Overseen by the
CALIFORNIA SECURE CHOICE RETIREMENT SAVINGS INVESTMENT BOARD

Proposed Regulations

Standardized Regulatory Impact Assessment

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California Secure Choice Retirement Savings Investment Board
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A. SUMMARY

1. Executive Summary

Nearly half of California workers are on track to live at or near poverty upon reaching retirement age. Without the ease and simplicity of regular payroll contributions to a retirement savings account at work, many simply do not save for retirement. While the problem of retirement insecurity may have many sources, one solution is evident: increasing access to workplace retirement plans. Research shows that people are fifteen times more likely to save when they have access to a payroll deduction savings vehicle at work.

The CalSavers Retirement Savings Program (“CalSavers” or “the Program”) will provide over seven million California workers access to a voluntary retirement savings program at their job. As more Californians join the workforce in the decades to come, the program will ensure the next generation of working Californians has the ability to begin saving for retirement throughout their career. The program will be self-sustaining by participant fees, with no direct cost to employers or taxpayers, and, over time, will provide a net benefit to taxpayers when fewer elder citizens require taxpayer funded public assistance.

Individual Saving

Due to the impact of compound interest, younger workers, in particular, stand to benefit from the program. For example, a 25 year old worker earning $30,000 per year could accrue about $350,000 in retirement savings if they participate in the program for 40 years under the default account settings — with investment earnings composing about two-thirds of the savings. By contrast, today, about one-third of American households aged 55 or older have nothing at all saved for retirement beyond Social Security.

Table 1. – Sample Savings Scenario for Career-long Participant at Default Settings

<table>
<thead>
<tr>
<th>Age</th>
<th>Contributions</th>
<th>Interest</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>$30,000</td>
<td></td>
<td>$30,000</td>
</tr>
<tr>
<td>30</td>
<td>$31,300</td>
<td></td>
<td>$31,300</td>
</tr>
<tr>
<td>35</td>
<td>$32,630</td>
<td></td>
<td>$32,630</td>
</tr>
<tr>
<td>40</td>
<td>$34,090</td>
<td></td>
<td>$34,090</td>
</tr>
<tr>
<td>45</td>
<td>$35,600</td>
<td></td>
<td>$35,600</td>
</tr>
<tr>
<td>50</td>
<td>$37,150</td>
<td></td>
<td>$37,150</td>
</tr>
<tr>
<td>55</td>
<td>$38,750</td>
<td></td>
<td>$38,750</td>
</tr>
<tr>
<td>60</td>
<td>$40,400</td>
<td></td>
<td>$40,400</td>
</tr>
<tr>
<td>65</td>
<td>$42,100</td>
<td></td>
<td>$42,100</td>
</tr>
</tbody>
</table>

Scenario assumptions: starting salary of $30,000 with 1% salary increase per year; hypothetical rate of return is 5%. Investment returns may vary, are not guaranteed, and assets may lose value.
Spending, Investment, and Sales & Use Tax Impacts

CalSavers’ success in encouraging millions of Californians to save for retirement may result in economic impact related to consumption (i.e. spending) that subsequently has sales and use tax revenue impacts. The scale of these impacts is correlated to the amount of retirement savings accrued by participating individuals.

While modest shifts from spending to saving could have a short-term macroeconomic impact, it is not certain that these impacts will materialize, and some of these potential impacts would be offset by increased investment in the state economy due to new savings by CalSavers participants. By the fifth year of operation, the positive impacts of increased investment are expected to outweigh any other impacts related to decreased spending.

Table 2. – Possible Macroeconomic Impacts - Output, Earnings, and Value Added

<table>
<thead>
<tr>
<th>IMPACT (BILLIONS)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output, Earnings, and Value-Added</td>
<td>$(10)</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

Employer Impact

Participating employers will facilitate their employees’ access to a retirement savings program at no cost and with no liability, improving their ability to compete in the labor market and retain current employees. While the program requires no direct costs or fees for employers, it may require some employers to perform tasks necessary to register for the program and facilitate payroll contributions, depending on the level of functionality provided by any payroll service arrangement.

The program based its estimates of the cost of employer compliance on actual experience data from the State of Oregon’s retirement savings program, which has most of the same design features as CalSavers. Based on that data, it is estimated that employers may experience opportunity costs of about $157 in the first year of participation and $135 annually thereafter.
for the staff time spent performing these tasks. This impact, however, could be subject to some significant variance, as some employers may have payroll systems that alleviate the impacts.

**Summary**
This Standardized Regulatory Impact Assessment (SRIA) represents the best estimates of potential impact of the Program. Because CalSavers has not yet begun operation, these estimates are based on commonly accepted methodologies in the state’s regulatory review framework, the experiences of similar programs, peer-reviewed research, and publicly available data. Throughout the SRIA, the authors attempt to show the rationale for the assumptions used and describe the causes and scope of the impacts considered.

Once implemented, the estimates and assumptions used in this analysis will shift from the theoretical to actual measurements of experience. The Board is eager to contribute to the wealth of knowledge on retirement savings, behavioral economics, and the use of that knowledge to better understand economic and fiscal impacts of bold public initiatives like CalSavers.

2. **Statement of the Need for the Proposed Regulations**

In 2012, the California Legislature enacted and the Governor signed Senate Bills (SB) 1234 and (Chapter 734, Statutes of 2012) and SB 923 (Chapter 737, Statutes of 2012) which established the California Secure Choice Retirement Savings Investment Board (Board) and required it to conduct a market analysis to determine whether the necessary conditions for implementing the California Secure Choice Retirement Savings Program (now known as the “CalSavers Retirement Savings Program”) could be met. The legislation required the Board to determine, based on the market analysis, if necessary conditions can be met and prohibited implementation of the Program without subsequent legislation to authorize it.

In 2016, the California Legislature enacted and the Governor signed SB 1234 (Chapter 804, Statutes of 2016) which granted the Board the authority to implement the Program, defined how certain aspects of the Program shall be operated, and provided the Board the authority to adopt regulations.

The Board is authorized under Government Code Section 100010(b) to adopt regulations it deems necessary to implement the Program consistent with the Internal Revenue Code and regulations issued pursuant to that code to ensure that the program meets all criteria for federal tax-exempt benefits. Government Code Section 100048 deems the adoption, amendment, repeal, or readoption of such regulations to address an emergency for purposes of Government Code Section 11346.1 and Section 11349.6 and thereby exempts the Board from the requirements of Government Code Section 11346.1(b).

In general, the proposed regulations will implement, interpret, and make specific the rules, policies, and procedures governing the CalSavers Retirement Savings Program. Specifically, the proposed regulations would accomplish the following:
a. Define employer and employee eligibility for the Program and establish the means by which the Program shall evaluate such eligibility;
b. Establish the processes by which eligible employers shall register for the Program;
c. Define the duties for participating employers and the processes by which participating employers shall comply with the requirements of the Program;
d. Establish processes for enrollment of eligible employees into the Program;
e. Establish policies for participation of individuals outside of an employment relationship;
f. Define default account settings for participants that do not make an alternative election;
g. Define the alternative elections available to participants;
h. Define processes and policies for contributions and investment of contributions;
i. Define the processes and policies for withdrawals from the Program and transfers into or out of the Program; and
j. Define the policies for confidentiality and disclosure of information collected by the Program.

3. Major Regulation Determination

Senate Bill 617 (Stats. 2011, ch. 496) established new regulatory impact assessment standards for major regulations. A state agency must conduct a SRIA when it estimates that a proposed regulation has an economic impact exceeding $50 million.

Because the revenue impact of adoption of these regulations, and, ultimately, the operation of the Program, is estimated to exceed $50 million in any given year of operation, the Board completed this SRIA in accordance with state law and regulations adopted by the Department of Finance on major regulations.

4. Economic Baseline

The proposed regulations were not needed prior to passage of SB 1234 in 2016\(^1\), which directed the California Secure Choice Retirement Savings Investment Board to design and implement the CalSavers Retirement Savings Program.

Prior to the implementation of the Program, over 7.5 million California workers lacked access to a workplace retirement savings plan\(^2\) and over half of California employers did not provide a workplace retirement savings plan\(^3\). After the Program is implemented, approximately 7.1 million Californians will gain access to a workplace retirement savings program.

To establish the economic baseline for this analysis, the authors assume current conditions without the Program and, therefore, no legislative mandate for certain employers to maintain a workplace retirement program.

\(^1\) Stats. 2016, ch. 804, (SB 1234, [De León])
\(^3\) Pew Charitable Trusts, (January 2016), Employer-based Retirement Plan Access and Participation across the 50 states (California)
5. Public Outreach and Input

Throughout the development of the proposed regulations, staff continually solicited the input of the public, stakeholders, and external expertise. The public had numerous opportunities to provide input on the regulations through publicly noticed Board meetings, workshops open to the public, and regular meetings of informal stakeholder working groups.

The process for developing the proposed regulations began in the summer of 2017 with a series of meetings with informal working groups composed of representatives from employer and business organizations in the state, organizations representing employees, non-profit organizations focused on financial empowerment and economic inclusion, and others. Staff conducted several program design feedback meetings were held with these informal working groups.

Staff begun providing regular updates on the development of regulations at public Board meetings beginning with the August 28, 2017 Board Meeting, focusing the initial presentations on the input of the informal working groups. Staff provided a second update on the input of the informal working groups at the September 25, 2017 Board meeting. Staff provided an in-depth presentation on options and recommendations for regulations at the October 23, 2017 Board meeting. To prepare the materials for the meeting, staff consulted with program consultants, stakeholder organizations, policymakers at the state and federal level, non-profit organizations, and peer-reviewed research. Each of these meetings were open to the public and public comment periods were provided.

At the November 27, 2017 Board meeting, staff presented the Board with a preliminary draft of the regulations. Following that meeting, staff solicited comments from the public on the draft regulations in writing and invited members of the public to participate in two workshops on the draft regulations held December 5 and December 7, 2017. Members of the public could participate in the December 5, 2017 meeting in-person or by phone. The December 7, 2017 workshop had been scheduled to be held in Los Angeles and by phone, but the in-person workshop was cancelled due to wildfires spreading in the area. Instead, staff conducted that workshop entirely by phone. Written comments were posted publicly on the Program website.

At the December 18, 2017 Board meeting, staff presented a summary of comments received, as well as copies of all written comment letters. Following that meeting, staff incorporated direction given by the Board to develop a set of proposed regulations, presented to the Board at the February 26, 2018 Board meeting. At the meeting, the Board approved the content of the regulations and authorized the Executive Director of the Program to initiate the emergency rulemaking process.
6. Methodology

For this SRIA, the authors made a series of calculations using assumptions and estimates from a variety of sources including peer-reviewed academic research; research conducted by an array of organizations, think tanks, non-profit, and for-profit entities; government data; and survey data from a variety of sources.

This SRIA relies on a number of assumptions that could vary significantly from actual experience. Some assumptions are influenced by the policy choices made by the Board in adopting the proposed regulations. For example, while the Board cannot know with any certainty how much an individual is likely to save under the Program, it expects that the default contribution rate will have some significant influence on the number. For that reason, this SRIA assumes all participating individuals will, on average, save according to the 5% default contribution rate established in the proposed regulations.

Other assumptions are almost entirely influenced by factors that cannot be directly influenced by the content of the proposed regulations. For example, investment return has a significant impact on expected savings, macroeconomic impacts, and—long term—Sales and Use Tax (SUT) revenue. Although there is potential for significant variation in outcomes, this SRIA assumes all participating individuals will earn investment earnings at a rate near rates typically earned for investments similar to the investment options to be offered by the Program.

While some assumptions used in the SRIA are built on decades of vigorous academic study, other assumptions used in the SRIA lack such a robust lineage of experience and required the authors to develop best estimates. Some calculations are made using author estimates, qualitative indicators, and survey data with relatively small sample sizes.

This section provides a summary of the methodology used for this SRIA, including data sources, methods for calculations, and additional notes.

2019-2028 Timeframe

Section 2002(c) of the California Code of Regulations requires state agencies to identify and describe all costs and benefits due to a proposed regulatory change calculated on an annual basis from estimated date of filing with the Secretary of State through twelve months following full implementation of the proposed regulation. The Board anticipates the Program will open for enrollment by early-January 2019. Covered employers will have until 2022 to comply with the proposed regulations. To demonstrate the impact of the proposed regulations, however, the SRIA evaluates the first decade of Program operation to better show the impact over time. Unless otherwise noted, this SRIA evaluates potential impact for calendar years 2019-2028.

Number of Employers Impacted

Typically, employers with a greater number of employees are more likely to offer a retirement plan than an employer with fewer employees. For this analysis, the authors estimated the
number of employers impacted by the Program by using a variety of existing studies and state
data on California employers. There are no perfect data on employer sponsorship of retirement
savings plans and assumptions can vary depending on data sources, methodology, and author
calculations.

To estimate the number of employers impacted, the authors used assumptions based on
existing studies by the Social Security Administration (SSA)\(^4\), the U.S. Bureau of Labor Statistics
(BLS)\(^5\), and the Pew Charitable Trusts\(^6\) and applied those assumptions to employer data
collected by the California Employment Development Department based on employer size.
Where necessary, the authors calculated the average sponsorship rate by various employer size
brackets to provide a comparison of data (shown with an asterisk). Because estimates of
employer sponsorship vary, the authors have provided a range of assumptions using the high
and low estimates of employer plan sponsorship.

Statute defines an eligible employer as an employer with five or more employees that doesn’t
already maintain a retirement plan. Most analyses of employer sponsorship do not explicitly
measure employer size ranges of five or more employees, but typically measure employers with
zero or more employees or employers with ten or fewer employees. Given this gap in directly
applicable data sources, the authors used the same range of assumptions for employers with
ten or fewer employees to apply to employers with five to nine employees.

Using these data sources, the authors estimate between 238,300 and 331,832 employers will
be impacted. For this analysis, the authors assumed the number of covered employers to be
the midpoint between the high and low estimates.

### Table 3. – Estimates of Employers Eligible for the CalSavers Retirement Savings Program

<table>
<thead>
<tr>
<th>Employer Size (as # of EEs)</th>
<th>Number of Employers (EDD)(^7)</th>
<th>Estimates of Employer Retirement Plan Sponsorship Rates</th>
<th>Estimated # of Covered Employers (2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SSA</td>
<td>BLS</td>
</tr>
<tr>
<td>500+</td>
<td>2,803</td>
<td>89%</td>
<td>70%</td>
</tr>
<tr>
<td>100-499</td>
<td>22,852</td>
<td>79%</td>
<td>56%</td>
</tr>
<tr>
<td>50-99</td>
<td>36,164</td>
<td>73%</td>
<td>65%</td>
</tr>
<tr>
<td>10-49</td>
<td>223,262</td>
<td>57%</td>
<td>30%</td>
</tr>
<tr>
<td>5-9</td>
<td>176,981</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>10+</td>
<td></td>
<td>23%</td>
<td>18%</td>
</tr>
</tbody>
</table>


\(^6\) Supra note 3

\(^7\) California Employment Development Department, *Size of Business Data for California (Quarterly)*
To estimate the growth of employers from the first year of program operation in 2019 to 2028, the authors calculated average annual employer growth from 2009-2017 using data from the Employment Development Department. For that period, the number of California employers increased by an average rate of 1.71% annually.

Appendix G.1. includes a table showing expected employer participation for years 2019-2028.

Assumptions Used for Employer Impact
To estimate the employer impact, the authors developed assumptions using the experience of employers participating in similar programs in other states—particularly the OregonSaves program. The OregonSaves program requires essentially similar employer duties:
- registration, including confirming employer details;
- establishing payroll contributions; and
- adding employee data.

In a survey of employers participating in the OregonSaves pilot program, participating employers provided feedback for the amount of time necessary to complete their duties. Employers reported registration required about 30 minutes, establishing payroll required an average of eleven minutes, and adding employee data required an average of about 30 minutes. To estimate the opportunity cost incurred by participating employers, the authors of this analysis assumed employer compliance will require the same amount of time as reported in the OregonSaves survey.

Because the registration and payroll contributions tasks will only be necessary one time for a participating employer, the authors included the impact related to those tasks in their first year of participation. Employers will be required to add new or newly-eligible employees within thirty days and conduct open enrollment once annually for employees that previously opted out of the Program. While the authors expect some significant variation in practice, they assumed employers will add new employees once monthly.

Table 4. – Estimated Opportunity Costs for Staff Time Necessary to Complete Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Avg. Minutes Per Task</th>
<th>Avg. Pay Rate</th>
<th>Year one</th>
<th>New Employee Enrollment (12x/annual)</th>
<th>Open Enroll (annual)</th>
<th>Year one</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>30</td>
<td>$20.50</td>
<td>$10.25</td>
<td></td>
<td>$10.25</td>
<td></td>
</tr>
<tr>
<td>Payroll Contributions</td>
<td>11</td>
<td></td>
<td>$3.42</td>
<td></td>
<td>$10.25</td>
<td></td>
</tr>
<tr>
<td>Add employees</td>
<td>30</td>
<td></td>
<td>$10.25</td>
<td>$10.25</td>
<td>$10.25</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td></td>
<td>$23.91</td>
<td>$122.99</td>
<td>$10.25</td>
<td>$157.15</td>
</tr>
</tbody>
</table>

\[8\] Ibid.
To estimate the staff costs necessary for employer compliance, the authors used the average hourly wage for office and administrative support, general office clerks, and payroll and timekeeping clerks, and human resources assistants\(^9\).

**Table 5. – Estimated Average Wages for Positions for Program Compliance**

<table>
<thead>
<tr>
<th>Average Wage by Position</th>
<th>Mean Hourly Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office and Administrative Support</td>
<td>$17.77</td>
</tr>
<tr>
<td>Office Clerks General</td>
<td>$17.84</td>
</tr>
<tr>
<td>Payroll and Timekeeping Clerks</td>
<td>$24.82</td>
</tr>
<tr>
<td>HR Assistants, except payroll &amp; timekeeping</td>
<td>$21.56</td>
</tr>
<tr>
<td>Average</td>
<td>$20.50</td>
</tr>
</tbody>
</table>

The authors multiplied the average hourly wage by the amount of time expected for the first year of program compliance and each year thereafter for a ten-year period. A table detailing these estimates of employer impact is included as Appendix G.3.

**Number of Eligible Employees**

For these assumptions, the authors relied on a market profile completed for the Board in 2016\(^{10}\). The authors of that study analyzed microdata from the **Current Population Survey** conducted by the U.S. Census Bureau, among other data sources. The demographic profile was created using data from 2013-2015.

Key demographic characteristics included in the 2016 market profile include:

- 6.8 million California workers age 18-64 were eligible for the Program were eligible for the Program;
- the population skews younger, with about three out of five under the age of 40 and over a third under the age of 30;
- average income is about $35,000 and median income is about $23,000\(^{11}\); and
- a majority (54%) of eligible workers are employed by firms with fewer than 100 employees and 43% work for firms with fewer than 50 employees.

Due to changes in the state unemployment rate and growth in the population of working-age Californians, the authors of this analysis expect the number of eligible workers has grown since the market profile was completed. To account for this growth and anticipate future employee growth, the authors calculated average annual employee growth using 2009-2017 data from the Employment Development Department. For that period, the number of California employees increased by an average rate of 1.82% annually. Using this growth factor, the

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\(^9\) OES Employment and Wages Data Tables - State of California, (1st Quarter 2018), Employment Development Department

\(^{10}\) Baki, M., Rhee, N., et. al., (2016), Final Report to the California Secure Choice Retirement Savings Investment Board, Overture Financial LLC

\(^{11}\) These estimates were developed before passage of Senate Bill 3 (Leno) in 2016, which increases the state’s minimum wage.
number of eligible employees in 2019, the first year of CalSavers operation, will be about 7.17 million.

Retirement Savings Assumptions for Participating Individuals
Impacts on individuals depends significantly on age, as longer time periods allow individuals to save a greater amount of money and earn compound interest on those contributions for a longer period of time. To demonstrate the impact on individuals, the authors used a model developed by the Board’s program consultant, AKF Consulting Group. The authors used the model to develop scenarios using the default program settings established in the proposed regulations for an individual who begins participating at age 25 and an individual who begins participating at age 35.

For each age, the authors also modelled outcomes for scenarios in which the individual begins contributing at the default contribution rate of 5% and one in which the individual contributes 3%. The authors also developed a scenario in which the individual’s contributions are subject to automatic escalation of 1% annually, as would be established as a default option in the proposed regulations, and a scenario in which the individual’s contribution amount remains static throughout the period.

Participating individuals can change their account settings – contribution amount, investments, IRA treatment, etc. – at any time. However, experience shows most participants in an automatic enrollment retirement plan remain with the default account settings. Given the uncertainty regarding participant behavior, the authors used the actual default contribution rate of 5% and an alternative default contribution rate of 3% for this analysis. The same considerations apply to automatic enrollment. While the authors anticipate some individuals will either choose to opt out of automatic escalation or choose an alternative escalation rate, the authors expect a majority of individuals will participate in automatic escalation at the default rate established in the proposed regulations.

For scenarios with automatic escalation, the authors assumed the escalations cease at 8% as required under Government Code Section 100032(k)(1).

For the investment return assumptions, the authors considered average historical returns for typical balanced investment portfolios akin to the investment options to be provided in the Program. Given the wide range of potential investment return outcomes, participant behavior, and other factor, any assumption about a typical individual’s investment carries a high degree of uncertainty. However, the long-range time horizons of these scenarios lend themselves to helpful historical comparisons. For this analysis, the author’s assumed net investment returns of 5%, informed by historical returns for investment portfolios similar to what will be offered under the Program.

For each, the authors assume the following:
- Net annual investment return (including fees) – 5%
- Age of retirement – 65
• Starting hourly wage – $15\textsuperscript{12}
• Hours worked per year – 2000
• Starting annual compensation – $30,000
• Annual increase in compensation – 1%

The estimates are included in the table below:

**Table 6. – Expected Retirement Savings for Individuals Age 25**

<table>
<thead>
<tr>
<th></th>
<th>Scenario 1a</th>
<th>Scenario 2a</th>
<th>Scenario 3a</th>
<th>Scenario 4a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributions</td>
<td>$119,089</td>
<td>$75,563</td>
<td>$116,340</td>
<td>$45,338</td>
</tr>
<tr>
<td>Earnings</td>
<td>$230,376</td>
<td>$150,766</td>
<td>$214,917</td>
<td>$90,460</td>
</tr>
<tr>
<td>Total Funds</td>
<td>$349,464</td>
<td>$226,329</td>
<td>$331,257</td>
<td>$135,798</td>
</tr>
<tr>
<td>Contributions as % of Total Funds</td>
<td>34.1%</td>
<td>33.4%</td>
<td>35.1%</td>
<td>33.4%</td>
</tr>
</tbody>
</table>

| Contributions Compared to Scenario 1a | ($43,526) | ($2,749) | ($73,751) |
| Earnings Compared to Scenario 1a     | ($79,610) | ($15,459) | ($139,916) |
| Total Funds Compared to Scenario 1a  | ($123,136) | ($18,207) | ($213,667) |
|                                       | -35.24%   | -5.21%    | -61.14%    |

**Table 7. – Expected Retirement Savings for Individuals Age 35**

<table>
<thead>
<tr>
<th></th>
<th>Scenario 1b</th>
<th>Scenario 2b</th>
<th>Scenario 3b</th>
<th>Scenario 4b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributions</td>
<td>$84,907</td>
<td>$54,199</td>
<td>$82,158</td>
<td>$32,519</td>
</tr>
<tr>
<td>Earnings</td>
<td>$102,688</td>
<td>$67,906</td>
<td>$94,259</td>
<td>$40,743</td>
</tr>
<tr>
<td>Total Funds</td>
<td>$187,594</td>
<td>$122,105</td>
<td>$176,417</td>
<td>$73,263</td>
</tr>
<tr>
<td>Contributions as % of Total Funds</td>
<td>45%</td>
<td>44%</td>
<td>47%</td>
<td>44%</td>
</tr>
</tbody>
</table>

| Contributions Compared to Scenario 1b | ($30,707) | ($2,748) | ($52,388) |
| Earnings Compared to Scenario 1b     | ($34,782) | ($8,429) | ($61,945) |
| Total Funds Compared to Scenario 1b  | ($65,490) | ($11,177) | ($114,333) |
|                                       | -35%       | -6%        | -61%        |

\textsuperscript{12} Absent a policy change or action from the Governor, the state minimum wage will be $15 an hour for all employers by January 1, 2023.
Estimates of Eligible Employees Based on Employer Size

Government Code Section 100032 establishes deadlines by which covered employers are required to comply with the statute. The deadlines differ for employers based on their number of employees. Employers with 100 or more employees are required to comply within 12 months after the Program opens for enrollment, employers with 50-99 employees have a 24 month deadline, and employers with 5-49 employees have a 12 month deadline.

In the market analysis and financial feasibility study conducted for the Board, the authors estimated how the eligible population breaks down by the size of their employer. The authors estimated that, out of the 7.17 million Californians eligible for the Program in year one:

- 3.32 million (46%) work for an employer with 100+ employees;
- 774,498 (11%) work for an employer with 50-99 employees; and
- 3.08 million (43%) work for an employer with 5-49 employees.

By applying the employee growth rate of 1.82%, the authors expect this population to increase to about 8.44 million by 2028.

Eligible Employee Participation Rate

Employees are more likely to participate in a retirement savings plan if there are incentives to participate (i.e. matching contributions from the employer) or if participation is convenient and requires minimal actions by the individual. Also, because not all employees may be immediately eligible for some private sector employer plans, participation rates among private sector employer plans can vary widely.

The CalSavers program utilizes what is commonly referred to as “automatic enrollment,” where individuals are enrolled into the Program if they do not affirmatively choose to opt out. Automatic enrollment has been shown to result in high participation rates in retirement plans, often resulting in participation rates above 90%, typically doubling participation rates when compared to plans without automatic enrollment. OregonSaves, a program similar to CalSavers that utilizes automatic enrollment, reports 73% of its eligible employees have chosen to participate in their program. Among employer plans without employer contributions or automatic enrollment, participation rates are estimated to be anywhere between 69% and below 50%. More broadly, the Bureau of Labor Statistics estimates about 72% of private workers with access to a workplace defined contribution retirement participate.

While there are many sources of data and analysis on participation rates for retirement plans with automatic enrollment versus plans without, and plans with an employer contribution versus plans without, the authors are unaware of any data on expected participation rates for

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13 Provided by OregonSaves program (June 1, 2018)
14 Pew Charitable Trusts, (February 2017), Retirement Plan Access and Participation Across Generations
plans with automatic enrollment and no employer contributions, as such plans are rare aside from the few other state retirement plans such as OregonSaves.

Because enrollment methodology would likely vary widely among various employer plans, this analysis uses a participation rate assumption of 70% – an assumption used in the “pessimistic” scenario used in the Board’s financial feasibility study.

Estimates of Annual Savings
Per Government Code Section 100032, employers will be required to comply with the law within twelve, 24, and 36-month periods that will begin once the Program opens for enrollment\(^1\). The Board estimates the Program will open for enrollment by early-2019. Employers with five or more employees will be required to comply with the law by about December 31, 2022. The Program is scheduled to launch in late-2018, however the SRIA assumes the Program opens January 1, 2019 to allow for easier comparison of annual impact and because there may not be significant impact for the period in 2018 during which the Program is operating.

To calculate estimates of annual savings, the SRIA multiplied the annual savings assumptions by expected annual eligible employee participation assumptions detailed earlier in this section.

As shown in Appendix G.5., annual savings could be substantial, potentially exceeding $3.5 billion in the first year. The authors note these estimates are highly sensitive to an array of factors, specifically employer compliance, employee participation, employee contributions, and investment return. The authors expect this potential outcome could represent the higher range of outcomes, as actual participation by employers and employees, among other assumptions, could vary significantly from these assumptions.

Assumptions for Consumption Impact
Long term, the authors expect implementation of these regulations will result in a total increase in consumption in the state due to the accrual of investment earnings compounded over time. Because participating individuals will save a portion of their income in their working years, the authors expect a reduction in consumption in the first decade of CalSavers operation.

The income and financial resources of individuals influences their consumption through spending on goods and services. Diminished consumption impacts the state by reducing economic activity and sales and use tax revenue—impacts that reverberate through the state by impacting employment, state and local spending on public benefits, and impacting sources of tax revenue.

As shown in tables 2 and 3, investment earnings are likely to account for a significant portion of an individual’s retirement savings—accounting for as much as two-thirds of total savings for individuals that begin participating at age 25. Due to the impacts of investment earnings and

\(^1\) Government Code Section 100032(e) provides the Board discretion to extend the deadlines.
compound interest on individuals’ savings, the California economy should benefit from long-term consumption increases.

The authors estimated the consumption impact for the first decade of the Program’s operation by using the same assumptions for employer and employee participation and expected contributions.

While some participating individuals may already be saving a portion of their income in savings accounts, other retirement accounts, or through other means, the authors expect a majority of the contributions will constitute new savings. As noted in earlier in this section, a majority of eligible individuals are lower-income and such individuals are not likely to already be saving through existing savings accounts, retirement accounts, or through other means. For the purposes of this analysis, the authors assumed 90% of savings through the Program will constitute new savings for those individuals.

The authors expect roughly 90% of savings under the Program will represent new savings, as lower-income individuals don’t typically direct a significant portion of their income toward other savings.

The authors expect some consumption loss will be mitigated by individual consumption through new debt, such as credit card expenditures. Research on participant behavior related to new retirement savings and its correlation to debt is limited. One study published in 2017 studied how newly-hired civilian U.S. Army employees’ behavior changed following implementation of automatic enrollment into the federal Thrift Savings Plan. The study found consumer debt increased by 2.1% for individuals with a high school education only, decreased by 1.5% for individuals below age 30, and did not change for individuals making less than $34,000 annually\textsuperscript{17}, although the findings were not statistically significant. While the authors expect some increase in additional consumer debt associated with participation in the Program, there do not appear to be assumptions that can be relied upon to make any accurate predictions. For this analysis, the authors used the assumption that 2.5% of the expected consumption will be offset by new credit or debt.

The IRA type used by participating individuals and their behavior could be a significant influence on overall consumption impact. Consumption impact could be mitigated by early retirement account withdrawals. Because contributions to a Roth IRA, the default IRA type, are made post-tax, individuals can withdraw contributions without additional taxes or penalties. The authors, however, do not expect early withdrawals to represent a significant impact on consumption and do not include it among the assumptions used in these calculations.

The authors multiplied expected contributions by a factor of 0.90 and 0.975 to account for the influence of new savings and new debt on consumption impacts.

\textsuperscript{17} Beshears, J., Choi, J., et. al., (December 7, 2017), “Borrowing to Save? The Impact of Automatic Enrollment on Debt”, Harvard University/Yale University/United States Military Academy
Appendix G.4. shows expected consumption impacts for the 2019-2028 calendar years and Appendices G.6.- G.9. include estimates of macroeconomic impacts related to the consumption impacts

Assumptions for Sales and Use Tax Impact
Implementation of these regulations will likely result in a short-term loss of consumption for participating individuals, as they will contribute some portion of their income to their CalSavers individual retirement account, resulting in losses in SUT revenue. However, the implementation of these regulations should result in a long-term increase in SUT revenue due to the effect of investment return earnings and compound interest earned on an individual’s account. As shown in Section A.6., investment return can compose a majority of overall retirement savings over time.

Typically, a majority of individual consumption is not subject to the sales and use tax. Most individuals spend a majority of their consumption on housing and utilities, healthcare, groceries, insurance, and education—expenditures not typically subject to the SUT\(^\text{18}\). For this analysis, the authors assumed about one-third of consumption in California is on goods subject to the SUT\(^\text{19}\).

Sales tax rates vary among California cities and counties—reaching as low as 7.25% and as high as 10.25%\(^\text{20}\). On average, the sales tax rate in California is about 8.4%.

Assumptions for Investment Impact
Implementation of the proposed regulations will result in significant new investments due to the retirement savings of CalSavers participants. Savings will be invested in a small menu of investment options established by the Board. Under the default account settings, the first $1,000 in contributions will be made to a capital preservation fund, which has the primary objective of providing individuals safety and liquidity. All contributions after the first $1,000 will be invested in either target-date or target-risk fund if the individual does not affirmatively select another investment option.

To estimate these impacts, the authors used the same assumptions outlined in this section for individual participation and annual savings. To estimate the investment impact on the California economy, the authors used assumptions for the portion of overall investment portfolio with exposure to California companies. While individuals will have the option to select their own investment options out of the menu provided by the Program, experience with similar other retirement plans shows most individuals will invest in the default investment option recommended to them. Given the age profile of the eligible population, the 2050 Target-Date Fund is the type of fund that would be suitable for individuals under age 40 during the first year of CalSavers operation.

\(^{18}\) Kerstein, S., (May 2015), Understanding California’s Sales Tax, Legislative Analyst’s Office

\(^{19}\) Ibid.

\(^{20}\) California City & County Sales & Use Tax Rates (effective April 1, 2018), California Department of Tax and Fee Administration
The Board’s investment consultants, *Meketa Investment Group*, estimate about 12.5% of a 2050 Target-Date Fund would have exposure to California companies. The top three most active sectors in California are information technology, health care, and consumer discretionary goods and services. The authors calculated expected impacts due to new investment for each sector, detailed further in Appendices G.6.-G.9.

**B. BENEFITS**

To live comfortably in retirement and maintain standards of living, individuals typically require retirement income at about 75-90% of their pre-retirement income\(^{21}\). However, millions of California workers – and millions more nationwide – have little to nothing saved for retirement.

Studies have shown over half (57%) of Californians age 18-64 lack access to a workplace retirement plan\(^{22}\) and, among workers in the middle 50% of the earnings distribution—a measure sometimes used to define the “middle class”\(^{23,24}\)—about half will face significant economic hardship in retirement\(^{25}\). Employers, particularly small businesses, cite cost, administrative burden, and liability concerns as the top three reasons for not currently offering employees access to a retirement savings plan.

Once implemented, the Program will ensure nearly all adult California workers will have access to a workplace retirement plan and substantially increase the number of employers that maintain a retirement plan for their employees.

State laws and regulations regarding Standardized Regulatory Impact Assessments require state agencies to evaluate the impact of major regulations “...without regard to any offsetting benefits...that might result directly or indirectly from that adoption, amendment, or repeal.”

The benefits of the Program will, for the most part, not be realized for decades following implementation of these regulations. Long-term, the Program should result in significant benefits for individuals due to the accrual of retirement savings and the benefits of compounded investment interest. Similarly, the Program should result in long-term fiscal benefits due to that accrual of savings through increased consumption, increased sales and use tax revenue, and a decrease in demand for some government services such as Medi-Cal.

While there may be some marginal benefit for individuals and fiscal benefits in the period of time evaluated in the SRIA, the SRIA estimates only the impact for the first decade of CalSavers operation, as most participating individuals are unlikely to withdraw retirement savings during

\(^{21}\) Munnell, A. H., Belbase, A., Sanzenbacher, G.T., (March 2018), *An Analysis of Retirement Models to Improve Portability and Coverage*, Center for Retirement Research at Boston College in conjunction with Summit Consulting, LLC

\(^{22}\) *Supra* note 2

\(^{23}\) Rose, S.J., (June 2016), *The Growing Size and Incomes of the Upper Middle Class*, The Urban Institute

\(^{24}\) Pew Research Center, (May 2016), *America’s Shrinking Middle Class: a Close Look at Changes Within Metropolitan Areas*, Pew Charitable Trusts

the decade evaluated in the SRIA. However, given the substantial differences in short- and long-
term benefit, the authors provide some commentary and estimates on the longer-term benefits
throughout this section.

1. Individuals

Implementation of these regulations and, ultimately, the Program, will benefit individuals by
providing them access to a workplace retirement plan, increasing the likelihood they will accrue
meaningful retirement savings and improve their financial security. The impact will depend on a
number of factors, including whether and when an individual decides to participate in the
Program, their decisions regarding how much they contribute and how they choose to invest
their contributions, investment performance, and the Program’s ability to reduce
administrative fees.

Behavior

Studies have also demonstrated individuals are fifteen times more likely to save for retirement
if they have access to a workplace retirement plan.\(^{26}\) A significant portion of eligible CalSavers
participants tend to skew lower-income,\(^{27}\) causing some to speculate that such workers will not
save for retirement even if provided access. While we expect some will choose not to
participate due to those concerns, studies have shown over 85% of working households
participate in a retirement plan when provided access\(^{28}\) and even among workers with incomes
below $25,000, a majority participate in a workplace retirement plan when given access\(^{29}\).

The existence of access alone will not completely solve the problem of retirement insecurity in
California, but should help the millions of current Californians without access, and millions
more future Californians, significantly improve their future financial security.

Social Security

An increasing share of workers in California rely on Social Security benefits for all, or a majority
of, their retirement income. And, when compared with an individual’s earnings, Social Security
provides a lesser benefit than in the past\(^{30}\). At the same time, costs in retirement are rising, as
housing costs, which typically comprise the majority of retiree expenses\(^{31}\), continuing to rise
and Medicare premiums projected to compose a greater share of retiree income over the next
ten years\(^{32}\).

\(^{26}\) *Employee Benefit Research Institute and Greenwald & Associates*, (2014), *Retirement Confidence Survey Fact Sheet #6, Preparing For Retirement In America*

\(^{27}\) Supra note 11

\(^{28}\) *U.S. Government Accountability Office*, (May 2016), *Low defined contribution savings may pose challenges*

\(^{29}\) Scott, J., Blevins, A., et. al., (January 2016), *Who’s in, who’s out Pew Charitable Trusts*

\(^{30}\) Goss, S., Clingman, M., et. al., (July 2015), *Replacement rates for retirees: What makes sense for planning and evaluation?*, *Social Security Administration*

\(^{31}\) *United States Government Accountability Office*, (March 2016), *Better Information on Income Replacement Rates Needed to Help Workers Plan for Retirement*

\(^{32}\) McInerney, M., Rutledge, M. S., King, S. E., (October 2017), *How Much Does Out-of-Pocket Medical Spending Eat Away at Retirement Income?*, *Center for Retirement Research at Boston College*
Many working Californians collect Social Security benefits prior to reaching the “Normal Retirement Age” of 67, thereby reducing their monthly benefit. For every year a person delays drawing Social Security benefits, he or she increases retirement income by 7-8 percentage points. Retirement savings accrued through the Program could afford some lower-income workers the resources necessary to delay collecting Social Security benefits. One study estimated about 40% of participants in programs like CalSavers could choose to delay claiming Social Security by a year or more even if contributing just 3% of their paycheck. We would expect even greater benefits resulting from participation in CalSavers because its 5% default contribution rate and automatic escalation should result in greater accumulation of savings – and better ability to delay collecting Social Security benefits.

Passage of recent legislation to increase the statewide minimum wage should serve to bolster savings assumptions, as it should increase the amount of contributions among CalSavers participants. One recent study analyzed the effect of the minimum wage increase and implementation of CalSavers on lower-income California workers. The study examined estimated impacts on a 25- and 45-year-old workers at varying income levels and estimated how saving through the Program, combined with the minimum wage increase, could result in changes to Social Security benefits. Similar to the previously-cited study, the authors found the CalSavers program would result in a substantial increase in retirement income through increased Social Security benefits and accrual of retirement saving. The study found young workers earning the bottom 50% of wages in their age cohort could increase their retirement incomes by roughly half as a result of the two policies.

2. Employers

Roughly half of employers throughout the country do not maintain a retirement plan for their employees. In California, well over half of employers (as high as 57%) do not maintain a retirement plan for their employees.

Smaller employers in particular are unlikely to maintain a retirement plan due in part to the costs and administrative complexity required to evaluate options in the private marketplace, maintain a plan, conduct reporting required of certain employer-sponsored retirement plans, and, potentially, incur the risk of liability for breaches of fiduciary duty, discrimination, or other legal risks.

The likelihood that an employer sponsors a retirement savings plan varies widely depending on an employer’s size. The U.S. Bureau of Labor Statistics estimates 83% of private employers with 100 or more employees provide retirement benefits, whereas 49% of private employers with 1-49 employees provide retirement benefits. The Social Security Administration estimates only

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33 Pew Charitable Trusts, (March 2018), Auto-IRAs could help retirees boost Social Security Payments
34 Rhee, N., (December 2017), California’s $15 Minimum Wage and Secure Choice Retirement Savings Program Can Boost Young Low-Income Workers’ Retirement Incomes by 50%, UC Berkeley Labor Center
35 Supra note 2
36 Supra note 5
28% of private employers with fewer than ten employees provide retirement benefits\textsuperscript{37}. Approximately 66% of the estimated eligible CalSavers population is believed to work for businesses with fewer than 100 employees.

\textit{Employee Recruitment and Retention}

For employers, offering a retirement plan can be a way to help recruit and retain employees. One survey found 89% of employers that offer a retirement plan cited employee recruitment and retention as a reason why they offer a plan\textsuperscript{38}. An even greater number of employers report retirement plans have a positive impact on employee performance. Despite these benefits, however, many employers do not maintain retirement plans due to cost, complexity, and concerns about liability. The same survey found over half of respondents cited either expenses or limited resources as the main reason for not offering a retirement plan.

Four out of five workers in California work for a small business, a number that many expect to grow with the advent of the gig economy and changes in the nature of the workforce. The ability to offer benefits helps employers compete in the labor market, something increasingly important as the unemployed rate continues to drop nationwide and, in particular, in California\textsuperscript{39}.

The CalSavers program will provide employers with a retirement plan option that is simple and requires no direct costs, annual reporting, with no fiduciary liability. By having an easy way to provide a popular employee benefit, the program should help some smaller employers improve their value in the labor market.

However, because all employers in the state with at least five employees will be required to either offer a plan of their own or participate in CalSavers, the net impact is difficult to estimate. Some employers will be better able to compete with larger employers for labor, however employers with fewer than five employees may be at a competitive disadvantage as a result of the implementation of statute.

Because of the impacts on labor market competition, some larger employers may be more likely to bolster their retirement benefits if they already offered a plan—by increasing employer contributions, providing other investment options, or offering a defined benefit or what are commonly referred to as ‘hybrid’ or ‘cash balance’ retirement plans.

\textbf{3. Jobs or Industries}

The implementation of these regulations should not result in any direct impact on the creation or elimination of jobs or occupations. As shown in Appendices G.6. – G.9., however, changes in consumption and investment related to operation of the CalSavers program could have an indirect impact on jobs and industries.

\textsuperscript{37} Supra note 4

\textsuperscript{38} Pew Charitable Trusts, (June 2017), \textit{Employer Barriers to and Motivations for Offering Retirement Benefits}

\textsuperscript{39} California Labor Market Statistics, \textit{State of California Employment Development Department}
C. IMPACT

1. Individuals

Participation in the Program is completely voluntary for eligible individuals. Individuals that choose to participate in the Program will contribute a certain amount of their wages into a personal CalSavers account and invest it among a menu of investment options offered by the Program.

Participants that do not make an affirmative decision on their contribution amount, investments, or IRA treatment will be treated under the Program’s default account settings. Participants can choose to change their account settings at any time, however there may be some lag if, for example, a change is not made in time to be reflected in an individual’s paycheck.

The impact on individuals could vary widely depending on a series of factors including, but not limited to:

- personal decisions (i.e. contributions, investment options, early withdrawals of savings, etc.);
- global investment performance; and
- administrative fees.\(^\text{40}\)

\(\text{\textit{Reduced Take-Home Pay}}\)

Participating individuals will be impacted through reductions in take-home pay that could be otherwise used to pay for concerns more immediate than retirement. However, individuals can withdraw their contributions at any time. Withdrawals made before reaching age 59 ½ may be subject to penalties and taxes depending on the IRA type under which the contributions are invested and the use of the funds.

These regulations would establish Roth as the default IRA treatment, which allows individuals to withdraw their contributions—but not investment earnings—without incurring taxes and penalties. The Board expects this default account setting should mitigate some of the potential financial impacts that may occur to some individuals.

In addition, the default setting directs the first $1,000 of participants’ contributions into a capital preservation fund intended to maintain principal for the purpose of use in emergency conditions.

\(\text{\(^{40}\text{For the purposes of this assessment, “administrative fees” refers to all fees necessary to operate the Program, including investment fees, TPA fees, and state administrative fees.}}\)\)
**Investment Performance**

There is inherent and unavoidable risk in any investment. Government Code Section 100002(e)(2)(A) compels the Board to seek to minimize participant fees and implement investment options that provide maximum possible income replacement balanced with appropriate risk.

Participants will choose to invest their contributions from a number of professionally managed investment options appropriately suited for participants based on varying levels of risk. Participants will have the option to change their investments at any time. For those that do not make an affirmative election otherwise, their contributions will be invested in the default investment.

The Board’s Investment Policy Statement (IPS)\(^{41}\), approved on May 21, 2018, establishes a default investment option that would:

- invest the first $1,000 of contributions into a capital preservation fund designed to provide low-risk, steady investment returns; and
- invest subsequent contributions in either a target date fund or a target risk fund (to be determined by the Board prior to final regulations and launch) that will be established with the primary objective of providing a diversified portfolio appropriate for either each participant’s time horizon (target date fund) or a broadly acceptable risk preference for all participants.

The IPS also establishes three additional investment options for consideration: a core bond fund; a global equity fund; and an environmental, social, and governance criteria (ESG) fund.

Experience has demonstrated diversified investments in the global stock market will earn interest long-term, even if the term includes recessions, sustained market losses, and volatility. However, past performance provides no guarantee of future performance. Depending on investment performance, timing, and participant behavior, participants could lose the value of their contributions and investment interest.

**Administrative Fees**

Similar to most retirement programs, the Program will charge participants a percentage fee on their assets held under the Program to pay for the costs of operating the Program—including investment management costs, third-party administrator (TPA) costs, and the costs for the state government staff and overhead.

Statute requires the Board to minimize administrative fees and limits the administrative fees to below 1% (often expressed as “basis points,” which represent one hundredth of one percent, i.e. “100 basis points) on and after six years of CalSavers operation. Despite the six-year period allowed by the statute, the Board has expressed a strong intention to secure fees below this cap by the commencement of the Program.

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\(^{41}\) [https://www.treasurer.ca.gov/scib/regulations/investment-policy-statement.pdf](https://www.treasurer.ca.gov/scib/regulations/investment-policy-statement.pdf)
The administrative fees necessary to operate the Program will depend on the number of participating employees and employers, contributions made by participants, and investment performance. Because each additional participating employer and employee brings both additional costs and additional revenue, the most important factor dictating administrative fees is the contributions by participants and investment performance.

2. Employers

Government Code Section 100032 requires employers to register with the Program if they 1) employ at least five employees and 2) don’t already maintain a retirement plan for their employees. Under the code section, eligible employers with 100+ employees are required to register within 12 months of Program operation; eligible employers with 50+ employees are required to register within 24 months of Program operation; and eligible employers with at least five employees are required to register within 36 months of Program operation. Government Code Section 100032(e) provides the Board the authority to extend those deadlines at its discretion.

The adoption of these regulations are a necessary part of the implementation of the Program, which will initiate the mandate that such eligible employers either begin to offer their own retirement plan or register for CalSavers.

Although the Program requires no direct costs from employers to participate and is designed to place minimal administrative burden on participating employers, there may be some marginal opportunity costs incurred by employers associated with the duties necessary to participate in the Program.

Specifically, employers will be required to:
- register with the Program;
- provide necessary data upon registration;
- facilitate distribution of materials provided by the Program;
- ensure employee contributions are remitted to the third-party administrator;
- provide updates as necessary (i.e. when a new employee enrolls in the Program); and
- adjust employee contributions when directed by the third-party administrator (employees will make account changes directly with the third-party administrator).

Employers will not be subject to any direct costs or fees and will not have a reporting requirement imposed through these regulations. Any impact on employers would be indirect impacts that may include opportunity costs due to the time spent registering with the Program and performing administrative duties (i.e. enrolling new employees) necessary to operate the Program.
Similar programs in other states, like the OregonSaves program, and internationally, like the NEST program in the United Kingdom, require essentially the same level of employer responsibilities as the CalSavers program (although the NEST program does require employer contributions to their employee accounts). Both programs have reported positive responses from participating employers\textsuperscript{42}, but have also experienced difficulty engaging employers that are likely eligible for their program.

The extent to which an employer would be impacted may depend on the type of system an employer uses for payroll. Employers that do not use a third-party payroll service or payroll software may require minor additional internal staff time dedicated to participating in the Program for duties including providing basic employee information to the Program, making the Program information packet available (either passing out hard copies or providing a web link), and facilitating payroll contributions.

While smaller employers may be less likely to use a payroll service, such employers would also be expected to require less administrative time for compliance, as they would have fewer employees to enroll. Smaller employers would also be expected to benefit more from the Program than larger employers, as smaller employers would be expected to have fewer resources than larger employers to provide a retirement plan. Smaller employers may also be more likely to receive less-favorable terms than a larger employer would from the private retirement plan administrators.

Much of the information participating employers will be required to provide to the Program are similar to the information employers are already required to provide in the quarterly report of wages DE 9C form. A recent state law (AB 1245), requires all California employers to submit tax returns, wage reports, and payroll tax deposits to EDD electronically. Due to this requirement, the Program does not expect the number of employers without electronic payroll systems to decrease substantially, further reducing any impact due to administration.

Using the assumptions outlined in Section A.6., the authors estimate employer impacts of about $157 in opportunity costs per employer due to the staff time necessary to facilitate the Program, resulting in a total employer impact of $1.3 million in 2019, $3.4 million in 2020, and, because a majority of employers are expected to join the Program in 2021, about $46 million in 2021. For more detail on the employer impact, please see Appendix G.3.

D. ECONOMIC IMPACTS

\textit{Economic Impact Methodology}
To evaluate the economic impact, the SRIA considers economic impacts related to expected changes to consumption and investment due to adoption of the proposed regulations. The authors used the Regional Input-Output Modeling System (RIMS II) developed by the Bureau of Economic Analysis to assess the economic impacts of the proposed regulations. The authors

\textsuperscript{42} December 19, 2017 Ascencus update to Oregon Retirement Savings Plan Board
used Type I multipliers for the California region to estimate the impacts of consumption and investment changes on output, earnings, employment, and value added on the economic sectors subject to the greatest impact.

**Consumption**
To evaluate expected impacts due to consumption, the authors used RIMS II multipliers for the economic sectors associated with the major categories of household expenses— with the average portion of household expenditures noted in parenthesis

- Housing and Utilities (38.58%)*
- Transportation (15.98%)
- Food (14.15%)
- Health (7.87%)*
- Entertainment (4.90%)
- Apparel and Services (3.13%)
- Miscellaneous (15.38%)

Because 80% of the eligible population has income below $50,000, the authors used the average annual household expenditures for individuals with income below $50,000. Using the assumptions outlined in Section A.6., implementing the proposed regulations will impact consumption. Over the next decade, the action of potentially millions of Californians saving for retirement will result in immediate loss of consumption in the state. Longer term, however, the accrual of retirement savings should result in a gain in consumption compared to the baseline, as participating individuals should accrue meaningful investment interest on their contributions.

In 2019, consumption could be reduced by about $3.0 billion, with increasingly greater consumption reductions in the following years. For more detail on the consumption impacts, please see Appendix G.4. and Appendices G.6.-G.9.

The authors used an average of the relevant RIMS II multipliers for each expenditure category and multiplied it by the expected consumption loss for the corresponding category.

For more detail on the industry-specific impacts, please see Appendices G.6. – G.9.

**Investment Impacts**
To estimate the investment impacts, the authors assume 12.5% of investments will be invested in California-headquartered public companies—a portion common to global equity funds. The authors evaluated potential impact using RIMS II multipliers for the top-three industry categories in California according to their share of the California economy. The authors used

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*The authors do not expect any significant impact on housing and utilities or health consumption due to adoption of these regulations and did not include calculations on the impact in the SRIA.*

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the same assumptions detailed in Section A.6. to model expected annual savings and the portion of savings that constitutes new savings (and therefore new investment).

For more detail on these industry-specific investment impacts, please see Appendices G.6-G.9.

*Competitive Advantage or Disadvantage*

The authors do not expect adoption of these regulations to create any significant competitive advantage or disadvantage for California businesses. As noted in the Employer Impact and Employer Benefit sections, there may be some benefit to covered employers in the labor market and some impact for covered employers due to compliance, but both impacts should be marginal.

*Employment*

The authors used the RIMS II multipliers and other assumptions detailed in Section A.6. to estimate impacts on jobs in California. The implementation of the proposed regulations will have positive impacts associated with new investment and negative impacts associated with reduced consumption.

As calculated, total employment would result in a decrease of 17,964 jobs and an increase of 3,189 jobs in 2019. For each year thereafter in the first decade of CalSavers operation, consumption losses result in increasingly greater job losses and investment gains result in increasingly greater job gains. By 2025, the calculations result in a total job gain. Long term, the authors expect the operation of the Program to result in job gains significantly greater than job losses as individuals begin to spend their retirement savings and investment interest earned.

For more detail on projected jobs impacts, please see Appendix G.8.

*Incentives for Innovation*

The enabling statute for the Program includes a requirement that any employer of at least five employees provide a retirement plan to their employees. While we expect many such employers to register with CalSavers, many will be served by other retirement plans provided in the private sector marketplace.

We expect the mandate to incentivize innovation by private sector firms in the employer-sponsored retirement plan market, recordkeeping, third-party payroll services, and other third-party benefit providers. The Program may also increase incentives for private sector retirement plan vendors to reduce unnecessarily high administrative fees due to competitive pressure created by the existence of the Program.

The Program should also result in competitive pressure among retirement plan sponsors to reduce fees and bolster administrative efficiency and ease of use for plan sponsors and participants. Because the Program will be available to self-employed individuals, we expect this competitive pressure to extend outside the employer-sponsored retirement plan market to the individual market, particularly mobile and web-based retirement savings applications.
E. ALTERNATIVES

State law established the Board and compels it to implement and operate the Program. The laws governing the Program include a great deal of specificity that did not require further definition in regulations. However, some sections of the law compel the Board to define specific policies about the Program through regulations.

Before adopting the proposed regulations, the Board considered some alternatives to certain aspects of the regulations. CalSavers staff estimated the economic and fiscal impacts of the proposed and alternative regulations. The table below summarizes the significant alternatives to the proposed regulations covered in this analysis:

<table>
<thead>
<tr>
<th>Proposed Regulations</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% Default Contribution Rate</td>
<td>3% Default Contribution Rate</td>
</tr>
<tr>
<td>Implement Automatic Escalation of 1% annually up to 8%</td>
<td>Not Implement Automatic Escalation</td>
</tr>
<tr>
<td>Designate an annual open enrollment period</td>
<td>Designate a biennial open enrollment period</td>
</tr>
<tr>
<td>Allow individuals to participate outside of an employment relationship</td>
<td>Prohibit participation from individuals not employed by a participating employer</td>
</tr>
<tr>
<td>Establish Roth as the default IRA type</td>
<td>Establish Traditional as the default IRA type</td>
</tr>
</tbody>
</table>

**Alternative 1: adopt a default contribution rate of 3%**

When an employee enrolls in the Program, they will be provided the opportunity to elect how much they will contribute to their account (either as a percentage of wages or a specific dollar amount), the type of IRA(s) under which their contributions will be invested, and how their contributions will be invested, among other things. The proposed regulations would allow a participating employee to select an alternative contribution rate between 0-100% of wages, or make contributions in whole dollar amounts. If participants do not make an affirmative election, they would be enrolled under what are referred to as default account settings.

Government Code Section 100032(i) establishes a default contribution rate of 3% of a participant’s wages and grants the Board authority to adjust the default contribution rate to no less than 2% and no more than 5%.

Before the Board adopted the 5% default contribution rate, it solicited the input of the informal stakeholder groups and the public at large. The majority of stakeholders preferred a 5% default contribution rate, however that support was not unanimous. Two stakeholder groups preferred a lower rate of 3% due to concerns that a higher rate would dissuade some lower-wage employees from participating in the Program.
The Board also relied on some of the analysis conducted for the feasibility study completed in 2016. As part of the feasibility study, the consultants held six focus groups throughout the state and conducted an online survey of over 1,000 eligible workers to estimate future participation of eligible workers and analyze the expected behavior of future participants, among other things.

i. Cost and Benefits

Alternative 1 would likely result in significantly less savings among participants, impact the Program finances, and reduce the Board’s ability to minimize administrative fees, further impacting participant savings and future financial security.

Meaningful Retirement Savings

There is no perfect metric to identify how much an individual should save to live comfortably in retirement, as it would require assumptions on how long an individual will live, how they would like to spend their money, and a myriad of other subjective assumptions. While many could disagree about a number, it is clear many do not have nearly enough saved to sustain their quality of life in retirement.

Commonly-cited studies have estimated the average American worker should have enough savings to replace about 75-90% of their pre-retirement income to sustain the same quality of life in retirement. Social Security benefits make up a significant share of retirement income for all workers and constitutes a greater portion of retirement income for lower income workers.

Because the mean and median income of likely participants is relatively low, it is unlikely that either a sustained 3% or 5% contribution rate would result in savings sufficient to provide total financial security in retirement for most participants. Given this reality, the deliberation on the ideal default contribution rate centers on which rate is most likely to result in optimal participant behavior including its impact on a participant’s contributions and their decision of whether or not to participate in the Program.

As shown in table 2 and 3, there are substantial differences between retirement savings accumulated between a 3% and 5% contribution rate. Absent automatic escalation, a typical 25 year old participant would accumulate $90,532 less in retirement savings under a 3% contribution rate when compared to a 5% contribution rate. In scenarios with automatic escalation, the differences in expected retirement savings between a 3% and 5% default contribution rate are mitigated to some degree, resulting in overall savings differences of 6% for an individual beginning to save at age 35 and 5.21% for individuals beginning to save at age 25.

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44 Supra note 11
45 Aon Consulting, (2008), Replacement Ratio Study
Low Sensitivity to Default Contribution Rates

Some commenters suggested relatively higher default contribution rates would result in an a greater likelihood that employees would choose to opt out of participation—suggesting a lower default contribution rate would result in greater participation rates for the Program. Recent studies, however, have demonstrated higher default contribution rates do not lead to significant reductions in participation rates, but, rather, resulted in an increased prevalence of contribution rate changes (both to decrease and increase the rates). This finding is further supported by recent survey data that show individuals eligible for programs like CalSavers are almost equally likely to participate under a 3% or 6% default contribution rate.

While higher rates are correlated with greater frequency of rate changes, lower default contribution rates have been shown to result in greater adherence to the rate, with one study showing 80% of participants remaining at a low default savings rate of 2% or 3%. Such “stickiness” may be due to some combination of inertia and the appearance of an endorsement that such a rate is sufficient to accumulate meaningful retirement savings.

Administrative Fees

Administrative fees have a significant impact on an individual’s total retirement savings (for the purposes of this analysis, “administrative fees” refers to all fees necessary to operate the Program, including investment costs, recordkeeping costs, etc.). While the differences between fractions of one percent may appear to be insignificant to some, such a difference could result in significant differences in retirement savings long term.

The feasibility study included the finding that the financing requirements and expense ratios for the Program are highly sensitive to the amount of contributions made to the Program. While there is no perfect way to analyze a proportional impact of higher contributions on the program’s ability to reduce fees, it is evident higher contributions will increase the Board’s ability to negotiate lower administrative fees—allowing participants to accrue more retirement savings.

ii. Reason for Rejection

The Board rejected Alternative 1 because it would likely result in insufficient retirement savings for the target population, would not result in a measurably greater number of employees participating, and would necessitate higher administrative fees than the baseline.

Alternative 2: not implement “automatic escalation”

“Automatic escalation” is a term used to describe a retirement plan feature in which a participant’s contributions are increased by a certain amount automatically at certain intervals.

46 Beshears, J., Benartzi, S., et. al., (October 2017), How Do Consumers Respond When Default Options Push the Envelope? Voya Behavioral Finance Institute for Innovation
47 Scott, J., Blevins, A., et. al., (October 2017), Worker Reactions to State-Sponsored Auto-IRA Programs, Pew Charitable Trusts
48 Choi, J., Laibson, D., Madrian, B., et. al., (December 2001), For Better or For Worse: Default Effects and 401(k) Savings Behavior National Bureau of Economic Research
for a certain period. Government Code Section 100032(k) provides the Board authority to implement automatic escalation and limits it to increases of no more than 1% of salary annually, up to a maximum of 8%.

The Board decided to implement automatic escalation of 1%, to occur annually January 1, as a default account setting for participants. Participants would have the option to opt out of automatic escalation at any time, or could choose an alternative automatic escalation rate. Participants that have not been enrolled in the Program for at least six months would not have contributions subject to automatic escalation as a default option until the January 1 that falls after the participant has exceeded 180 days of participation.

Most stakeholders and public comments expressed a preference for implementing automatic escalation, however some expressed interest in automatic escalation rates below 1% due to concerns about financial burdens to participants. At least one commenter conditioned their support for automatic escalation on a lower default contribution rate. Most, if not all, commenters expressed an understanding of the benefits of some level of automatic escalation as a valuable tool to encourage greater retirement savings.

i. Cost and Benefits

The benefits of implementing automatic escalation include the same benefits of a higher default contribution rate: an increased likelihood of greater retirement savings among participants and the related benefits of improved financial efficiency for the Program and reduced administrative fees for participants. In addition, starting participation with the lower 5% rate and building up to the higher 8% during a four year period allows participants, many of whom are not accustomed to formal saving and investing, to adjust to the change in their household cash flow more gradually than starting with a higher rate from the outset.

Stakeholders supported implementation of Automatic Escalation. Some stakeholders expressed concerns that the rate and frequency of Automatic Escalation could result in financial burden to some participants. In response to those concerns, the Board included the regulatory requirement that participants be notified about any pending Automatic Escalation no later than 90 days before it is set to occur.

Individual Preferences

Automatic features in retirement plans have been increasingly prevalent in retirement plans nationwide over the past decade—spurred in part by passage of the Pension Protection Act of 2006. Nationwide, about half of retirement plans use automatic enrollment and about two-thirds of those plans use automatic escalation

Automatic features are popular among individuals. A survey performed for the Board’s market analysis found about 84% of the eligible population think automatic enrollment is a good idea.

49 Vanguard, (June 2018), How America Saves 2018
and over half (57%) of respondents expressed strong support for it. Among those surveyed, 81% noted they would remain in the Program if it utilized automatic escalation, however a third expressed they would opt out of the automatic increases\(^50\).

**Retirement Security**
As shown in the assumptions section in table 2, the use of automatic escalation will provide individuals with a substantial increase in retirement savings compared to models without automatic escalation. For a typical eligible individual age 25, use of automatic escalation of 1% annually resulted in $43,526 more retirement savings, a 35% increase compared to models that do not use automatic escalation.

**Administrative Fees**
Similar to the considerations in alternative 1, the use of automatic escalation would have a beneficial impact on the administrative efficiency of the Program, allowing the Program to more rapidly reduce administrative fees. Administrative fee reductions will have a strong beneficial impact on an individual’s retirement savings and financial security.

**Risks of Financial Burden**
Some commenters have expressed concerns that automatic escalation could result in financial burden for participants who may not remember the default automatic increase feature. To mitigate such concerns, the Board has adopted proposed regulations that would require notice to participating employees at least 90 days prior to any automatic escalation—to be followed by additional notices nearer to the escalation.

In addition, employees will have the opportunity to opt out of automatic escalation at any time or change their automatic escalation amount. Employees will also be made aware of the opportunity at enrollment, before they have made any contributions to their account.

ii. **Reason for Rejection**

Due to the benefits of automatic escalation and incorporation of policies that mitigate risk of individual financial impacts, the Board rejected Alternative 2.

**Alternative 3: designate a biennial open enrollment period**
The proposed regulations would establish an annual open enrollment period from October 1 through November 30 during which eligible employees are provided the opportunity to enroll in the Program. The open enrollment period would be the only period during which an employee who previously opted out of the Program could choose to enroll in the Program. New or newly-eligible employees will have the opportunity to enroll after their hire date or date of eligibility—outside of open enrollment.

\(^{50}\) Supra note 11
Government Code Section 100032(f)(2-3) provides the Board designate an open enrollment period at least once every two years.

i. Cost and Benefits

The benefits of making open enrollment annually, instead of every two years, would include allowing employees more opportunities to participate in the Program and accrue retirement assets. Disadvantages of annual open enrollment include some marginal additional opportunity cost for employers, as annual open enrollment would require more frequent employer duties than every two years.

As detailed in Section A.6., enrolling new employees will have some impact on employers due to the time necessary to facilitate enrollment, about thirty minutes to add new employees. The authors expect some substantial variation in the time necessary for employer compliance depending on the systems used by the employer, the number of employees, and other factors. However, the authors believe the impacts of annual open enrollment are outweighed by the benefits of improved financial security for participating individuals.

ii. Reason for Rejection

The Board rejected Alternative 3 because it would restrict the times at which an employee may choose to enroll in the Program, thereby reducing their likelihood of accruing meaningful retirement savings.

Alternative 4: prohibit individual participation

Government Code Section 100012(k) compels the Board to “Evaluate and establish the process by which an individual or an employee of a nonparticipating employer may enroll in and make contributions to the program.”

The proposed regulations would allow California residents, who are not employees of participating employers, to participate in the Program (for these purposes, referred to as “individual participation”). To participate, individuals can contribute to a CalSavers account directly using bank transfers. Due to concerns about cost efficiency, each contribution must be at least $10 under the proposed regulations.

i. Costs and Benefits

Portability and Inclusivity

Government Code Section 100004(a) establishes the California Secure Choice Retirement Savings Trust and identifies its purpose as “...promoting greater retirement savings for California private employees in a convenient, voluntary, low-cost, and portable manner.”
By allowing individual participation, participating employees will be able to continue contributing to their CalSavers account if they leave a participating employer—increasing the likelihood they will accrue meaningful retirement savings. In addition, this provision enables self-employed individuals and contractors to access low-fee, professionally managed, transparently governed investments.

Disallowing individual participation would reduce the portability and reach of the Program, reducing the likelihood that individuals would continue saving throughout their career and would flout one of the four key tenets of the Program established in state law.

**Administrative Efficiency**
Potential disadvantages of allowing individual participation pertain mostly to impacts on administrative efficiency and costs. Each additional individual participating in the Program will result in additional costs necessary to administer their account. However, those costs are covered by the contributions an individual makes into the Program. Because such individuals will not have the benefit of regular automatic payroll contributions, the Program will rely on affirmative actions by the individual to contribute directly into their account. Allowing individuals to participate outside of an employment relationship may increase the risk of negatively impacting cost efficiency. However, such individual participation could result in a net benefit for administrative efficiency if such individuals make meaningful contributions to their account consistently.

   ii. **Reason for Rejection**

Due to the benefits of greater retirement security for California workers and the legislative mandate to make the Program portable, the Board adopted proposed regulations that would allow individuals to participate outside of an employment relationship.

*Alternative 5: establish Traditional IRA as the default IRA type*
The proposed regulations would allow participants to choose between a Roth and Traditional IRA and establish Roth IRAs as the default IRA type.

Government Code Section 100008 compels the Board to include one or more payroll deduction IRA arrangements for the Program.

Before deciding on the default IRA type, Program staff considered the input of its stakeholder working groups and external expertise to consider the merits and potential disadvantages of selecting either of the two types as the default option.

   i. **Costs and Benefits**

The qualities of Traditional IRAs include:
• contributions may be tax-deductible depending on the taxpayer's income, tax-filing status and other factors; and
• when taking distributions from a traditional IRA, the funds are treated as ordinary income and are subject to income tax. Distributions can be taken as early as age 59 ½ with required minimum distributions at age 70 ½. Funds removed prior to full retirement eligibility incur a 10% penalty in addition to the applicable income tax rate.

The qualities of a Roth IRA include:
• Contributions are taxed in the year in which they are contributed.
• Investment earnings are not taxable.
• Contributions are subject to the same limits as a Traditional IRA.
• Contributions are not tax deductible since they are made with after-tax dollars (although the Saver’s Credit provides an additional tax credit of 10% to 50% of the contribution, depending on income and life situation).
• Distributions equal to the amount contributed to the account can be withdrawn at any time without penalty, however withdrawals of any investment interest earned on contributions prior to 59 ½ will be taxed as income and subject to a 10% early withdrawal penalty.
• Contributions can be made after the participant reaches the age of 70 ½ provided they have earned income.
• Savings are not subject to required minimum distributions.
• There are eligibility restrictions on Roth IRA participation depending on tax filing status and income level.

This table from the IRS shows the eligibility and contribution limits for participation in a Roth IRA for 2018:\[51:\]

<table>
<thead>
<tr>
<th>Filing Status</th>
<th>Adjusted Gross Income</th>
<th>Contribution Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>married filing jointly or qualifying widow(er)</td>
<td>&lt; $189,000</td>
<td>up to the limit</td>
</tr>
<tr>
<td></td>
<td>≥ $189,000 but &lt; $199,000</td>
<td>a reduced amount</td>
</tr>
<tr>
<td></td>
<td>≥ $199,000</td>
<td>Zero</td>
</tr>
<tr>
<td>married filing separately and you lived with your spouse at any time during the year</td>
<td>&lt; $10,000</td>
<td>a reduced amount</td>
</tr>
<tr>
<td></td>
<td>≥ $10,000</td>
<td>Zero</td>
</tr>
<tr>
<td>single, head of household, or married filing separately and you did not live with your spouse at any time during the year</td>
<td>&lt; $120,000</td>
<td>up to the limit</td>
</tr>
<tr>
<td></td>
<td>≥ $120,000 but &lt; $135,000</td>
<td>a reduced amount</td>
</tr>
<tr>
<td></td>
<td>≥ $135,000</td>
<td>Zero</td>
</tr>
</tbody>
</table>

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\[51:\] Amount of Roth IRA Contributions That You Can Make for 2018 Internal Revenue Service
Whether a Roth or Traditional IRA is more beneficial to the participant depends on a multitude of factors, including:

- tax bracket and current income of the participant;
- expected tax rate at retirement;
- need or desire for penalty-free access to savings pre-retirement; and
- personal preference.

In general, lower participant current income and a longer investment horizon suggests an advantage to participating in a Roth IRA, since there is no (or a reduced) benefit to the reduction in taxable income provided by a Traditional IRA. Additionally, since Roth IRA contributions are made with after-tax dollars, both the contributions and earnings can be withdrawn tax free in retirement.

If a participant decides they do not want to participate in the Program after being automatically enrolled, or otherwise withdraw their contributions, the contributions are treated as if they were never made as long as the distribution occurs by the due date of their tax return for the year in which they made the contribution(s). The withdrawal of contributions is tax free, but any earnings on the contributions must be reported as income for the year in which they were earned. The relatively greater flexibility for withdrawals could result in greater likelihood of early withdrawals, mitigating some of the consumption impacts detailed in Section A.6.

An argument in favor of the Traditional IRA approach is the inherent incentive for participants to leave retirement savings invested in the account and not access the funds for shorter term needs. This structure strongly encourages participants to commit to treating the IRA as the long-term investment account that it is intended to be. However, as strongly suggested by several employee and consumer stakeholders groups, access to funds for emergency or other high priority needs may be paramount for many lower income families that the Program seeks to serve. As referenced in the introduction to this document, the Program must be sensitive to the diverse financial lives of its participants and be vigilant in identifying means to accommodate a complex hierarchy of financial needs.

Proponents of a Traditional IRA option also argue that it would allow individuals earning above the Roth income cap (in 2018, the caps are $135,000 annually for individuals, up to $199,000 annually for married couples) to participate in the Program, where those individuals could not participate via a Roth IRA account structure. While data on this sub-group is not available, staff assumes that there would be only a small number of such individuals among the employers subject to the law’s mandate and that many of them would be likely to have savings arrangements established on their own.

There is no clear administrative delineation to the Program or cost advantage to the participant of offering either a Roth or Traditional IRA, though offering both at launch would add complexity to program participation at both the employer and employee level. It would add operational complexity for the participating employers by requiring them to track both pre- and post-tax contributions for various employees, and would require an additional level of outreach.
and education to the participants and potential participants so that the advantages and
disadvantage of both account types are clearly understood.

ii. Reason for Rejection

Because the greatest share of participants are likely to benefit more from saving in a Roth IRA
treatment rather than Traditional, the proposed regulations would establish Roth IRAs as the
default IRA type.

F. FISCAL IMPACTS

Adoption of these regulations would result in no direct costs of compliance or enforcement for
state government, local agencies, or any other local government entity. Adoption of these
regulations would result in no impact on federal funding to the state. Adoption of the
regulations may result in additional expenditures by the State to finance the implementation of
the Program, however state law requires the Program reimburse the state for any funds loaned
to the Program to facilitate implementation and initial operations, including any such services
performed by other state agencies. Statute requires the Program to be self-sufficient, with all
necessary funding to be provided by fees applied to the Program assets.

Adoption of these regulations will impact sales and use tax revenue for the state and local
government due to expected losses in consumption, detailed below. Long term, the authors
expect adoption of these regulations will result in an increase in sales and use tax revenue due
to compound interest earned on investment returns earned throughout a participating
individual’s working life. As shown in A.5., investment interest can compose as much as two-
thirds or more of an individual’s total retirement savings.

If these regulations are not adopted, the Program could not operate and would be unable to
earn the funds necessary to repay the loan.

Any fiscal impact resulting from the adoption of these regulations would be indirect and
dependent on the behavior of the eligible population.

Sales and Use Tax

Using the assumptions outlined in Section A.6., and assuming participating individuals spend
33% on taxable goods at the average state sales tax rate of 8.4%, the authors estimate the
adoption of these regulations could result in an $85 million reduction in SUT collection in 2019\(^\text{52}\) and
greater reductions each year thereafter. For projections of Sales and Use Tax impact for
calendar years 2019-2028, please see Appendix G.4.

This SUT revenue loss, however, is not permanent. Individuals who save through the Program
will, at some point, withdraw their retirement savings and spend those savings in the economy.

\(^{52}\) For additional years, please see Appendix G.4.
Because those savings will accrue investment interest compounded over time, most individuals should have a significant portion of total retirement savings made up of investment interest. That interest represents dollars that would not have been otherwise spent in the economy compared to the baseline.

Individuals that withdraw their retirement funds before reaching retirement age (or age 59 1/2, the age after which savings can be withdrawn free of taxes and penalties), would result in little to no long-term impacts to SUT, as the individuals would have access to the same dollars that negatively impacted consumption and SUT revenue. Early withdrawals may even add to total SUT revenue depending on investment return, as some investment return may be sufficient to compensate for the dollars lost through taxes or penalties.

Interest earned by participants represents new contributions to consumption and SUT revenue, as it represents assets that would not have been earned by individuals in the baseline scenario. As shown in Tables 4 and 5, investment interest can account for a majority of total retirement savings, even for individuals that don’t start saving until age 35. For individuals that begin saving at age 25, investment interest can account for about two-thirds of total retirement savings under relatively conservative assumptions. For participants that begin saving at age 35, investment interest can account for about 55% of total retirement saving.

To show an example of how the Program may impact SUT revenue long-term, the authors calculated expected savings for the cohort of participants eligible for the Program ages 34-18 during year one of operation (2019). Using assumptions from the market analysis and feasibility study for participant ages 53, a little less than half of eligible participants will be below age 35 (about 3.5 million individuals) in 2019. Out of those, about 1.5 million will be below age 25 and about 2 million will be between ages 34 and 25.

For these estimates, the authors assumed all participants age 34-25 will save and earn interest according to the assumptions used for Tables 4 and 5, earning about 55% of total retirement assets through investment interest. Similarly, the authors assumed all individuals age 24-18 will earn about 66% of retirement assets through investment interest. For the cohort age 34-25, the authors assumed each would save for thirty years. For the cohort age 24-18, the authors assumed each would save for a period of 40 years. To show differences in potential outcomes, the authors show expected retirement savings for this cohort if as few as 10% of participants save for the full 30/40 year periods.

If only half of such participants save for the full 30 or 40 year periods, their participation would result in $189.6 billion collectively in investment interest alone, assets they would not have accumulated in the baseline scenario, and over $300 billion in total assets. If only 10% of such participants participate for the full period, they would be expected to earn $37.9 billion collectively in investment interest and about $62 billion in total savings.

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53 Supra note 11
Personal Income Tax Revenue

The extent to which operation of the Program impacts tax revenue will depend on the behavior of participants. Specifically, the impact shall depend on the frequency of the IRA type selected by participants.

Selection of the Roth IRA type should result in no significant impact on personal income tax revenue, as contributions to a Roth IRA are taxed as normal income. Because the default IRA type is Roth, and because experience shows an overwhelming majority of participants will use the default settings, the authors expect only a negligible portion of retirement savings to be made under a Traditional IRA.

Any contribution to a Traditional IRA should result in a long-term increase in taxable income. Contributions to a Traditional IRA are eligible for a tax benefit for participants for the tax year in which contributions are made. At the time an individual withdraws their funds, both contributions and earned interest are taxed as ordinary income. Because taxes are applied to both contributions and the interest earned, the net tax benefit should be positive for contributions made to a Traditional IRA.

Any impacts on tax revenue could vary widely depending on the following factors:
- the likelihood participants will choose to contribute to a traditional (pre-tax) IRA, as opposed to the default Roth (post-tax) IRA treatment;
- the amount of time an individual spends contributing to the Program;
- income tax rates for participants in the near future and in the future;
- for assets held in a Traditional IRA, the investment returns earned on those assets;
- the pace of withdrawals from an individual’s account; and
- expected investment return for participants.

CalEITC

Because many participants will be eligible for tax benefits due to saving in the Program, staff expect an increase in tax filing statewide. Due to the expected increase, staff would also expect an increase in the number of Californians who claim the California Earned Income Tax Credit (CalEITC) as well as the federal Earned Income Tax Credit.

The authors expect this impact to be minor, as it should only result from individuals who choose a Traditional IRA treatment in lieu of Roth, the default IRA treatment. Because individuals must have relatively low income to qualify for CalEITC, and because lower income individuals tend to benefit less from using a Traditional IRA than they would a Roth IRA, we do not expect there to be a significant increase in EITC claims resulting from the Program.

Employment Development Department

The enabling statute requires the Employment Development Department (EDD) to facilitate the dissemination of Program materials to participating employers and identifies it as the state agency responsible for enforcement of employer compliance with the Program. Any costs
incurred by EDD due to fulfilling either role would be reimbursed by the Program, as required by the statute under Unemployment Insurance Code (UIC) Section 1088.9(g), accordingly EDD will require permanent staff, technological upgrades, and some ancillary expenditures.

The Board anticipates CalSavers staff and the TPA will perform many of the major marketing duties and some of the distribution duties. However, EDD will require certain resources to perform the duties identified in statute and respond to inquiries from employers. For their role in marketing and dissemination of program materials, EDD anticipates it will require 8.88 full-time equivalent (FTE) staff and $2.99 million in one-time costs and 8.4 FTE and $1.31 million in ongoing costs. These costs include staff time spent distributing materials, responding to calls and other correspondence from employers, developing some new online materials, and incorporating program-related education into existing employer outreach efforts. This assumes EDD is the sole source for disseminating the program materials.

The compliance functions outlined in UIC 1088.9 will not begin until six months after the Board notifies the Director of EDD that full implementation of Title 21, the Government Code Sections dictating operations of CalSavers, will proceed. Based on current rollout plans, this notification is expected to occur in 2023. Because of the logistical considerations necessary to develop new IT systems, recruit and train staff, obtain funding, and receive approvals necessary for state IT projects, EDD anticipates it will require a minimum of 24 months to implement the compliance feature.

For their role in enforcing employer compliance, EDD anticipates it will require 29.14 FTE and $10.77 million in one-time costs. These costs are primarily for updating information technology systems and creating a new stand-alone system to track employee complaints regarding employer non-compliance, investigations, collection of penalties, and coordination with the Program. EDD estimates it will need 24.67 FTE and $5.03 million in ongoing costs. In addition to staff and IT costs, compliance will require EDD to establish a new phone line and correspondence procedures, develop an online interface to verify employer information, establish a new P.O. Box for mail associated with the program, and other ancillary support services.

**Medi-Cal Savings**

Medi-Cal accounts for a significant portion of the state’s annual expenditures, accounting for about 15% of the state’s 2017-18 General Fund budget.

Participation in the Program is expected to result in a significant increase in retirement savings among Californians. Because individuals must have incomes below a certain threshold to participate in Medi-Cal, there will likely be a net reduction in Medi-Cal participation than would otherwise occur absent these regulations.
One analysis found California would save an estimated $604.7 million in reduced Medi-Cal expenditures over a ten year period due to implementation of the CalSavers program\textsuperscript{54}. The authors of the study note the estimate is conservative and suggest long-term savings could be exponentially higher depending on long-term behavior by participants and other factors.

\textit{Saver’s Credit}

These regulations would likely result in some increase in claims for the federal Retirement Savings Contributions Credit (aka, the “Saver’s Credit”). However, the Program does not expect any significant fiscal impact resulting from such an increase, as the number of individuals who would benefit from claiming the credit is limited by its design\textsuperscript{55}.

G. APPENDICES

1. Estimated Annual Number of Eligible Employers (2019-2028)
2. Estimated Annual Number of Eligible Employees (2019-2028)
3. Estimated Annual Employer Impact (2019-2028)
5. Estimated Annual Savings (2019-2028)

\textsuperscript{54} Segal Consulting, \textit{(2017)}, \textit{State Retirement Savings Initiatives Do More than Enhance Retirement Security for Private Sector Workers}

\textsuperscript{55} Alicia H. Munnell and Anqi Chen, \textit{Could the Saver’s Credit Enhance State Coverage Initiatives?} Center for Retirement Research at Boston College (April 2016)
## G.1. ESTIMATED ANNUAL NUMBER OF ELIGIBLE EMPLOYERS (2019-2028)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>500+</td>
<td>2,803</td>
<td>308</td>
<td>575</td>
<td>841</td>
<td>2,851</td>
<td>314</td>
</tr>
<tr>
<td>50-99</td>
<td>36,782</td>
<td>9,931</td>
<td>14,897</td>
<td>19,862</td>
<td>37,411</td>
<td>10,101</td>
</tr>
<tr>
<td>5-9</td>
<td>183,085</td>
<td>131,822</td>
<td>140,976</td>
<td>150,130</td>
<td>186,216</td>
<td>134,076</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Employer Size</th>
<th>2024 Employers</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>500+</td>
<td>3,052</td>
<td>336</td>
<td>626</td>
<td>915</td>
<td>3,104</td>
<td>341</td>
</tr>
<tr>
<td>100-499</td>
<td>24,874</td>
<td>5,223</td>
<td>8,084</td>
<td>10,944</td>
<td>25,299</td>
<td>5,313</td>
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</table>

<table>
<thead>
<tr>
<th>Employer Size</th>
<th>2029 Employers</th>
<th>2029</th>
<th>2030</th>
<th>2031</th>
<th>2032</th>
</tr>
</thead>
<tbody>
<tr>
<td>500+</td>
<td>277,586</td>
<td>259,384</td>
<td>310,287</td>
<td>361,191</td>
<td>511,543</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employer Size</th>
<th>2033 Employers</th>
<th>2033</th>
<th>2034</th>
<th>2035</th>
<th>2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>500+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-499</td>
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<td></td>
</tr>
<tr>
<td>50-99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-9</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
## G.2. ESTIMATED ANNUAL NUMBER OF EMPLOYEES (2019-2028)

<table>
<thead>
<tr>
<th>Employer Size</th>
<th>2019 Number of Employees</th>
<th>2019 Expected Participation (70%)</th>
<th>2020 Number of Employees</th>
<th>2020 Expected Participation (70%)</th>
<th>2021 Number of Employees</th>
<th>2021 Expected Participation (70%)</th>
<th>2022 Number of Employees</th>
<th>2022 Expected Participation (70%)</th>
<th>2023 Number of Employees</th>
<th>2023 Expected Participation (70%)</th>
<th>2024 Number of Employees</th>
<th>2024 Expected Participation (70%)</th>
<th>2025 Number of Employees</th>
<th>2025 Expected Participation (70%)</th>
<th>2026 Number of Employees</th>
<th>2026 Expected Participation (70%)</th>
<th>2027 Number of Employees</th>
<th>2027 Expected Participation (70%)</th>
<th>2028 Number of Employees</th>
<th>2028 Expected Participation (70%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-99</td>
<td></td>
<td>788,594</td>
<td>552,016</td>
<td>802,947</td>
<td>562,063</td>
<td>817,560</td>
<td>572,292</td>
<td>832,440</td>
<td>582,708</td>
<td>847,590</td>
<td>593,313</td>
<td>604,111</td>
<td>615,106</td>
<td>626,301</td>
<td>911,000</td>
<td>637,700</td>
<td>5,904,628</td>
<td>5,904,628</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,320,303</td>
<td>2,324,212</td>
<td>4,169,326</td>
<td>2,918,528</td>
<td>7,434,690</td>
<td>5,204,283</td>
<td>7,570,001</td>
<td>5,299,001</td>
<td>7,707,775</td>
<td>5,395,443</td>
<td>7,848,057</td>
<td>5,493,640</td>
<td>5,990,892</td>
<td>5,593,624</td>
<td>8,136,326</td>
<td>5,695,428</td>
<td>8,284,407</td>
<td>5,799,085</td>
<td>8,435,183</td>
<td>5,904,628</td>
</tr>
</tbody>
</table>

**Notes:**
- The table presents the estimated annual number of employees for different employer sizes from 2019 to 2028, with participation rates indicated in parentheses.
- The participation rates are assumed to be 70% for the years 2019 to 2028.
### G.3. ESTIMATED ANNUAL EMPLOYER IMPACT (2019-2028)

<table>
<thead>
<tr>
<th>Employer Size</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td>$1,257,430</td>
<td>$1,084,312</td>
<td>$1,102,854</td>
<td>$1,121,713</td>
<td>$1,140,894</td>
<td>$1,160,403</td>
<td>$1,180,246</td>
<td>$1,200,428</td>
<td>$1,220,956</td>
<td>$1,241,834</td>
</tr>
<tr>
<td>5-49</td>
<td></td>
<td></td>
<td>$42,660,810</td>
<td>$36,787,437</td>
<td>$37,416,502</td>
<td>$38,056,324</td>
<td>$38,707,087</td>
<td>$39,368,978</td>
<td>$40,042,188</td>
<td>$40,726,909</td>
</tr>
</tbody>
</table>
### G.4. ESTIMATED ANNUAL CONTRIBUTIONS, CONSUMPTION, and SALES AND USE TAX IMPACT (2019-2028)

#### Annual Contributions (Billions)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>$0.828</td>
<td>$1.022</td>
<td>$1.226</td>
<td>$1.441</td>
<td>$1.482</td>
<td>$1.524</td>
<td>$1.567</td>
<td>$1.612</td>
<td>$1.657</td>
<td></td>
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</tbody>
</table>

#### Annual Consumption Impact (Billions)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Annual Statewide SUT Impact (Billions)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.40%</td>
<td>$(0.0848)</td>
<td>$(0.1248)</td>
<td>$(0.2319)</td>
<td>$(0.2779)</td>
<td>$(0.3074)</td>
<td>$(0.3339)</td>
<td>$(0.3433)</td>
<td>$(0.3531)</td>
<td>$(0.3631)</td>
<td>$(0.3734)</td>
</tr>
<tr>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>
G.5. ESTIMATED ANNUAL SAVINGS (2019-2028)

<table>
<thead>
<tr>
<th>Employer Size (as # of EEs)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td>$3.573</td>
<td>$8.230</td>
<td>$14.089</td>
<td>$21.282</td>
<td>$29.147</td>
<td>$37.738</td>
<td>$47.109</td>
<td>$57.320</td>
<td>$68.433</td>
<td>$80.518</td>
</tr>
<tr>
<td>50-99</td>
<td>$0.848</td>
<td>$1.954</td>
<td>$3.346</td>
<td>$5.054</td>
<td>$6.922</td>
<td>$8.963</td>
<td>$11.188</td>
<td>$13.613</td>
<td>$16.253</td>
<td></td>
</tr>
<tr>
<td>5-49</td>
<td>$3.371</td>
<td>$7.906</td>
<td>$13.534</td>
<td>$20.443</td>
<td>$27.999</td>
<td>$36.251</td>
<td>$45.253</td>
<td>$55.061</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$3.573</td>
<td>$9.079</td>
<td>$19.416</td>
<td>$32.534</td>
<td>$47.737</td>
<td>$65.104</td>
<td>$84.071</td>
<td>$104.760</td>
<td>$127.301</td>
<td>$151.833</td>
</tr>
</tbody>
</table>
## G.6. ESTIMATED MACROECONOMIC IMPACT – OUTPUT (2019-2028)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CONSUMPTION (Billions)</th>
<th>INVESTMENT (Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transportation</td>
<td>Food</td>
</tr>
<tr>
<td>2019</td>
<td>$(0.6831)</td>
<td>$(0.6480)</td>
</tr>
<tr>
<td>2020</td>
<td>$(1.0052)</td>
<td>$(0.9536)</td>
</tr>
<tr>
<td>2021</td>
<td>$(1.8677)</td>
<td>$(1.7718)</td>
</tr>
<tr>
<td>2022</td>
<td>$(2.2385)</td>
<td>$(2.1237)</td>
</tr>
<tr>
<td>2023</td>
<td>$(2.4761)</td>
<td>$(2.3491)</td>
</tr>
<tr>
<td>2024</td>
<td>$(2.6891)</td>
<td>$(2.5512)</td>
</tr>
<tr>
<td>2025</td>
<td>$(2.7654)</td>
<td>$(2.6236)</td>
</tr>
<tr>
<td>2026</td>
<td>$(2.8439)</td>
<td>$(2.6980)</td>
</tr>
<tr>
<td>2027</td>
<td>$(2.9247)</td>
<td>$(2.7746)</td>
</tr>
<tr>
<td>2028</td>
<td>$(3.0077)</td>
<td>$(2.8533)</td>
</tr>
</tbody>
</table>
### G.7. ESTIMATED MACROECONOMIC IMPACT – EARNINGS (2019-2028)

<table>
<thead>
<tr>
<th>Year</th>
<th>Transportation</th>
<th>Food</th>
<th>Entertainment</th>
<th>Apparel and Services</th>
<th>Miscellaneous</th>
<th>Information Technology</th>
<th>Health</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$(0.1752)</td>
<td>$(0.1965)</td>
<td>$(0.0613)</td>
<td>$(0.0432)</td>
<td>$(0.2374)</td>
<td>$0.1239</td>
<td>$0.0251</td>
<td>$0.0351</td>
</tr>
<tr>
<td>2020</td>
<td>$(0.2578)</td>
<td>$(0.2892)</td>
<td>$(0.0902)</td>
<td>$(0.0636)</td>
<td>$(0.3493)</td>
<td>$0.3148</td>
<td>$0.0638</td>
<td>$0.0891</td>
</tr>
<tr>
<td>2021</td>
<td>$(0.4789)</td>
<td>$(0.5374)</td>
<td>$(0.1675)</td>
<td>$(0.1182)</td>
<td>$(0.6491)</td>
<td>$0.6733</td>
<td>$0.1364</td>
<td>$0.1905</td>
</tr>
<tr>
<td>2022</td>
<td>$(0.5741)</td>
<td>$(0.6441)</td>
<td>$(0.2008)</td>
<td>$(0.1417)</td>
<td>$(0.7780)</td>
<td>$1.1282</td>
<td>$0.2286</td>
<td>$0.3192</td>
</tr>
<tr>
<td>2023</td>
<td>$(0.6350)</td>
<td>$(0.7125)</td>
<td>$(0.2221)</td>
<td>$(0.1567)</td>
<td>$(0.8606)</td>
<td>$1.6554</td>
<td>$0.3354</td>
<td>$0.4683</td>
</tr>
<tr>
<td>2024</td>
<td>$(0.6896)</td>
<td>$(0.7738)</td>
<td>$(0.2412)</td>
<td>$(0.1702)</td>
<td>$(0.9346)</td>
<td>$2.2576</td>
<td>$0.4574</td>
<td>$0.6387</td>
</tr>
<tr>
<td>2025</td>
<td>$(0.7092)</td>
<td>$(0.7958)</td>
<td>$(0.2481)</td>
<td>$(0.1750)</td>
<td>$(0.9611)</td>
<td>$2.9153</td>
<td>$0.5907</td>
<td>$0.8248</td>
</tr>
<tr>
<td>2026</td>
<td>$(0.7293)</td>
<td>$(0.8183)</td>
<td>$(0.2551)</td>
<td>$(0.1800)</td>
<td>$(0.9884)</td>
<td>$3.6327</td>
<td>$0.7360</td>
<td>$1.0278</td>
</tr>
<tr>
<td>2027</td>
<td>$(0.7500)</td>
<td>$(0.8416)</td>
<td>$(0.2623)</td>
<td>$(0.1851)</td>
<td>$(1.0164)</td>
<td>$4.4143</td>
<td>$0.8944</td>
<td>$1.2489</td>
</tr>
<tr>
<td>2028</td>
<td>$(0.7713)</td>
<td>$(0.8655)</td>
<td>$(0.2698)</td>
<td>$(0.1903)</td>
<td>$(1.0453)</td>
<td>$5.2650</td>
<td>$1.0668</td>
<td>$1.4896</td>
</tr>
</tbody>
</table>
G.8. ESTIMATED MACROECONOMIC IMPACT – EMPLOYMENT (2019-2028)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CONSUMPTION</th>
<th></th>
<th></th>
<th></th>
<th>INVESTMENT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transportation</td>
<td>Food</td>
<td>Entertainment</td>
<td>Apparel and Services</td>
<td>Miscellaneous</td>
<td>Information Technology</td>
<td>Health</td>
</tr>
<tr>
<td>2019</td>
<td>(2,696)</td>
<td>(5,778)</td>
<td>(1,303)</td>
<td>(1,209)</td>
<td>(6,978)</td>
<td>2,145</td>
<td>458</td>
</tr>
<tr>
<td>2020</td>
<td>(3,968)</td>
<td>(8,502)</td>
<td>(1,917)</td>
<td>(1,779)</td>
<td>(10,269)</td>
<td>5,450</td>
<td>1,163</td>
</tr>
<tr>
<td>2021</td>
<td>(7,373)</td>
<td>(15,798)</td>
<td>(3,563)</td>
<td>(3,306)</td>
<td>(19,080)</td>
<td>11,655</td>
<td>2,487</td>
</tr>
<tr>
<td>2022</td>
<td>(8,837)</td>
<td>(18,935)</td>
<td>(4,270)</td>
<td>(3,962)</td>
<td>(22,868)</td>
<td>19,530</td>
<td>4,168</td>
</tr>
<tr>
<td>2023</td>
<td>(9,775)</td>
<td>(20,945)</td>
<td>(4,723)</td>
<td>(4,382)</td>
<td>(25,296)</td>
<td>28,657</td>
<td>6,115</td>
</tr>
<tr>
<td>2024</td>
<td>(10,616)</td>
<td>(22,747)</td>
<td>(5,130)</td>
<td>(4,759)</td>
<td>(27,472)</td>
<td>39,082</td>
<td>8,340</td>
</tr>
<tr>
<td>2025</td>
<td>(10,917)</td>
<td>(23,392)</td>
<td>(5,275)</td>
<td>(4,894)</td>
<td>(28,251)</td>
<td>50,468</td>
<td>10,769</td>
</tr>
<tr>
<td>2026</td>
<td>(11,227)</td>
<td>(24,056)</td>
<td>(5,425)</td>
<td>(5,033)</td>
<td>(29,053)</td>
<td>62,887</td>
<td>13,419</td>
</tr>
<tr>
<td>2027</td>
<td>(11,546)</td>
<td>(24,739)</td>
<td>(5,579)</td>
<td>(5,176)</td>
<td>(29,878)</td>
<td>76,419</td>
<td>16,307</td>
</tr>
<tr>
<td>2028</td>
<td>(11,873)</td>
<td>(25,441)</td>
<td>(5,737)</td>
<td>(5,323)</td>
<td>(30,726)</td>
<td>91,145</td>
<td>19,449</td>
</tr>
</tbody>
</table>
### G.9. ESTIMATED MACROECONOMIC IMPACT – VALUE-ADDED (2019-2028)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Consumption (Billions)</th>
<th>Investment (Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transportation</td>
<td>Food</td>
</tr>
<tr>
<td>2019</td>
<td>$(0.3442)</td>
<td>$(0.3395)</td>
</tr>
<tr>
<td>2020</td>
<td>$(0.5065)</td>
<td>$(0.4996)</td>
</tr>
<tr>
<td>2021</td>
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