury Note and a comprehensive site on the Internet which provides access to all bond prospectuses and other important State financial information. The demand for State bonds increases as our investor base is expanded, which reduces borrowing costs.

The table below lists the top holders of State debt as of July 31, 1998. These investors have increased their holdings of State obligations by approximately $\$ 651.7$ million. to $\$ 2.84$ billion, since 1997. This increased investment in the State's debt can be viewed both as an affirmation of the continuing improvement in the credit quality of the State and as positive feedback to the State Treasurer's investor relations program.

| TOP HOLDERS OF STATE OF CALIFORNIA BONDS (\$000's) |  |  |
| :--- | :---: | :---: |
| FUND MANAGEMENT COMPANY | PORTFOLIO BALANCE | CHANGE SINCE 1997 |
| Franklin Advisers Inc. | SI,033,670 | $+\$ 547,315$ |
| AIG Global Investment Corp. | 387,335 | $-48,550$ |
| State Farm Mutual Auto. Ins. | 363,370 | $+10,000$ |
| Putnam Investment Mgmt., Inc | 267,885 | $-49,990$ |
| John Nuveen and Company Inc. | 250,575 | $+58,195$ |
| Vanguard Group Incorporated | 202,115 | $+40,725$ |
| Saint Paul Companies Inc. | 119,280 | +0 |
| Wells Fargo Investment Mgmt. | 108,445 | $+36,575$ |
| Merrill Lynch Asset Mgmt. | $\underline{107,480}$ | $+57,380$ |
| TOTAL | $\$ 2,840,155$ | $+\$ 651,650$ |

Source: CDA/Spectrum. as published on Thomson Municipal News, July 31. 1998

The State Treasurer took additional steps to increase the market for the State's bonds in 1996 with the introduction of the State's commercial paper borrowing program. Investors in the State's tax-exempt commercial paper are primarily tax-exempt money market mutual funds and corporations who would otherwise not invest in State bonds. Thus, the commercial paper program opened up a new investor base for the State and, by reducing the amount of long-term bonds that would otherwise be sold, served to increase demand for the remaining long-term bonds. Use of commercial paper in lieu of long-term bonds to fund construction costs has resulted in accumulated estimated savings of $\$ 32.5$ million

## Improved Trading Value

During fiscal year 1997-98, the relative trading value of the State's General Obligation bonds improved from approximately five basis points ( $0.05 \%$ ) above the average of double-A rated states to the point where the State's bonds now trade at interest rates equivalent to double-A rated states, in spite of the fact the State's bonds were rated at single-A levels by Moody's and $S \& P$ during this period. The chart below shows the dramatic improvement in the relative trading value of the State's bonds since 1995, when the State's debt carried interest rates at least 20 basis points ( $0.20 \%$ ) above the double-A state average. This improvement in trading value is due in part to the State Treasurer's investor relations program and its aggressive marketing of the State's value as a long-term investment. The improvement reduces the money State taxpayers must spend on interest costs for State borrowing.


## State Bond Issuance During Fiscal Year 1997-98

The State Treasurer issued more than $\$ 8.6$ billion in securities on behalf of the General Fund during fiscal year 1997-98. Of these securities issued, $\$ 1.6$ billion in general obligation new money was used to refund commercial paper issued.

STATE OF CALIFORNIA
GENERAL FUND
FY 1997.98 DEBT ISSUANCE (000'S)

|  |  | NEW MONEY | REFUNDING | CASH FLOW | TOTAL |
| :--- | ---: | ---: | ---: | ---: | ---: |
| General Obligation Bonds ${ }^{(1)}$ | $\$ 1,600,000$ | $\$ 981,230$ | $n / a$ | $\$ 2,581,230$ |  |
| General Obligation Commercial Paper | $1,822,000$ | $n / a$ | $\mathrm{n} / \mathrm{a}$ | $1,822,000$ |  |
| Lease Revenue Bonds | 679,835 | 545,100 | $\mathrm{n} / \mathrm{a}$ | $1,224,935$ |  |
| Revenue Anticipation Notes |  | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\$ 3,000,000$ | $3,000,000$ |
|  |  | $\$ 4,101,835$ | $\$ 1,526,330$ | $\$ 3,000,000$ | $\$ 8.628,165$ |

[^1]
## CHAPTER 6: EONCLUSION

This 1998 report analyzing the outstanding indebtedness and debt affordability of the State's General Fund has included various financial ratios which are routinely applied by the municipal bond market as factors in determining credit ratings on general obligation debt. Lower credit ratios relative to other borrowers indicate a greater likelihood of debt repayment, which translates into reduced borrowing costs for an issuer. The conclusions outlined below are available to serve as a framework for determining the affordability of the State's future infrastructure needs.

## Utilize Debt Affordability Concept to Establish Spending Priorities

By analyzing prospective debt issuances with a focus on future financial resources, a satisfactory compromise between the infrastructure needs of the present generation and the repayment obligations of future generations can be achieved. The alternatives of future Californians having substandard infrastructure or conversely being highly burdened by debt are both unattactive prospects for the State. Striking a balance between fiscal resources and capital needs in the short-term is essential to the long-term financial success of the State. The debt affordability concept is intended to assist state policymakers in setting priorities for capital spending and borrowing so that the highest priority needs can be met with the limited fiscal resources available, To the extent projected General Fund revenues are insufficient to maintain a ratio of annual debt service to General Fund revenues of less than $6.0 \%$, policymakers should bond finance only the highest priority projects.

## Monitor Debt Position to Reduce Borrowing Costs

Governmental entities that have incorporated the debt affordability concept into the capital planning process have often benefited in terms of credit ratings upgrades. These improvements in credit quality allow governmental entities to issue debt at lower yields to investors and lower costs to taxpayers.

Management of the State's General Fund indebtedness has improved since its high of fiscal year 199495. As is illustrated by the comparisons with Moody's medians, the State has reduced its debt burden over the last three fiscal years and placed itself in position for upgrades of its credit ratings.

## Capacity for Additional Debt within Cautionary Zone

Our calculations indicate that the State's General Fund can support a maximum of $\$ 49.0$ bilion in new bond issuances ( $\$ 4.9$ billion per year) from fiscal years 1998-99 through 2007-08 without exceeding the $6.0 \%$ borrowing ceiling. Due to improvements in the State's economy and tax revenue base, this estimation is an improvement over the affordability levels calculated in the 1997 Report.

## Increase in Debt Affordability from 1997 Levels

While this higher level of debt affordability is good news for Californians, the dramatic improvement over just one year reflects the volatility of debt affordability projections and the importance of preparing this debt affordability analysis on an annual basis. The record growth now present in the State's economy and tax base cannot be expected to continue indefinitely; therefore, the debt levels currently affordable will vary in the coming fiscal years.

## Future General Fund Debt Affordability

The three-year annual improvement in the ratio of annual debt service to General Fund revenues has increased the borrowing capacity of the General Fund. This improved capacity for additional indebtedness may enable the State to bond finance a greater level of needed capital improvements in the future. The ability of policymakers to maintain an ongoing balance between fiscal resources and capital needs is essential to the long-term financial stability of the State's General Fund and the California economy.

| STate | Net Tax-Supported debt Per Capita | NET TAX-SUPPORTED Debt as a \% OF 1996 Personal Income | Moody's Rating |
| :---: | :---: | :---: | :---: |
| Alabama | \$334 | 1.7\% | $\mathrm{Ala}^{3}$ |
| Alaska | - 128 | 0.5 | Aa 3 |
| Arizona | 388 | 1.9 | n/a |
| Arkansas | 143 | 0.8 | Aa. ${ }^{3}$ |
| California ${ }^{(1)}$ | 652 | 2.6 | A1 |
| Colorado | 18 | 0.1 | n/a |
| Connecticut | 2.962 | 8.7 | Aa3 |
| Delaware | 1.619 | 5.9 | Aal |
| Florida | 798 | 3.4 | Aa2 |
| Georgia | 647 | 2.9 | Aaa |
| Hawsiil | 2,718 | 10.7 | AI |
| Idate | 45 | 0.2 | n/a |
| Illinois | 728 | 2.7 | Aa 2 |
| Indiana | 185 | 0.8 | Aal |
| lowa | 11.3 | 0.5 | n/a |
| Kansas | 380 | 1.7 | $n / \mathrm{a}$ |
| Kentucky | 774 | 3.9 | n/a |
| Louisiana | 519 | 2.6 | A2 |
| Maine | 391 | 1.9 | Aa2 |
| Maryland | 849 | 3.1 | Aaa |
| Massachusetts | 2,329 | 7.8 | Aa3 |
| Michigan | 381 | 1.6 | Aal |
| Minnesota | 489 | 1.9 | Aaa |
| Mississippi | 606 | 3.5 | Aa3 |
| Missouri | 238 | 1.0 | Aaa |
| Montana | 260 | 1.4 | Aa3 |
| Nebraska | 38 | 0.2 | n/a |
| Nevada | 403 | 1.6 | Aa2 |
| New Hampshire | 633 | 2.4 | Aa2 |
| New Jersey | 1,576 | 5.1 | Aal |
| New Mexico | 355 | 1.9 | Aal |
| New York | 1.914 | 6.5 | A2 |
| North Carolina | 229 | 1.0 | Aaa |
| North Dakota ${ }^{\text {a }}$ | 169 | 0.8 | Aa3 |
| Ohio : | 591 | 2.5 | Aal |
| Oklahoma | 157 | 0.8 | Aa3 |
| Oregon | 280 | 1.2 | Aa 2 |
| Pennsylvania | 501 | 2.0 | Aa3 |
| Rhode Island | 1,618 | 6.6 | Al |
| South Carolina | 309 | 1.6 | Aaa |
| South Dakota | 316 | 1.5 | n/a |
| Tennessee | 203 | 0.9 | Aaa |
| Texas | 300 | 1.4 | Aa2 |
| Utah | 590 | 3.1 | Aaa |
| Vermont | 946 | 4.2 | Aa2 |
| Virginia | 519 | 2.1 | Aaa |
| Washington | 1.192 | 4.8 | Aal |
| West Virgnia | 512 | 2.8 | Al |
| Wisconsin | 661 | 2.8 | Aa2 |
| Wyoming | 147 | 0.7 | n/a |
| 1998 Median | 446 | 1.9 |  |
| 1998 Mean | 719 | 2.9 |  |

Source: "1998 State Debi Medians". Moody's Investors Service, August 1998
(1) The 1908 Moody's Medians reflect state net-tax supported debt as of the end of 1997, estimated population in 1997. and 1996 perional income as reported by the U. S. Department of.Commerce. Bureau of Economic Analysis. In the body of the report, we have updated the State of California's ratios to reflect the calculations based on more recent projections of population and personal income, and to include net tax-supported debt as of June 30. 1998.

Historical Actuals \& Growth Scenario for
Population, Personal Income \& GF Revenues (000s)

| $\begin{aligned} & \text { FYE } \\ & \text { June } 30^{\text {tn }} \end{aligned}$ | Population | $\begin{gathered} \% \\ \text { Change } \end{gathered}$ | Personal <br> Income |  | General Fund Revenues | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1988 | 28,323 | n/a | \$530,968,000 | n/a | \$33,041,398 | n/a |
| 1989 | 29,063. | 2.61\% | 571,119,000 | 7.56\% | 37.651,878 | 13.95\% |
| 1990 | 29,142 | 0.27 | 573,300,000 | 0.38 | 38,546,178 | 2.38 |
| 1991 | 29.976 | 2.86 | 617.700,000 | 7.74 | 40,563,041 | 5.23 |
| 1992 | 30,565. | 1.96 | 635,000,000 | 2.80 | 42,925,671 | 5.82 |
| 1993 | 31.188 | 2.04 | 697,911,000 | 9.91 | 42,757,910 | -0.39 |
| 1994 | 31,517 | 1.05 | 722,002,000 | 3.45 | 40,527,732 | -5.22 |
| 1995 | 31.790 | 0.87 | 764,435,000 | 5.88 | 42,690,000 | 5.34 |
| 1996 | 32.063 | 0.86 | 807.975,000 | 5.70 | 46,296,000 | 8.45 |
| 1997 | 32,383 | 1.00 | 867,200,000 | 7.33 | 49,210,000 | 6.29 |
| 1998 ' | 32,957 | 1.77 | 929,400,000 | 7.17 | 54,824,000 | 11.41 |
| 1999 | 33,516 | 1.70\% | \$986.800,000 | 6.18\% | \$56,985,000 | 3.79\% |
| 2000 | 34,110 | 1.77 | 1,050.200,000 | 6.42 | 60,870,000 | 6.82 |
| 2001 | 34,717 | 1.78 | 1,111,300,000 | 5.82 | 64,077,000 | 5.27 |
| 2002 | 35,328 | 1.76 | 1,174,400,000 | 5.68 | 67,192,000 | 4.86 |
| 2003 : | 35,939 | 1.73 | 1,245,700,000 | 6.07 | 70,710,000 | 5.24 |
| 2004 | 36,557 | 1.72 | 1,320,100,000 | 5.97 | 74,386,920 | 5.20 |
| 2005 | 37,182 | 1.71 | 1,403,800,000 | 6.34 | 78,255,040 | 5.20 |
| 2006 | 37,822 | 1.72 | 1,495,800,000 | 6.55 | 82,324,302 | 5.20 |
| 2007 | 38,472 | 1.72 | 1,585,700,000 | 6.01 | 86,605,166 | 5.20 |
| 2008 | 39,134 | 1.72 | 1.685,000,000 | 6.26 | 91,108.634 | 5.20 |
| Annual Average, |  |  |  |  |  |  |
| (FY 1998-99 to FY 2007-08) |  | 1.73\% |  | 6.13\% |  | 5.20\% |
| Sources: \% ; |  |  |  |  |  |  |
| Population-State of California Dept. of Finance (FY 1987-88 tr FY 2007-08) |  |  |  |  |  |  |
| Pers. nal Incomie- State of Califirnia, Dept. of Finance (FY 1987-88 [/, FY 1997-98) |  |  |  |  |  |  |
| UCLA Anderson Forecast. September. 1997 (FY 1998-99 io FY 2007-08; |  |  |  |  |  |  |
| GF Revenues. State if Califirnia. Office of the State Comiruller (FY 1987-88 w, FY 1997.98) |  |  |  |  |  |  |
| State of Callifurnial Dept. of Finance (FY 1998-99 w) FY 2002-03) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

# SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR GENERAL FUND GENERAL OBLIGATION BONDS(a) (Non-Self Liquidating) <br> As of June 30, 1998 


(a) Does not include commercial paper outstanding.
(b) Includes scheduled mandatory sinking fund payments as well as serial maturities.
(c) Total represents the remaining deht service requirements from July 1.1998 through June 30, 1999.

SOURCE: State of California, Olfice of the Treasurer.

# SCHEDULE OF DEBT SERVICE REQUIREMENTS FOR LEASE-PURCHASE DEBT 

As of June 30, 1998
Fiscal
Year
Ending

| June 30 | Interest |  | Principal (a) |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999............................. | \$ | 355,078,475.47 | \$ | 241,385,400.38 | \$ | 596,463,875.85 |
| 2000. |  | 341,376,959.72 |  | 284,489.962.79 |  | 625,866,922.51 |
| 2001. |  | 327,740.521.06 |  | 306,294.019.75 |  | 634,034,540.81 |
| 2002 |  | 313,335.015.46 |  | 285,810.773.02 |  | 599.145.788.48 |
| 2003. |  | 301,858,424.78 |  | 286,431,118.58 |  | 588.289,543.36 |
| 2004. |  | 286,749,970.24 |  | 293,771,386.24 |  | 580,521,356.48 |
| 2005. |  | 272,882,650.30 |  | 306,934.507.20 |  | 579,817,157.50 |
| 2006. |  | 254,355,360.46 |  | 325,337.554.60 |  | 579,692,915.06 |
| 2007. |  | 242,163,194.04 |  | 277,243,920.44 |  | 519,407.114.48 |
| 2008. |  | 224,527,266.31 |  | 283,586,787.98 |  | 508.114,054.29 |
| 2009. |  | 213,442,144.43 |  | 303,792.732.44 |  | 517,234,876.87 |
| 2010. |  | 191,825,112.77 |  | 290.511.633.76 |  | 482,336,746.53 |
| 2011. |  | 165,088,257.43 |  | 301,135,000.00 |  | 466,223,257.43 |
| 2012. |  | 148,766,671.06 |  | 282,520,000.00 |  | 431,286,671.06 |
| 2013. |  | 133,383,739.83 |  | 288,815,000.00 |  | 422,198,739.83 |
| 2014. |  | 117,776,483.45 |  | 289,125,000.00 |  | 406,901,483.45 |
| 2015. |  | 101,829,339.33 |  | 305.265,000.00 |  | 407,094,339.33 |
| 2016. |  | 85,366,091.30 |  | 283,015,000.00 |  | 368,381.091.30 |
| 2017. |  | 69,825,413.53 |  | 284,415,000.00 |  | 354,240.413.53 |
| 2018. |  | 54,728,913.68 |  | 295,215,000.00 |  | 349,943.913.68 |
| 2019. |  | 39.581.964.45 |  | 249.860,000.00 |  | 289,441,964.45 |
| 2020. |  | 26,560,336.23 |  | 216,330,000.00 |  | 242,890,336.23 |
| 2021. |  | 16,438,386.77 |  | 155,235,000.00 |  | 171,673,386.77 |
| 2022. |  | 8,185,733.73 |  | 128,345.000.00 |  | 136.530,733.73 |
| 2023. |  | 3.147,663.15 |  | 69,510,000.00 |  | 72,657,663.15 |
| 2024. |  | 271,065.63 |  | 2,515,000.00 |  | 2.786.065.63 |
| 2025. |  | 93,267.50 |  | 2,730.000.00 |  | 2,823,267.50 |
| Total ...... | \$ | 4,296,378.422.11 | \$ | 6,639,619.797.18 | \$ | 10.935.998,219.29 |

(a) Includes scheduled mandatory sinking fund payments as well as serial maturities.
(b) Total represents the remaining debt service requirements from July 1, 1998 through June 30, 1999

SOURCE: State of California. Office of the Treasurer.



Computation of Debt Ratios for Existing General Fund Debt plus State Treasurer's Projected Bond Issuances for Fiscal Years $1998-99$ and 1999-00 (000's)




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14981 leth affordabiliey Reporr

## Computation of Debt Ratios for Existing General Fund Debt plus $\$ 49.0$ Billion in Projected Bond Financings (000's)

Compliance with $6.0 \%$ Borrowing Ceiling

| FYit June 30 |  | 19\%9 |  | 2000 |  | 2001 |  | 2002 |  | 2003 |  | 2004 |  | 2005 |  | 2006 |  | 2007 |  | 2008 |  | (04) : 203 | 10141 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| General Fund Debr - Existing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gencral (t)ligation Humd, | 3 | 13.907.50: | > | 13.890.301 | 5 | 11.691.288 | 5 | 10.842.26.3 | 5 | 9.843.932 | S | 8.919 .572 | 5 | 8.055.297 | 5 | 7.260 .312 | \$ | 6.500 .897 | 5 | 5.770.289 |  |  |  |
| Leax Purihax Finaming, |  | 0.398.23: |  | 6,11, 7, 74 |  | 5,807.450 |  | 5.521 .640 |  | 5,235.209 |  | 4,941.4.37 |  | 4,6,3, 5003 |  | 4.309.155 |  | 4.031.931 |  | 3,748.344 |  |  |  |
| Sub-Total |  | 20. 305.795 |  | 19,010.105 |  | 17,698,736 |  | 16.363.00.3 |  | $15.079,140$ |  | 13.861, (0) |  | 12,692,800) |  | 11.56\%,477 |  | 10.538 .818 |  | 4. 518.63 |  |  |  |
| General Fund Debr Projeited |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General Coligation Bunds |  | 4.900 .180 |  | 9.636 .665 |  | 14,209,995 |  | 18,619,99) |  | 22,866,66,50 |  | 26.949,975 |  | 30,869,965 |  | 34.626,620 |  | 38.719 .940 |  | +1.609.93] |  |  |  |
| Leax Prurhaxe Pinancillys |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub-Tutal |  | 4.900 .000 |  | 9.636 .665 |  | 14,209.995 |  | 18.619.990 |  | 22,866,650 |  | 26,949.975 |  | 30,869,965 |  | 34.626 .620 |  | 38.219.940 |  | 41.049,925 |  |  |  |
| total. |  | 25.203.393 |  | 28,646.\% |  | 31.908 .135 |  | . 54.98 .5189 .5 |  | 17,949\% | . | 40.810 .984 - |  | $43.00 ? 105$ |  | 40.140.047) |  | 48.788.78 |  | 31.108.2-48 |  |  |  |
| Prinipal Repuyments - Existing Debr |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General Obligation Bunds |  | 1.025,205 |  | 1.011. 200 |  | 1.005.073 |  | 1.049 .025 |  | 998.331 |  | 924.360 |  | 861.274 |  | 797.985 |  | 753.415 |  | 736.608 | 3 | 5.770.289 | 514.93 .700 |
| Lease Purchasc Financings |  | 241,385 |  | 284, 409 |  | 306.294 |  | 285.811 |  | 286.431 |  | 293.771 |  | 3066,935 |  | 125,338 |  | 277.24 |  | 283.587 |  | 3,748,334 | - 0.6 .39020 |
| Sub Total |  | 1.266 .590 |  | 1.295.690 |  | 1,311.367 |  | 1.334.836 |  | 1,284,763 |  | 1.218,131 |  | 1,168,209 |  | 1.123.323 |  | 1.030.6.59 |  | 1.020 .195 |  | 9.518 .623 | 21.572 .386 |
| Primipal Repayments - Projezied Deba |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General Obligation Bonds |  |  |  | 163.335 |  | 326.670 |  | 490.005 |  | 653.340 |  | 816,675 |  | 980.010 |  | 1.143.345 |  | 1.306,680 |  | 1.470.015 |  | 11.049.925 | +8.000(n) |
| Lease Purchase finarkings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub.Total |  |  |  | 16,3.3.35 |  | 326,670 |  | 490.005 |  | 653,340 |  | 816,675 |  | 980,010 |  | 1.14.3,345 |  | 1.306,680 |  | 1.470.015 |  | +1.619.925 | 49.0x)(0) |
| total. |  | 1,266,590 |  | 1.459.035 |  | 1.638,037 |  | 1.824.84! |  | 1,938.103 |  | 2.034,806 |  | 2.148 .219 |  | 2.266.668 |  | 2.337.339 |  | 2.490.210 |  | 51.168 .548 | 70.572 .380 |
| Interest Payments - Existing [̌ubr |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General Obligation Bonds |  | 884.922 |  | 825,337 |  | 768.525 |  | 699.314 |  | 6.36 .260 |  | 572.187 |  | 517,689 |  | 461,109 |  | +10.173 |  | 365.2-10 |  | 2.138 .319 | 8.279 .370 |
| Lease Purchase Financings |  | 355,078 |  | 34, 3777 |  | 327,741 |  | 31,3,339 |  | 301.858 |  | 286.750 |  | 272,883 |  | 254.355 |  | 232,16.3 |  | 23.597 |  | 1.376,311 | 4.2\%0.378 |
| Sub-Toral |  | 1,240,(0) |  | 1.166 .714 |  | 1,0\%6,265 |  | 1.012 .649 |  | 938,119 |  | 858,9.37 |  | 790.571 |  | 715.464 |  | 652,336 |  | 589.867 |  | 3.514 .029 | 12.575 .5 .5 |
| Interest Payments Projetsed lebr |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General (Obligation Bonds |  | - |  | 294,000 |  | 578.20) |  | 852.600 |  | 1,117.199 |  | 1,371,999 |  | 1.616 .9 ¢9) |  | 1.852.198 |  | 2,077,597 |  | 2.293.1\% |  | 3, 51515.577 | 45.569.565 |
| Lease l'uchase Financings |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub-Toral |  |  |  | 2.24 .000 |  | 578,200 |  | 852.610 |  | 1.117.199 |  | 1.371.999 |  | 1,616,999 |  | 1.852.198 |  | 2.077.597 |  | 2.29.3.19 |  | 33,515.577 | 45.569 .565 |
| roral. |  | 1.240,001 |  | 1.460 .714 |  | 1,674,46.5 |  | 1.865.244) |  | 2,055,318 |  | 2,230,936 |  | 2,407,570 |  | 2.567,662 |  | 2.729.933 |  | 2.883 .1664 |  | 37.030,206 | 58.145.119 |
| Debr Service Paymenas - Existing Debt |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Generat (bligation Bonds |  | 1.910.127 |  | 1.836,537 |  | 1,773.598 |  | 1.748,339 |  | 1.634.592 |  | 1.496,547 |  | 1,378.96.3 |  | 1.259.094 |  | 1.163.588 |  | 1.101.918 |  | 7.908.608 | 23.2ו1.941 |
| Lease Purchase Financings |  | 590, 564 |  | 625.867 |  | 6,4,0,39 |  | [299,146 |  | -588.220 |  | . 580.521 |  | 579,817 |  | 579,693 |  | 519,407 |  | 508.114 |  | 5.121.645 | 10.935.945 |
| Sub-Total |  | 2.506 .591 |  | 2.462.404 |  | 2,407.6.32 |  | 2.347.485 |  | 2.222.881 |  | 2.077.068 |  | 1.958.780 |  | 1.838.787 |  | 1.682.995 |  | 1.610.06? |  | 13.033 .253 | 34.147 .40 |
| Debi Senice Paymems - Projarted Debi |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| General Obtigation Bonds |  | . |  | 457.335 |  | 904,870 |  | 1.342.605 |  | 1.770 .539 |  | 2.188.674 |  | 2,597,009 |  | 2.995.543 |  | 3.384 .277 |  | 3.763.211 |  | 75.165.502 | 94.809 .50 |
| Lease Purchaxe Financings |  |  |  |  |  |  |  |  |  |  |  | . . |  |  |  |  |  |  |  |  |  |  |  |
| Sub-Tocal |  |  |  | 457.335 |  | 994.870 |  | 1,342,605 |  | 1,770.539 |  | 2,188.674 |  | 2,597,009 |  | 2.995 .54 .3 |  | 3.384 .277 |  | 3.76 .3 .211 |  | 75.165 .50 | 41.509 .565 |
| IOTAI. |  | 2.506.591 |  | 2.919.739 |  | 3,312.502 |  | 3.690 .090 |  | 3.993.421 |  | 4.265.742 |  | 4.555 .789 |  | 4.8.4.330 |  | 5.1067 .212 |  | 5.373.271 |  | 88.148 .735 | 123.717.605 |
| Compulasion of Debt Ratics |  |  |  |  |  | . |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FYE fune 30 |  | 1999 |  | 2000 |  | 2001 |  | 2002 |  | 2003 |  | 2004 |  | 2005 |  | 2006 |  | 2007 |  | 3008 |  |  |  |
| Population |  | 33.516 |  | 3.1810 |  | 34,717 |  | 35.328 |  | 35.9 .19 |  | 36.557 |  | 37.182 |  | . 37.822 |  | 38.472 |  | 39.134 |  |  |  |
| Perisunal fincome | 5 | 986,800,000 | 5 | 1.050.200.000 | S | 1.111.300.000 | s | 1.174.400.000 | 5 | 1.245.700,000 | 5 | 1.320.100.000 | 5 | 1.403.800.000 | S | 1.495.800.000 | $s$ | 1.585.700.000 | \$ | 685.000 .000 |  |  |  |
| General Fund Kevenues |  | 56.985.000 |  | 60.870,000 |  | 64,077,000 |  | 67.192.000 |  | 70.710,000 |  | 74.386.920 |  | 78,255.040 |  | 82.32-1.302 |  | 86.005 .160 |  | 91.108 .014 |  |  |  |
| 1xebr pel Capita |  | \$752 |  | \$840 |  | 5919 |  | \$990 |  | \$1.056 |  | \$1.116 |  | \$1.172 |  | \$1.221 |  | \$1.267 |  | \$1.308 |  |  |  |
| Debu to Personal income |  | 2.555 |  | $273 \%$ |  | 2.87\% |  | 2.98\% |  | 3.05\% |  | 3.09\% |  | $3.10 \%$ |  | 3.199\% |  | 3.07\% |  | $3.104 \%$ |  |  |  |
| itery Serine to Cemetal Fund Revenues |  | 4.40\% |  | 4.80\% |  | 5.17\% |  | 5.49\% |  | 5.65\% |  | 5.73\% |  | 5.82\% |  | 5.87\% |  | $5.85 \%$ |  | 5.90\% |  |  | . |

[^2]
[^0]:    * Debt per capita and debt to personal income medians are for 1998; debt service to general fund revenues median is for 1996.

[^1]:    ${ }^{11}$ Includes bonds issued to refund commercial paper.

[^2]:    
    

