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Preparing for California's Next Recession

SUMMARY

CONTENTS

Technical appendices to this report are available on the PPIC website.

This report begins with the assumption that California will face a recession in the none-too-distant future. When that recession comes, the state will most likely experience a fall in revenue over multiple years. Our goal is to estimate the impact of a recession on the state's budget, determine the extent to which current reserves could help the state navigate drops in revenue, and help identify steps policymakers can take to reduce the next recession's impact on the state's economy and residents.

Because California's tax structure is highly sensitive to economic ups and downs, recessions hit the state's budget particularly hard. Past recessions have caused deep drops in General Fund dollars leading to a combination of spending cuts, tax increases, and borrowing in an effort to balance the state's budget.

Since the Great Recession, the governor and legislature have taken a number of steps to help the state prepare for the next economic downturn. But there is room for more preparation. Using the state's experience with past recessions as a guide, we outlined scenarios for the next downturn: mild, moderate, and severe. We also factored in the impact of revenue shortfalls on funding levels for the K–12 and community college systems, which are guaranteed by Proposition 98.

- We estimate that a relatively mild recession would produce a drop in total General Fund revenue between $28 billion and $36 billion spread over three years. Should the state experience a moderate recession, revenue declines would range between $69 billion and $100 billion over four years. And finally, in a severe recession declines would be even deeper, between $173 billion and $185 billion over five years.
- We find that California is prepared to withstand a mild recession given its current level of reserves. In the moderate and severe scenarios, policymakers would exhaust current reserves and still be looking to close a gap in the budget anywhere from $5 to $18 billion each year, for several years.
- Our estimates suggest that under these scenarios, the Proposition 98 guarantee would fall $4–5 billion per year below projected levels in a mild recession and between $8 and 15 billion per year under the moderate and severe scenarios.

Given that filling gaps of that magnitude would likely cause considerable hardship for the state's residents, we recommend that as the state continues to prepare for the next recession, it should take steps to mitigate the effect of a

possible economic crisis, in a manner similar to a community preparing for an earthquake or other natural crisis. These include:

- Continuing to set aside reserves, limiting recurring spending commitments, and undoing changes made during earlier recessions that are no longer needed.
- Determining budget priorities now by exploring detailed "what if" state budget recession scenarios, including an explicit discussion about Proposition 98 spending during a recession.
- Anticipating opportunities for strategic investments that may arise during an economic crisis.

In the past, the federal government has provided financial support to states during economic downturns. But now that the federal deficit is moving into uncharted territory, it is not clear how much assistance will be forthcoming when the next recession hits. Given this fiscal uncertainty at the federal level as well as a changing global economy, careful preparation for the next recession takes on even greater importance.

Introduction

Since California began to emerge from the Great Recession in June 2009, it has been enjoying one of the longest periods of economic expansion in US history. Unemployment is low and, as of April 2019, jobs had been growing for 102 consecutive months. Tax revenue has grown, exceeding projections in recent years. The state has made tremendous progress in terms of its fiscal position as it recovered from the Great Recession.

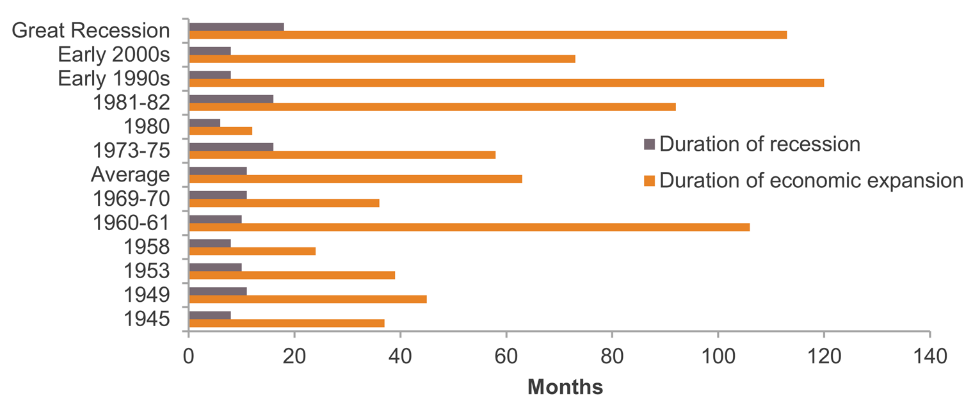
But history confirms that expansions do come to an end. As Jerry Brown observed when presenting his final budget, "What's out there is darkness, uncertainty, decline and recession, so good luck, baby."[1] The governor's pessimistic assessment of the future is the blunt reminder that California has known great highs, but also has experienced tremendous lows. And when the economy slows down and recessions occur, California's governments feel it acutely.[2] Government revenues, in general, are sensitive to economic swings. California is no different, but its revenue roller

What happens in a recession?

A recession is defined as a period of negative economic growth. For this work we use National Bureau of Economic Research (NBER) periods of expansion and recession. The NBER defines a recession as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real gross domestic product, real income, employment, industrial production, and wholesale-retail sales. A recession has multiple effects at the state and national level:

- Real gross domestic product falls
- Unemployment rises as workers are laid off
- Inflation falls due to the decrease in demand in the economy
- Government debt can increase as the federal government expands fiscal policy
- Asset prices fall due to lower demand in economy for market shares and housing
- Interest rates may be cut as central banks try to stimulate economic growth

Past recessions have varied in intensity and length



SOURCE: US Business Cycle Expansions and Contractions by the National Bureau of Economic Research.

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[1] "Brown's Final California Budget Stashes Billions in Reserve," *Sacramento Bee,* January 10, 2018.

[2] While this report focuses on the state budget, California's local governments—counties, cities, towns, schools, and other districts—experience the ups and downs as well. These swings are felt directly, as their own revenue can fluctuate with the economy, or indirectly, as many receive significant funding from the state's coffers.

coaster has steeper slopes. These effects are amplified by the state's progressive tax system, which relies on a relatively small number of high-income residents to generate a large share of General Fund revenue.

When the economy slows, state revenues dip and the budget falls out of balance. The state's most vulnerable residents turn to government for help just when resources are most strained. Policymakers then face decisions about cutting programs, raising taxes, or borrowing—all of the options are unappealing. Looking back at how officials grappled with these decisions, we can assess the past responses to budget shortfalls and offer suggestions and adjustments for potential improvements to these tough decisions.

We begin by outlining why economic shifts have such an impact on California's state General Fund revenues, and describing the state's historical experience with recessions. We then provide an overview of the policy options in response to a recession, with particular attention to the state's investment in reserves. Drawing on the four most recent recessions, we outline three scenarios—mild, moderate, and severe—and their potential impact on the state General Fund. Finally, to help the state prepare, we outline steps that could be taken now to lessen the impact of the next recession and position the state to thrive in the recovery.

California's recent recessions

Our scenarios for the next downtown are drawn from the fiscal impact of four most recent recessions.

Early 1980s oil shock. In the early 1980s, the economy stalled after several years of high inflation and high unemployment; rising oil prices also contributed. The downturn, which lasted almost two years, was the worst since the Great Depression.

Early 1990s slump. When oil prices spiked in 1990, the country slipped into a short recession. The timing was particularly difficult for California. The collapse of the Soviet Union led to cuts in defense spending, which greatly affected the areas of the state with military bases and defense contractors and made California's recovery more challenging.

Early 2000s dot-com bust. Two decades ago, California's fledgling internet industry experienced a "dot-com bubble." When the bubble burst, the San Francisco Bay Area and the technology industry were especially affected.

Great Recession. California felt the effects of the Great Recession more acutely than most other states, due in part to the state's pre-recession housing boom and to deep optimism about the stock market and the industries (including construction and technology) that were driving its economy.

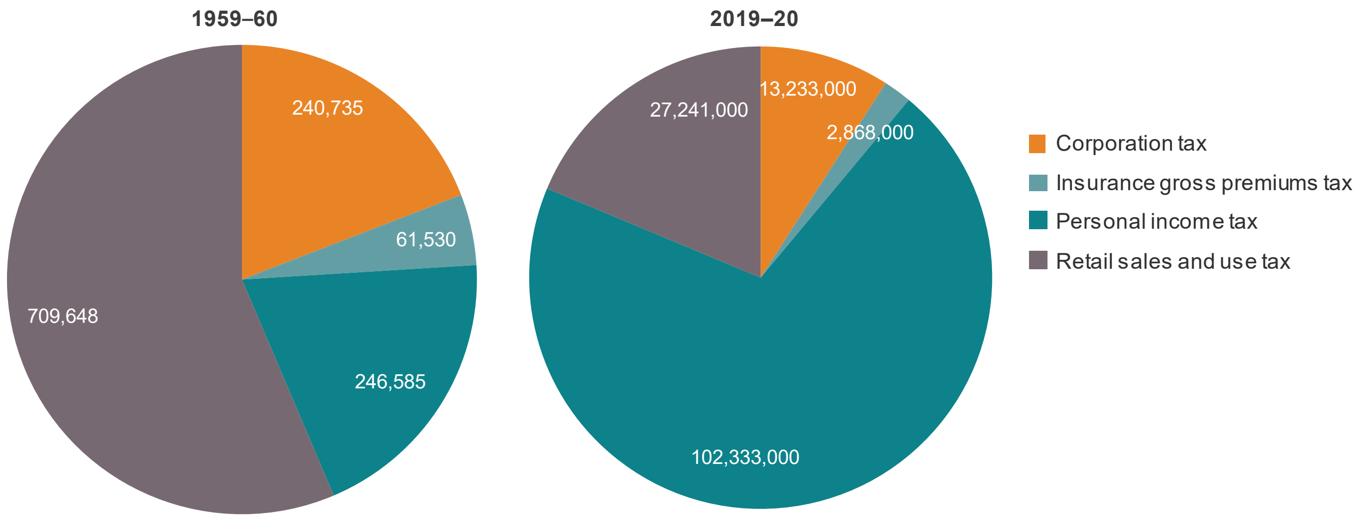
California's Revenue Structure Is Volatile

The composition of California's revenues has shifted dramatically over the past 60 years: from a broadly distributed portfolio of taxes to a system that relies on personal income taxes (PIT) as the General Fund's primary revenue source, followed by the sales tax and the corporate income tax.[3] Property taxes also play a significant—albeit complicated—role.

In the current budget year, the state expects to collect more than 70 percent of General Fund revenues from PIT, triple the percentage it was in 1960 (Figure 1). Retail sales and use taxes, once over half (55%) of the revenue streams, comprise just a fifth of revenues.

FIGURE 1

California's General Fund revenues



SOURCE: Legislative Analyst's Office.

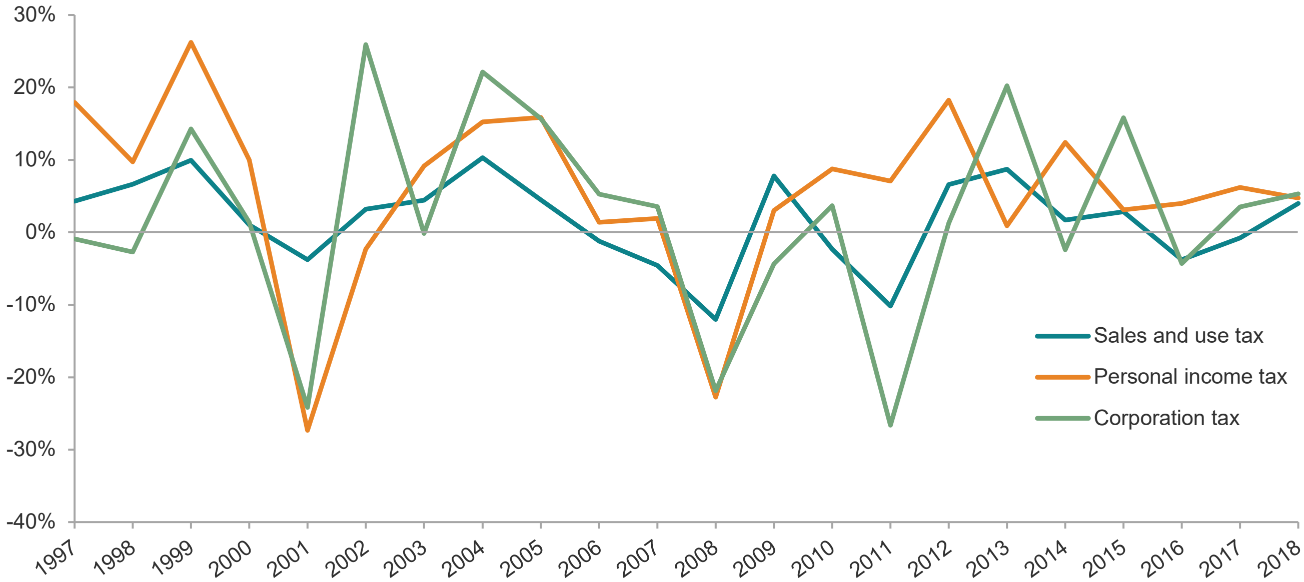
NOTE: General Fund revenues (reflects Governor's May 2019 budget revision). Dollar amounts are in nominal terms.

California's current mix of revenue streams creates considerable volatility. The impact of volatility on the state's budget is driven by two factors that interact. The first is the degree to which a particular tax source fluctuates year-over-year. Second, the effect is a function of how much the state depends on particular revenue source. Typically, if a tax is highly volatile from one year to the next, but is a minor source of revenue, its impact on the overall budget picture is limited. California's PIT accounts for a large share of overall General Fund revenue and it has historically fluctuated widely (Figure 2). It is worth noting that the corporate income tax (CIT) and the sales tax also swing in accord with changes in the economy, though their contribution to the General Fund is smaller and the timing may differ.

[3] Our analysis focuses only on General Fund revenues. While special funds have grown at a faster rate than the General Fund, their revenue sources exhibit similar volatility (Technical Appendix A).

FIGURE 2

State revenues are volatile



SOURCES: California Department of Finance Schedule 3: Comparative Yield of State Taxes; Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED).

NOTE: Year-over-year percent changes calculated using constant (2017) dollars based on Federal Reserve Economic Data (FRED) personal consumption deflator.

Personal income tax. The dependence on personal income tax as a major source of revenue for the state is further amplified by the progressive tax rate structure, which increases the PIT rate as the taxpayer's income rises. As some segments of the state's population become wealthier, increasingly fewer Californians contribute to larger proportions of the state's General Fund. In 2016, the top 1 percent of income earners in California reported about a quarter (23%) of all the adjusted gross income reported in California PIT returns, and accounted for nearly half (46%) of the total PIT paid (technical appendix Figures A3 and A4).

Any spikes or drops in income experienced by this wealthy group of Californians is reflected in changes in the state's total revenue. Highs can translate into budget surpluses and could produce gaps. This reliance on the PIT, along with the dominance of the highest of California's income earners, has left California with a highly volatile revenue structure.

The volatility of the PIT goes beyond the fact that relatively few people account for a large share of revenue. The type of income those individuals earn—with capital gains playing a major role—amplifies the volatile nature of this source of revenue. Even a simple comparison of changes in year-over-year returns from the S&P 500 and changes in the PIT suggests a relationship between state tax revenue and the equities market, though the two do not track perfectly (Figure 3).

FIGURE 3

Capital gains drive personal income tax volatility

SOURCES: Author calculations based on California Department of Finance Schedule 3: Comparative Yield of State Taxes; Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED); Damodaran 2019.

NOTE: S&P returns are calculated based on upon price change and dividend distributions.

Sales and use tax. The sales and use tax represents the second-largest share of General Fund revenue.[4] California has the highest sales tax rate in the country.[5] In contrast to the personal income tax, sales and use taxes are generally viewed as regressive because consumption represents a larger share of income for less-affluent households. Indeed, many low-income households have little to no earnings to save or invest.

Further, sales taxes are not very flexible or nimble fiscal tools. California's constitution requires approval by two-thirds of voters for tax measures dedicated to a specific purpose, while tax measures on the ballot to increase revenue for a local jurisdiction's General Fund only require a simple majority. Any effort to adjust the sales tax to respond to an economic downturn would not only lag behind the onset of the decline but could also have the effect of limiting spending by less-affluent residents, who are more sensitive to sales tax increases.

Corporate income taxes. California's third-largest revenue source at the state level is corporate income taxes. The corporate income tax in the state accounts for about 9 percent of General Fund revenue. Corporate income taxes are collected by the state from businesses through three separate taxes: a corporate tax, a franchise tax, and an alternative minimum tax. Businesses in California are subject to at least one of these types of taxes, but they can be required to pay more than one type of tax. California corporate income taxes are also volatile in downturns; while individuals may still earn some income and consume products in a recession, corporations may experience net losses that leave them with no corporate tax liability.

Property taxes. Property taxes play a complicated role in California's state and local revenue systems. Although property taxes are exclusively a local revenue source, their impact on the state budget is significant. The state controls the laws that govern the allocation of these revenues, which go primarily to K–12 and community college

[4] The use tax generally applies to the storage, use, or other consumption in California of goods purchased from retailers in transactions not subject to the sales tax. Use tax may also apply to purchases shipped to a California consumer from another state, including purchases made by mail order, telephone, or internet. (See California Department of Tax and Fee Administration.)

[5] In California today, the statewide tax rate is 7.25 percent (6% for the state and 1.25% for county and city funds). On top of this 7.25 percent, many cities and counties have elected to add taxes to fund various initiatives, from transportation to homelessness prevention.

districts, as well as counties and other local governments. The allocation of property tax revenue has shifted over time as a consequence of state ballot measures and legislation. In particular, education financing has been significantly affected by Proposition 98, which guarantees a minimum level of funding for K–12 schools and community colleges based upon a combination of property tax and General Fund revenue. When revenues from property taxes rise above the 1 percent set aside for local school and college districts, the state's share of the spending from General Fund revenue for education decreases. In theory, a rise in property taxes could offset a drop in state revenue from other sources, helping to support education funding. Such a situation is unlikely, however, since the conditions that would lead to a fall in state tax revenue are unlikely to produce a dramatic rise in property tax receipts.[6]

Economic booms and busts are tough on budgets and residents alike; small adjustments to the market can impact the wealth and tax receipts for the state, causing revenues to tumble and opening funding gaps. The volatility of California's revenue streams has been a focus of discussion for a number of years, especially during periods of recession. Although there have been proposals to shift the state to a more stable revenue portfolio, there have been no significant changes to the state's revenue structure (Sheffrin 2010). The next economic downturn, then, will still present a budget challenge for California. The next section discusses the options available to policymakers when that recession hits.

California's Budget-Balancing Options Are Limited

When an economic downturn causes a drop in projected revenues, the legislature and the governor need to find ways to produce a balanced budget. In general, the policy options are lowering program spending, raising revenue, or borrowing. We discuss these options briefly in this section.[7] We also examine the evolution of budget reserves in California and their potential to help close future budget gaps.

Cutting Spending

Spending cuts were enacted during the past four recessions. The areas that can be cut have been limited by a variety of constitutional constraints, federal regulations, court decisions, and political considerations. An increasing share of state spending is supported with special funds, which are established by propositions and legislation to generate revenue for specific purposes through the imposition of fees or taxes (see Technical Appendix A). For example, gasoline and diesel taxes collected at the pump go into a special fund that is primarily used to maintain highways, roads, and streets.[8]

Education spending, the largest slice of the budget pie (Figure 4), is largely determined by a constitutional formula: Proposition 98 (1988) guarantees that the state's K–12 schools and community colleges get a set share of General Fund revenue.[9] The complicated formula takes into account such variables as prior funding levels, K–12 enrollment, and property tax revenues (Technical Appendix A). This does not mean that education funds are protected during recessions: historically, when revenues have fallen education funding has declined.

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[6] Since Proposition 13 caps both the overall rate and the speed at which assessed property values can increase, property taxes would generally move slowly, usually upward. Property can be re-assessed above the capped rate when it is sold or renovated. During periods with a large number of property transactions and/or renovations, one would assume that property tax assessments would rise more quickly and therefore increase the revenue generated by property taxes. Such a situation is much more likely when the economy is growing, however.

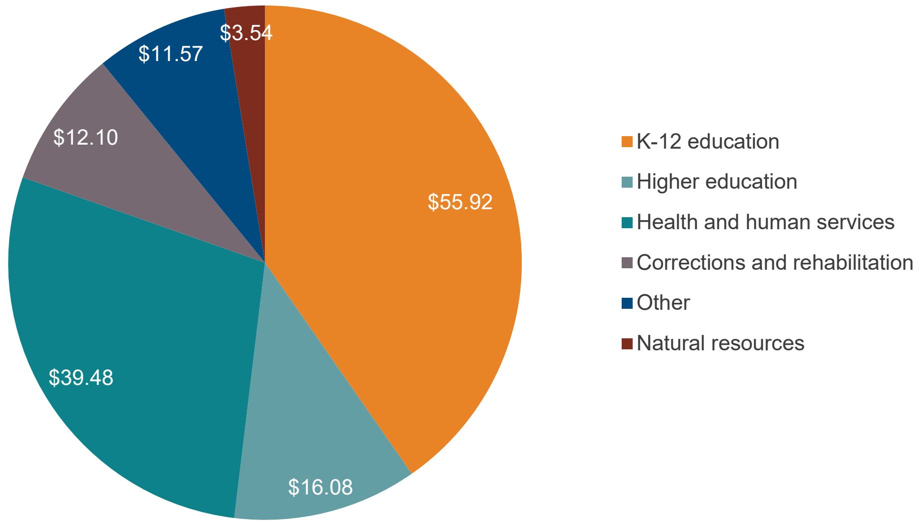
[7] For a more detailed discussion of some of the constraints associated with these options and how they have been used in past recessions, see Technical Appendix A.

[8] It is possible to divert revenue from special funds to the General Fund under specific circumstances. See Technical Appendix A.

[9] In dire economic times, Proposition 98 can be suspended by a two-thirds vote. This has happened twice, in 2004 and 2010 (LAO 2017).

FIGURE 4

Education and HHS programs account for most General Fund spending



SOURCE: California State Budget 2018–19, California Department of Finance, June 2018.

NOTE: Dollar amounts are in billions.

Spending for social safety net programs, another large budget area, is often determined by the number of individuals who enroll. These programs are counter-cyclical: demand increases during a recession. Typically, heightened demand increases the program costs. Further complicating efforts to reduce spending for these programs is the fact that so many of the decisions are tied to federal regulations (Technical Appendix A).

Cutting spending in other parts of the budget is not easy either. One way to reduce spending on corrections, for example, would be to release currently incarcerated prisoners early, a move that could be politically unappealing. And few policymakers have enthusiastically advocated for cutting support for the remaining General Fund programs—for example, higher education, natural resources, or the state courts.

Raising Revenue

California policymakers have made selective use of revenue increases during past downturns. Their reluctance to raise taxes stems from economic, political, and procedural considerations. From an economic perspective, one could argue that raising taxes takes money out of the economy precisely when the government should be making more resources available.[10] A second disincentive is anti-tax sentiment. In recent years, six in ten of California's likely voters have consistently stated that they pay somewhat more or much more than they should in their combined state and local taxes; 2019 marks the first time since 2014 that a majority of likely voters have described the present state and local tax system as not too or not at all fair, with a record high of 28 percent saying it is not at all fair.[11] For some or perhaps all of these reasons, California has made it more difficult to raise taxes than to cut spending.[12] Simple legislative majorities can reduce spending, but raising taxes requires supermajorities in the legislature and/or at the ballot box.

[10] This essentially Keynesian argument is a macroeconomic one, better suited to nations (with monetary policy levers) than states. That said, given the scale of California and its place in the global economy, it certainly could lay claim to "nation-like" status. The absence of its own central bank, however, does limit the reach of its macroeconomic tools.

[11] Baldassare et al., PPIC Statewide Survey, time trend for likely voters, June 2003–March 2019.

[12] California isn't unique in this regard. A review of how all 50 states responded to recessions found that existing rules and processes had an impact on the combination of responses policymakers turned to during the Great Recession (Rueben et al. 2018).

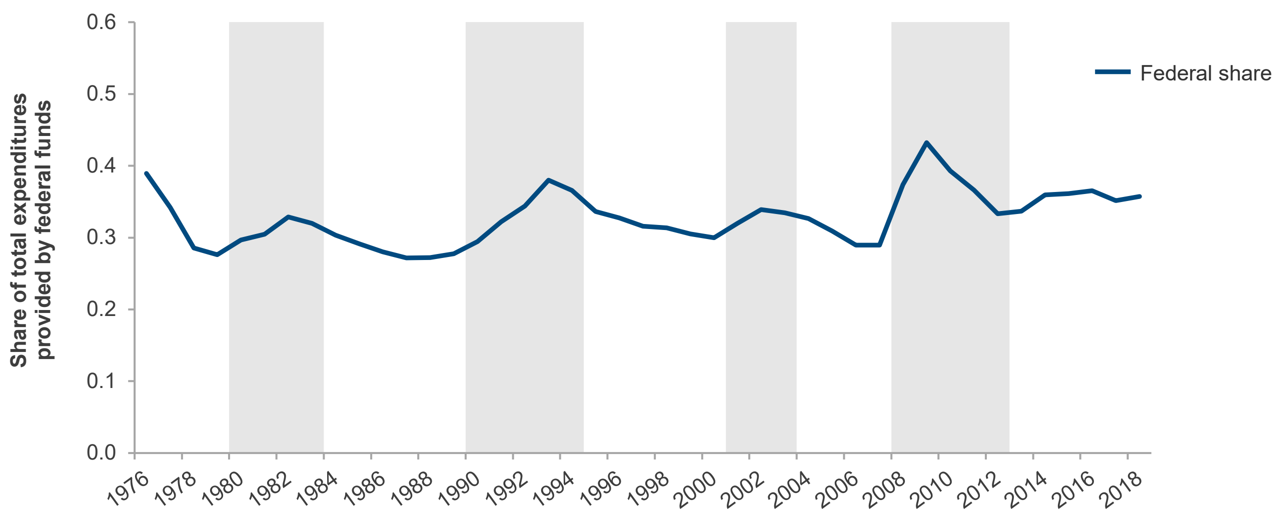
However, tax increases *have* been approved in the wake of past downturns. The Great Recession offers the most visible examples. Proposition 30 (2012) temporarily raised both personal income taxes and the state sales tax. Four years later, voters approved Proposition 55, extending the Proposition 30 personal income tax increases to 2030. The state turned to other tax sources to increase revenues during other economic crises (see Technical Appendix A).

Policymakers have also made creative changes in tax policy that do not fall neatly into the category of raising or lowering taxes. Instead, policymakers have shifted and swapped revenue streams between the state and local governments. For example, in the early 1990s, state policymakers twice shifted a share of property taxes from cities to local school districts.[13] These shifts effectively cut revenue for cities, counties, and other local governments. School funding from the state was reduced by the same amount to free up General Fund dollars and balance the budget (Coleman, 2015).[14] Proposition 1A, which passed in 2004, prohibits the state from using this strategy.

The federal government has provided California and other states with additional revenue during past recessions. Unlike most states, the federal government has no balanced budget requirement and can increase spending even as revenues are declining. California has benefited from federal assistance in the form of increased funding to support education, social safety net, infrastructure, and other programs (Figure 5).

FIGURE 5

California has benefited from deficit spending by the federal government



SOURCE: California Department of Finance Historical Tables.

NOTES: Total expenditures includes General Fund sources, special funds, and federal dollars. Recessionary periods are shaded.

However, the federal government may not always be able to provide this kind of assistance. For decades, US government debt hovered between 40 and 65 percent of the gross domestic product (GDP). Deficit spending during the Great Recession increased that ratio, which eventually climbed above 100 percent of GDP (technical appendix Figure A5). The 2017 federal tax cuts are likely to add to the deficit. How much debt is too much can be debated at

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[13] The "educational revenue augmentation funds" shifts were implemented as part of the 1992–93 budget (ERAF I) and a second one effective with the start of the 1993–94 budget year (ERAF II). The ERAF shifts affected both cities and other local special districts (Coleman 2015).

[14] The requirement that the governor submit, and the legislature pass, a balanced budget is enshrined in California's constitution (Article 4, § 12, Subdivision (a); Article 16, 1). However, policymakers can find ways to comply with the letter of law but not the spirit. California is not unique in this regard. A national review of balanced budget provisions found that while most states had some kind of requirement, only a few included an enforcement provision that ensured compliance (National Conference of State Legislatures 2010).

length.[15] But as the deficit moves into uncharted territory, federal aid to state governments during a recession cannot be guaranteed.

Borrowing

Policymakers have found ways to borrow during recession periods that do not violate the balanced budget requirement.[16] Our definition of borrowing includes the formal issuance of debt (i.e., bonds sold to investors) as well as non-market arrangements where the state draws from other funds or governments to meet current obligations. It also includes deferrals of payments to state agencies or local governments.

In past recessions, policymakers have deployed all of these strategies. In 2004, during the dot-com bust, voters passed Proposition 57, approving $15 billion in Economic Recovery Bonds. These funds helped balance the budget, but it took $19 billion and 11 years to pay off the debt.[17] California has also made significant use of deferred payments to free up resources to balance budgets. Shifts of revenue from a special fund to the General Fund with a commitment to repay it in the future were carried out extensively during the Great Recession. The outstanding balance fluctuated between $8 billion and $19 billion from 2008 to 2012. Deferrals to the state's higher education systems and local governments totaled more than $11 billion from 2011 to 2013 (see technical appendix Table A1).

Whenever California borrows to offset revenue drops, it commits future revenues to pay off the debt and (usually) some amount of interest.

One-time Measures

California's policymakers have turned to one-time measures to balance the budget. Typically, these strategies involve shifting the timing of a payment or collection. During some of its darkest fiscal moments, the state has gone so far as to delay payments to state contractors and tax refunds to taxpayers. In 2009, it shifted pay dates for state employees, accelerated the withholding schedule for taxpayers, and moved a quarterly pension payment from June to July.[18]

Budget Reserves

Budget reserves have always been a tool for addressing deficits, but until recently California was never able to set aside enough funds to have a significant impact. While the reserve policy has evolved in response to past recessions (see Technical Appendix C), the most recent changes seem to have been more successful than previous efforts.

Proposition 2 (2014) has formed the basis of the state's present-day approach to reserves marked by mandatory savings that are safeguarded against withdrawal, except during a time of a budgetary emergency. The proposition created the Budget Stabilization Account (BSA), also known as the rainy day fund, which is funded by setting aside 1.5 percent of General Fund revenues as well as a portion of capital gains revenues that exceed a specified threshold. Half of these combined revenues are used to pay down existing debt and the other half are deposited in the BSA.[19] Proposition 2 requires annual transfers into the BSA until it reaches a threshold of 10 percent of General Fund tax revenue. According to Proposition 2, any funds in excess of the 10 percent threshold must be spent on infrastructure. To make a withdrawal from the BSA, the governor must declare a budget emergency (as defined by Proposition 2).

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[15] The impact of the federal deficit has been discussed and debated for several years (Thornton 2012). Some have suggested that an increase in the relative size of the debt leads to an increase in long-term interest rates (Engen and Hubbard 2004). Others maintain that the size of the debt has few negative effects as long as unemployment is low (Davidson 2014).

[16] The requirement that the governor submit, and the legislature pass, a balanced budget is enshrined in California's constitution (Article 4, § 12, Subdivision (a); Article 16, 1). However, policymakers can find ways to comply with the letter of law but not the spirit. California is not unique in this regard. A national review of balanced budget provisions found that while most states had some kind of requirement, only a few included an enforcement provision that ensured compliance (National Conference of State Legislatures 2010).

[17] The state actually paid off the Economic Recovery Bonds early, see Technical Appendix A.

[18] The Legislative Analyst cannot determine the first year the General Fund CalPERS fourth-quarter payment was shifted from June to July, but it would appear to have been a budget balancing maneuver (LAO 2019c).

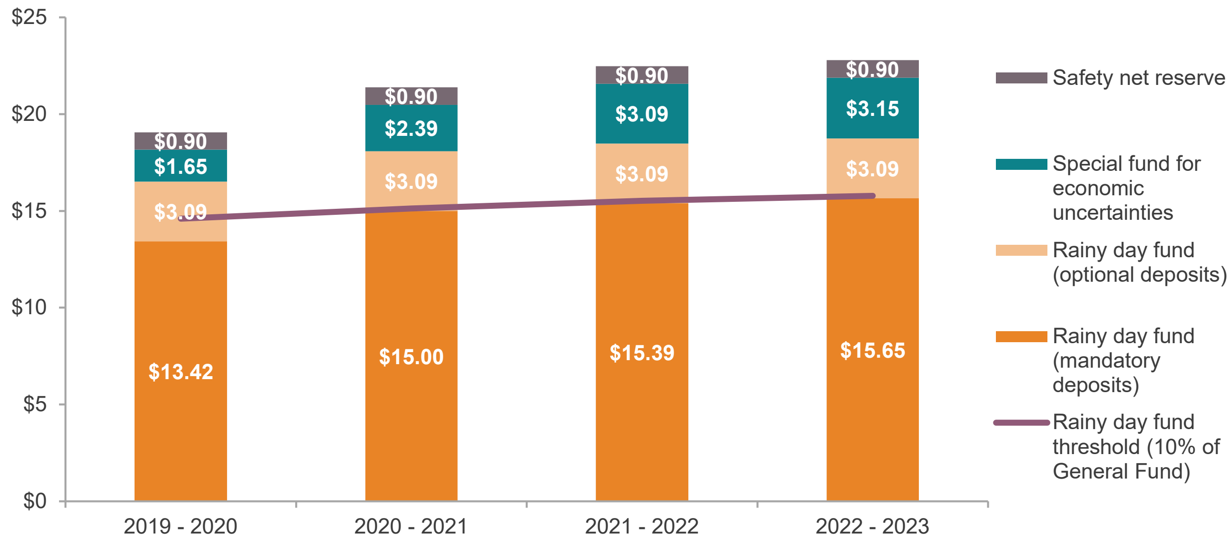
[19] This requirement is in effect until 2029–30, after which all of the funds will be deposited into the rainy day fund.

The proposition also includes a provision that makes it possible to set aside savings for future education spending. Higher-than-average capital gains tax receipts could fund the Public School System Stabilization Account (PSSSA), although the rules governing this are tied as well to both the Proposition 98 tests and the level of reserves held by local districts (Technical Appendix C).[20] To date, there have been no PSSSA deposits; however, the governor's 2019–20 May Revision budget projects that the first deposit of $389 million will be triggered in this fiscal year (Department of Finance 2019b).

In addition to the BSA, California relies on various other reserve funds to augment its preparation against deficits. As part of the 2018–19 Budget Act, the legislature created a new reserve with a CalWORKs and Medi-Cal subaccount. This new Safety Net Reserve Fund is dedicated to protecting these crucial programs during an economic downturn. Governor Newsom's first budget proposes to allocate $700 million to the Safety Net Reserve Fund and transfer $3 billion into the BSA, per the constitutional requirement, bringing the total balance of the BSA to $16.5 billion for 2019–20 (Figure 6). It also proposes to allocate $1.65 billion to the Special Fund for Economic Uncertainties (SFEU), the state's discretionary reserve determined as the balance between total expenditures and available resources. Based on the new administration's multi-year projections, total reserves are projected to rise well above the rainy day fund threshold of 10 percent of the General Fund.

FIGURE 6

Total reserves are projected to rise to $22.8 billion



SOURCE: Governor's May Revision, California Department of Finance, May 9, 2019.

NOTES: Dollar amounts presented in billions. According to Proposition 2, once the rainy day fund reaches 10 percent of General Fund taxes, any additional funds are required to be spent on infrastructure. In addition to the constitutionally required amounts, the legislature has made two optional deposits into the rainy day fund (2016–17 and 2018–19). Recently, the Office of Legislative Counsel has concluded that any optional deposits made into the rainy day fund do not count toward the 10 percent threshold.

California policymakers will face the next recession with most of the options that have been available to them in the past, namely cutting spending and increasing revenue. While some of the borrowing strategies the state has used in the past are no longer available, California has built up an unprecedented level of reserves.[21] The adequacy of those reserves is difficult to assess, primarily because it is so hard to make predictions about the next recession. We can,

[21] Ballot initiatives now restrict the use of general revenue bonds, the shifting of costs to local governments, and the redirection of local revenue streams.

however, construct different scenarios to help us examine to what extent revenue drops can be offset by reserves and estimate the gap that would have to be addressed by the state's options.

How Might California Fare in a Future Recession?

Predicting the next recession in California is a bit like predicting the next drought: we know it is going to happen, but we don't know when the downturn will begin, how long it will last, or how bad it will be. Despite the fact that the United States is experiencing one of the longest periods of economic growth in its history, it is possible to imagine different factors that could lead to an economic slowdown, including the waning of stimulus effects associated with the 2017 tax cut, domestic uncertainty around trade and tariff wars, or a spillover shock of declining overseas markets on our globalized economy. Forecasting how any of these elements or some other driver could cause the next recession and the timing of such a downturn may make for an interesting conversation. But the degree of certainty associated with any assertion would be limited. Consequently, we will leave the prophesying of causes to others and, for the sake of developing scenarios, simply assume that a recession will begin to affect state revenues in 2020.[22]

Scenarios for the Next Recession

While we cannot predict the timing nor the cause, we can use other variables to develop possible scenarios that can help frame the type of decisions that policymakers will face in a future recession. Guided by the state's experience with past recessions, we developed three generic scenarios: mild, moderate, and severe. We applied these scenarios to the baseline projections beginning in 2020.

The total loss of revenue ranges from $36 billion to $173 billion over the recessionary period (Table 1). These estimates are similar to those of the LAO (LAO 2018a) and the Department of Finance in the most recent governor's budget (DOF 2019).

TABLE 1

The impact of the three scenarios on state revenues varies considerably

Scenario	Duration of fiscal impact (years)	Lost revenue (yearly) as a share of General Fund	Lost revenue per year (billions)	Total revenue loss (billions)
Mild	3	8%	$12	$36
Moderate	4	12%	$23	$93
Severe	5	22%	$35	$173

SOURCE: Author calculations drawing on revenue projections from the California Department of Finance, 2019–20 budget (January 2019) and Legislative Analyst's Office (2018b). For a more detailed description, see Technical Appendix B.

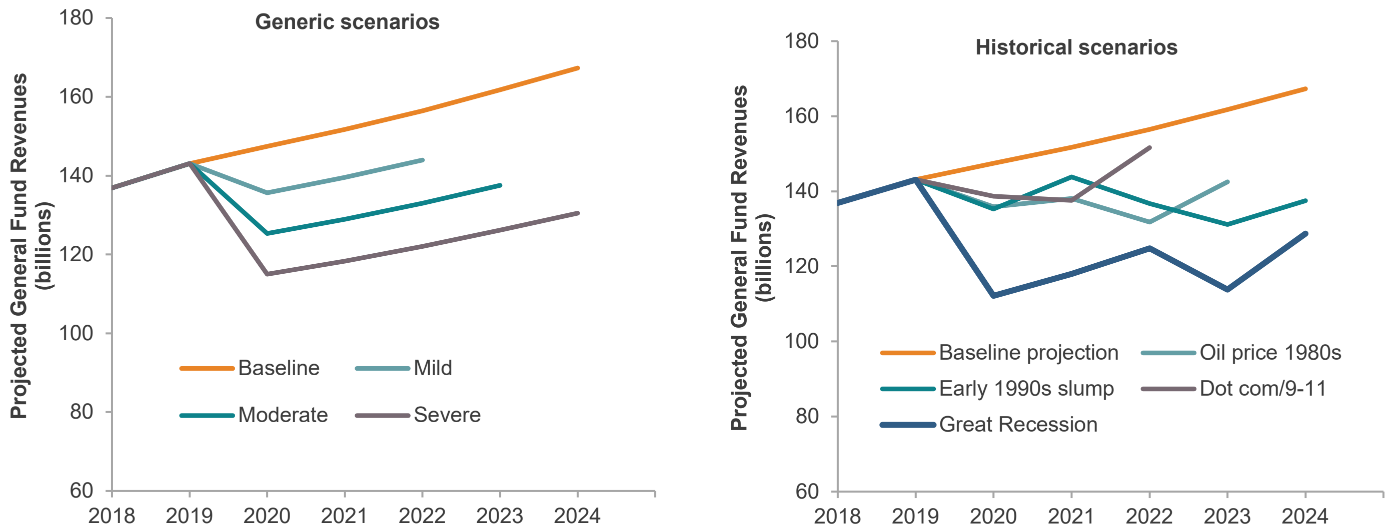
NOTES: Revenue losses are calculated relative to the average of the DOF and LAO revenue projections. Additional outyears calculated using the same rate of growth. Dollar amounts are rounded.

[22] The choice of 2020 serves as a way to anchor the analysis. Given that the decline in state revenues typically lags an economic downturn, for the impact to be felt in the 2020–21 budget year, the economic slide would have to begin in the 2019 calendar year. Should the next recession begin later, it would push the anchor year of our scenarios further into the future.

These generic scenarios provide a sense of the range of damage that could be done to General Fund revenues. What a review of past recessions reveals, however, is that the effect is rarely felt evenly. Using the same baseline and starting year, we applied the different annual percentage lost (which varied) across the number of years associated with the different recessions (Figure 7).

FIGURE 7

Generic recession scenarios show overall fiscal effects, while historical scenarios show that the effects fluctuate



SOURCE: Author calculations drawing on revenue projections from the California Department of Finance, 2019–20 budget (January 2019) and Legislative Analyst's Office (2018b).

NOTES: Revenue losses are calculated relative to the average of the DOF and LAO revenue projections. Additional outyears calculated using a consistent rate of growth. The projections are shown for the length of the recession only. We assume thereafter that revenue would begin to recover and bend back toward the baseline.

The historical scenarios provide a slightly different depiction of the impact of recessions with estimated total losses ranging from $28 billion to $187 billion (Table 2). Annual losses, on average, ranged from 6 percent of the estimated 2019–20 General Fund revenues to 26 percent.

TABLE 2

Estimating the impact of the next recession using historical scenarios

Scenario	Duration of fiscal impact (years)	Lost revenue (yearly) as a share of General Fund (base year)	Average lost revenue per year (billions)	Total revenue loss (billions)
Early 1980s oil shock	4	12%	$17	$69
Early 1990s slump	5	14%	$20	$100
Dot-com bust	3	6%	$9	$28
Great Recession	5	26%	$37	$187

SOURCE: Author calculations drawing on revenue projections from the California Department of Finance, 2019-20 budget (January 2019) and Legislative Analyst's Office (2018b).

NOTES: Revenue losses are calculated relative to the average of the DOF and LAO revenue projections. Additional outyears calculated using a consistent rate of growth. For a more detailed description of the calculations, see Technical Appendix B. Dollar amounts are rounded.

How Prepared Is California?

As we have seen, California has already taken steps to plan for the next recession. Building off the state revenue projections in our scenarios, we explored what impact each drop in revenue would have on state programs, the degree to which existing reserves would mitigate the effects, and how much of a gap would remain. Our assessment is based on the following assumptions:

- Projected revenue would fall to the levels in the historical scenarios.
- Baseline spending would be based on the LAO "Growth Scenario" presented in the most recent *Fiscal Outlook* (LAO 2018b).[23]
- K–12 and community college funding would adjust downward, per Proposition 98 rules.
- HHS spending would rise slightly due to an increase in demand for services.[24]
- No new payments would be made to the reserves.

Applying these assumptions and using the parameters of the historical scenarios, we find that the state has a large enough reserve balance to withstand a mild recession, similar to the dot-com bust in the early 2000s (Table 3). The current level of reserves would not fill all of the revenue gap created by a downturn similar to the early 1980s recession, so policymakers would be facing a revenue gap of $5 billion per year over a three-year period.

TABLE 3

Current reserves would cover budget gaps during a mild recession, but not during a more severe downturn

	Estimated remaining gap in revenue (billions $)							
		2020	2021	2022	2023	2024	Total Gap	Gap less $19 billion in reserves
Oil price 1980s		4	7	15	11	-	37	17
Early 1990s slump		4	4	12	18	17	55	36
Dot-com		2	7	3	-	-	12	-
Great Recession		19	29	19	29	22	109	90

SOURCE: Author calculations drawing on revenue projections from the California Department of Finance, 2019–20 budget (January 2019) and Legislative Analyst's Office (2018b).

NOTES: Revenue losses are calculated relative to the average of the DOF and LAO revenue projections. Additional outyears calculated using a consistent rate of growth. They are presented net of the Proposition 98 guarantee offset. For detailed figures, see Technical Appendix B. Dollar amounts are rounded.

Applying the parameters of the two longest recessions, however, reveals a more significant challenge. Under circumstances similar to those of the early 1990s slump or the Great Recession, the state would need to close budget gaps of more than $6 billion and $17 billion annually over multiple years.

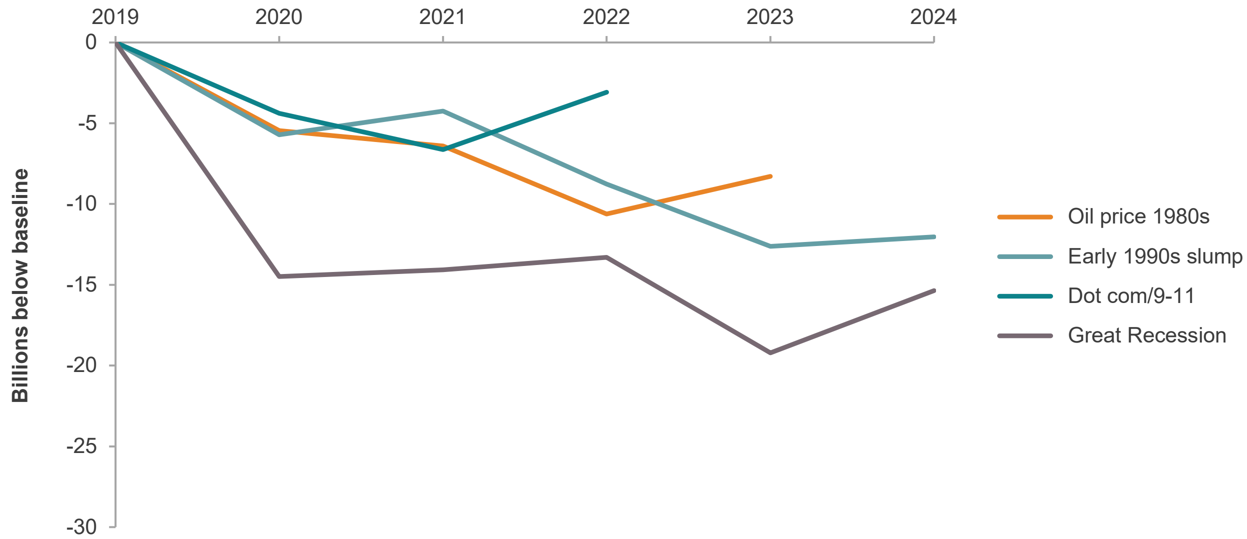
The outlook is dimmer when we factor in the impact of Proposition 98. Because the vast majority of K–12 and community college dollars are driven by revenue levels, the level of funding guaranteed by the measure would fall significantly under all four of the recession scenarios (Figure 8). The difference ranges, from a total reduction of nearly $14 billion over three years under a mild recession to more than $75 billion over 5 years in a Great Recession scenario.

[23] The LAO spending projections assume a continuation of current policy and law. These projections do not extend as far out into the future as needed to model all of the scenarios. We extend them using the growth rates reported in the LAO's analysis.

[24] Historically, recessions have had a counter-cyclical impact on health and social service programs as more people feel the strain of the economic downturn and turn to the government for assistance. For the purposes of these calculations, we merely increase the growth rate slightly (0.5%) during the recession years. We look forward to exploring the impact of recessions on the social safety net in a forthcoming publication.

FIGURE 8

Funding guaranteed by Proposition 98 would fall in all recession scenarios



SOURCE: Author calculations drawing on revenue projections from the California Department of Finance, 2019–20 budget (DOF 2019) and Legislative Analyst's Office (2018b).

NOTE: Figures represent the difference between projected Proposition 98 funding given recession scenario revenue and what the funding level would have been assuming 2.9 percent annual growth.

Most calculations (including the ones in Table 3) take the lower Proposition 98 guarantee level as a given when calculating the budget shortfall in an economic downturn. The magnitude of the shortfall is actually larger when we include a decline in the guaranteed funding available for K–12 schools and community colleges of as much as $15 billion a year. The legislature could appropriate additional funds over and above the guaranteed level, but currently there are no state funds set aside to specifically offset a recession-driven drop in Proposition 98 dollars.[25]

Getting Ready for the Next Recession

Our analysis suggests that a moderate to severe recession will create significant budget challenges for the state.[26] And as we have discussed, it is difficult to look to the federal government as a source of fiscal salvation with the national debt projected to grow to unprecedented levels far into the future.

The good news is that California's policymakers have been preparing for the next recession. Over the past few years, the Brown administration and the state legislature took steps to pay down deferrals and other de facto borrowing, set aside more funds than required under Proposition 2, and invested a significant portion of new revenues in one-time expenditures to limit future obligations. The most recent budget presented by the new governor continues in this

[25]As noted elsewhere, the governor's 2019–20 May Revision projects the first deposit into the PSSSA, the state's school reserve, if a number of conditions are met. Local school districts do set aside their own reserves, which could be drawn on to offset a future decline in state funds. One estimate of the total reserves held at the local level was $11.7 billion in 2016–17 (LAO 2019b).

[26] Though this is an untested proposition, it is possible that changes in the nature of the state and the global economy, combined with shifts in the state's tax structure, make it more likely that the state will experience a moderate to severe recession.

direction, proposing to use additional revenue to pay down long-term liabilities such as pensions. In this section we recommend some additional strategies that can help the state weather the next economic crisis.

Roll back one-time measures enacted during past recessions. In past economic crises, policymakers resorted to short-term measures to make the numbers work. Now would be the time to undo those measures so that they could be used again if needed. For example, the one-month June payroll deferral that provided one-time savings nine years ago, as well as the deferral of the fourth-quarter payment to CalPERS are both proposed to be rolled back in the governor's January budget and could be rolled back. Similarly, on the revenue side, the accelerated withholding schedule was devised to satisfy budget accounting needs. Rolling back that provision would return tax withholding to the pre-2009 schedule.

Taking these steps would return these measures to the shelf for possible use at a future date. They aren't solutions, but they are alternatives to reducing the size of programs or raising taxes.[27] While they shouldn't be the first strategies deployed, they could prove useful in the later years of a recession after difficult budget decisions have worn down the will of both the public and their elected leaders.

Prioritize in advance. Budgets are often described as a quantitative expression of values. Budgeting in a crisis puts those values to the test. During the next recession, policymakers are likely to be faced with a host of options, nearly all of which will be "bad" relative to what they value. Those decisions, however, will still need to be made.

Determining priorities now may enable policymakers to identify the combination of "least bad" options that aligns most closely with their values. Budget analysts in both the administration and the legislature have, undoubtedly, completed work on possible responses to a recession-driven drop in state revenue. If they haven't already, we would urge them to examine some detailed "what if" scenarios. For example, what would the budget look like if, during the next fiscal year, General Fund revenues drop 10 percent below current projections and continue at that level for three years (a moderate recession)? What would the budget look like if the drop in expected revenue is 6 percent over three years (a mild recession)?

Such an exercise may seem time-consuming to staff that already has plenty to do. But let's return to the analogy of preparing for a natural disaster. First responders often engage in simulated responses to hurricanes and earthquakes as part of their preparation. Such exercises can expose gaps in planning, logistical chokepoints, and key trade-offs in the midst of a crisis. For policymakers, recession simulations would have a similar effect, helping them to articulate their priorities and identify critical trade-offs without the added pressure of a ticking clock. A simulation exercise could also help policymakers produce a game plan that would form the basis of a response when the crisis hits. It could be used to map out a multi-year plan for how reserves will be spent down and which funds will be tapped. It may even help policymakers identify additional steps that can be taken in advance of a crisis.

This report represents a start on developing such simulations, identifying the scale and length of possible recession scenarios. In doing so, it exposes one of many key decision points that will present a challenge to elected officials. The rules of the Proposition 98 funding guarantee could significantly reduce education funding under all of the recession scenarios. As noted above, the governor's 2019–20 May Revision projects the first deposit into the PSSSA, the state's school reserve. If a number of conditions are met, a $389 million deposit into the account will be required, representing a very modest offset to the projected drop in the guarantee level. The state has already prioritized setting aside funds for safety net programs, even in the absence of constitutional requirements. Policymakers should engage

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[27] The LAO (2019c) has correctly maintained that if the rationale for unwinding these measures is simply to have them available for future use, it may be preferable to simply set aside more reserves. We still lean toward using one-time money to unwind these deferrals, however, as they improve transparency slightly while representing a different type of "tool" in the budget toolkit that could prove useful when reserves are depleted.

in a discussion about how education spending fits within their priorities now, while the state is still experiencing economic growth.

Don't let a crisis go to waste. Finally, there is an element of crisis preparation that can extend beyond simply planning to survive. It is possible that California could treat a looming economic downturn as an opportunity to address difficult policy problems that need a crisis atmosphere to overcome inertia or opposition.[28] Here, the drought analogy resurfaces. California's periodic water shortages have created the momentum to make changes in water storage and conveyance, conservation, and most recently, groundwater management that was lacking in non-drought years.

Looking for opportunities during a recession may help bring beneficial strategies to light. For example, most organizations—both public and private—pull back on capital investment during economic downturns. When the Great Recession took hold, however, New York State's higher education authority decided to implement a multi-year plan it had already developed to upgrade the infrastructure at its colleges and universities, with a budget of $6 billion. Since few others were building at the time, construction companies were eager for the work; 84 percent of bids came within or under budget in 2009, and the upgrade initiative became a stimulus (Zimpher 2009). When the state emerged from the recession, important higher education infrastructure projects were either well under way or completed, and a significant portion of a maintenance backlog had been addressed.[29]

Infrastructure is just one area in which counter-cyclical investment during a recession could yield returns as the state's economy begins to recover. Investing in human capital may offer a similar opportunity. As the economy slows, many who lose their jobs will turn to higher education systems to upgrade their skills. The state could develop a plan to support an investment in human capital—with an emphasis on critical occupations such as teachers or health care or a focus on sectors that are expected to be in demand during a recovery. While this kind of investment would require considerable forethought, it could help the state make a strong economic recovery.

California is likely to experience a recession in the near future—and given the state's volatile tax structure, even a mild economic downturn will have a significant fiscal impact. In the past, policymakers have had to make difficult decisions under pressure in order to close budget gaps. Thoughtful preparation for the next downturn will not eliminate these difficulties but it could reduce the number of hard choices. Moreover, although their first priority will be to mitigate the impact of the downturn, policymakers may be able to make progress on policy impasses that could not be resolved in a less-urgent context, and/or prepare the state and its residents for a strong recovery when the economy begins to grow again.

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[28] One study found that companies that responded to the Great Recession with both defensive and offensive moves performed better and emerged stronger than those that only acted defensively (Gulati et al. 2010).

[29] As noted, excess rainy day funds—funds that cause the balance to exceed the 10 percent limit—would have to be spent on infrastructure projects. Thus far, policymakers have been reluctant to officially exceed that limit. Instead, they have deposited reserves in other funds. This gives them flexibility when it comes to when and how the reserves are spent.

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