

Using Alternative Scenarios in Forecasting

California Department of Finance
September 23, 2019



Overview

- Main forecast: foreshadowing
- Communicating a risk scenario:
 - Start with one big difference
 - Show how it affects rest of forecast
 - Talk about likelihood
- Listing other risks: mechanisms and magnitudes
- Reiterate main forecast: why it was chosen



Helpful Hints

- Know Your Audience – start where they are
- Rule of No Surprises – constant communication
- Killer Charts – worth 1000 words, and takes time to develop
- Topic Sentences:
 - Worry or not?
 - Issue under discussion
 - Important metric as basis
 - Quotable numbers

Main Forecast: Foreshadowing

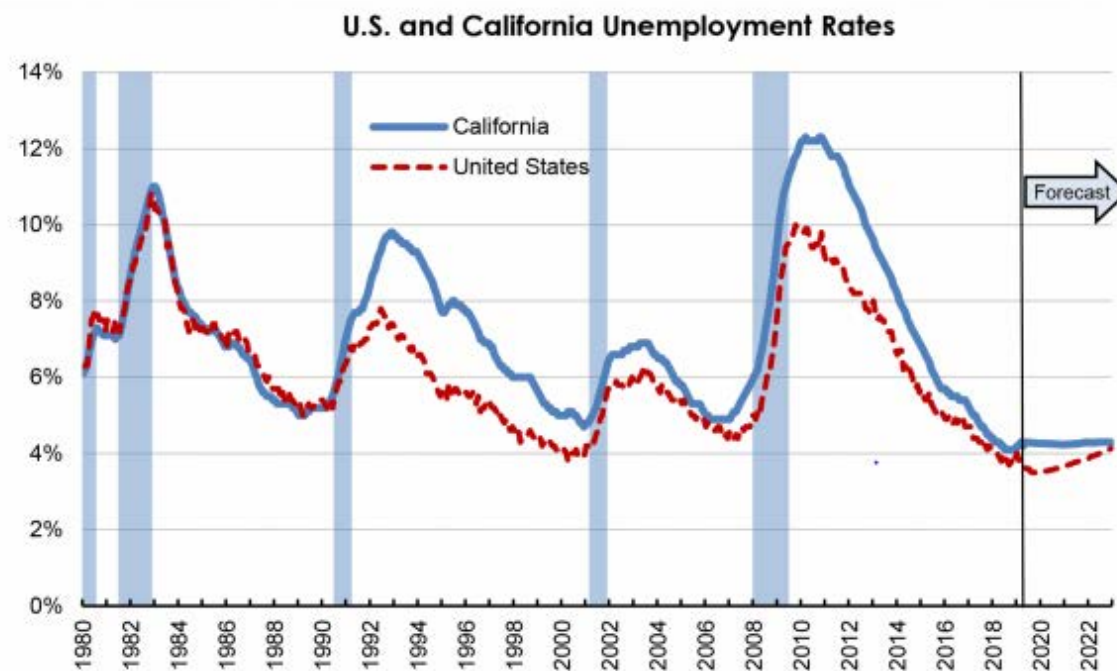
Long-Term Revenue Forecast — Three Largest Sources

(General Fund Revenue — Dollars in Billions)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Average Year-Over-Year Growth
Personal Income Tax	\$93.8	\$98.3	\$102.3	\$103.8	\$106.3	\$107.6	2.8%
Sales and Use Tax	\$25.0	\$26.1	\$27.2	\$28.1	\$28.8	\$29.6	3.4%
Corporation Tax	\$12.3	\$13.8	\$13.2	\$13.7	\$14.2	\$14.7	3.7%
Total	\$131.1	\$138.2	\$142.8	\$145.5	\$149.3	\$151.8	3.0%
Growth	10.0%	5.4%	3.4%	1.9%	2.6%	1.7%	

Note: Numbers may not add due to rounding.

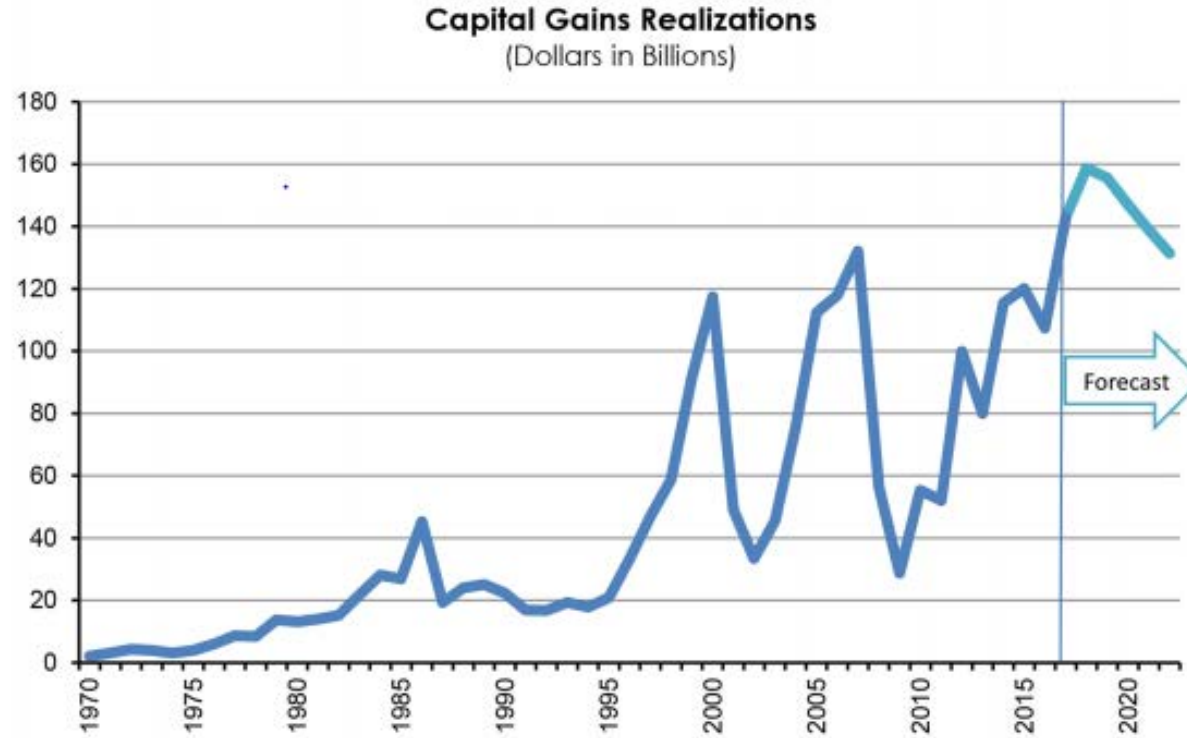
Main Forecast: Foreshadowing



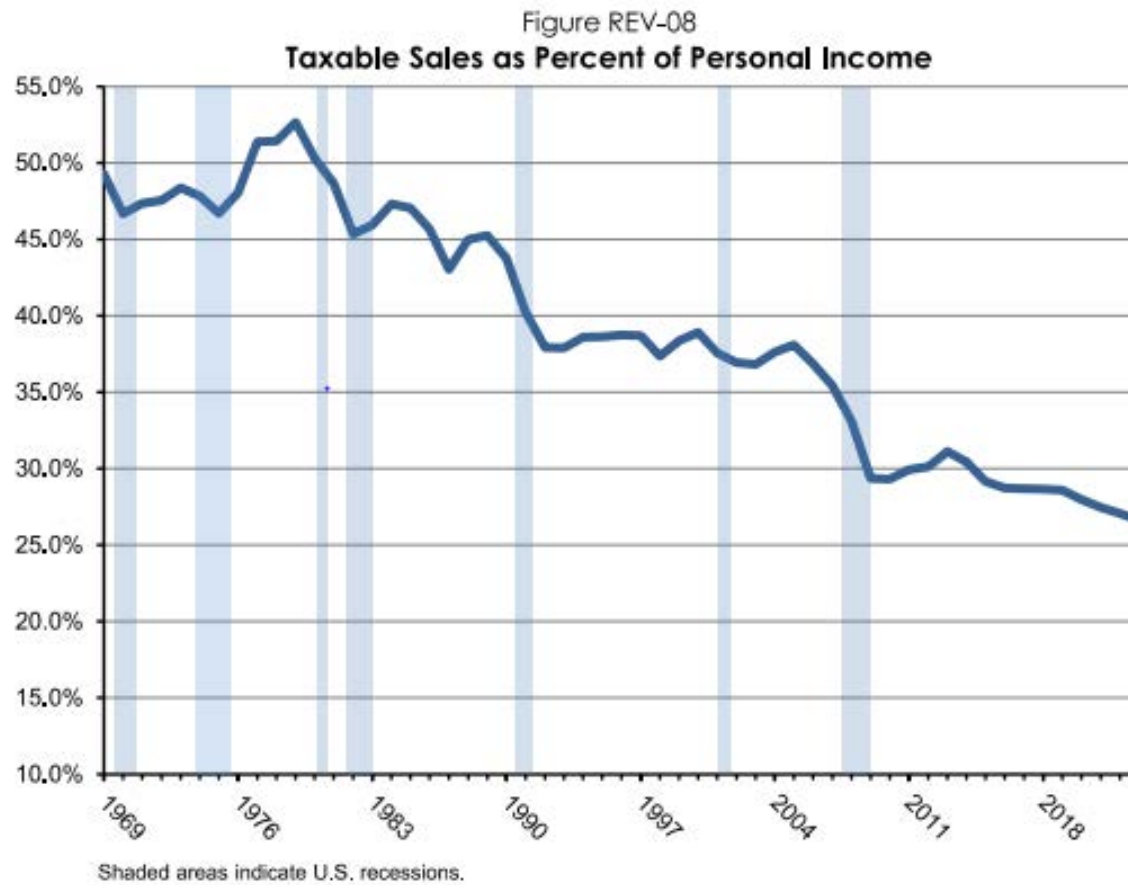
Shaded areas indicate U.S. recessions.

Source: U.S. Bureau of Labor Statistics; CA Employment Development Department, Labor Market Information Division; CA Department of Finance, May Revision Forecast.

Main Forecast: Foreshadowing



Main Forecast: Foreshadowing

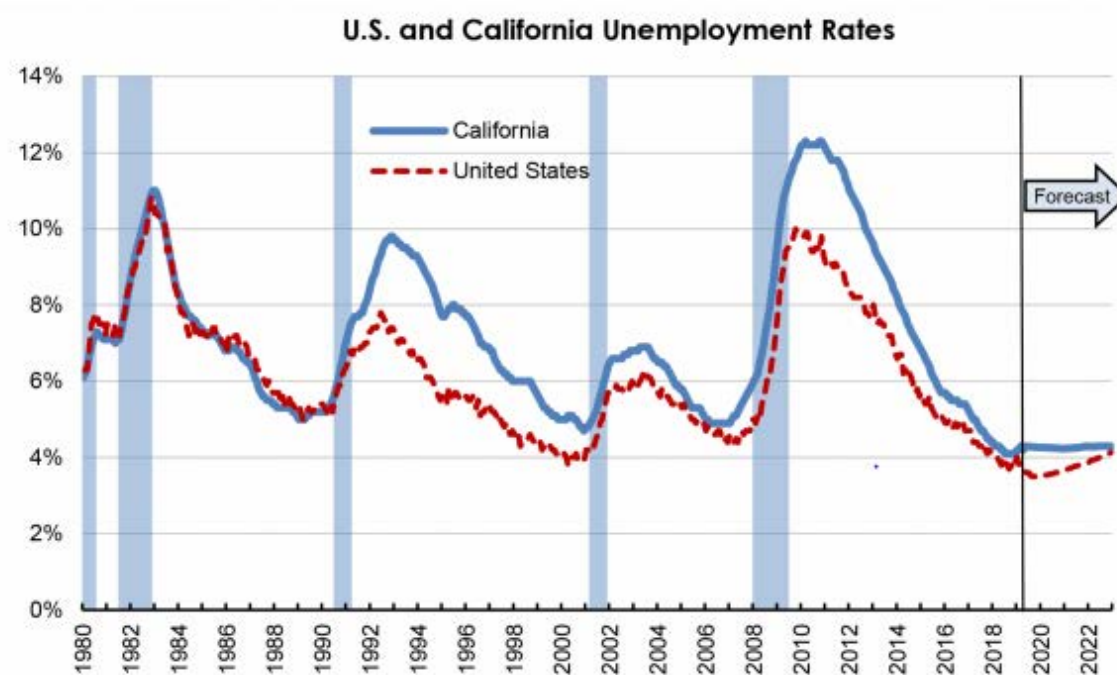




Risk: Recession

- Unemployment goes up
- Capital gains fall
- People spend less
- Property values fall
- Corporate losses increase
- Also: safety net costs increase, interest rates fall but risk premium increases, federal government may not spend more

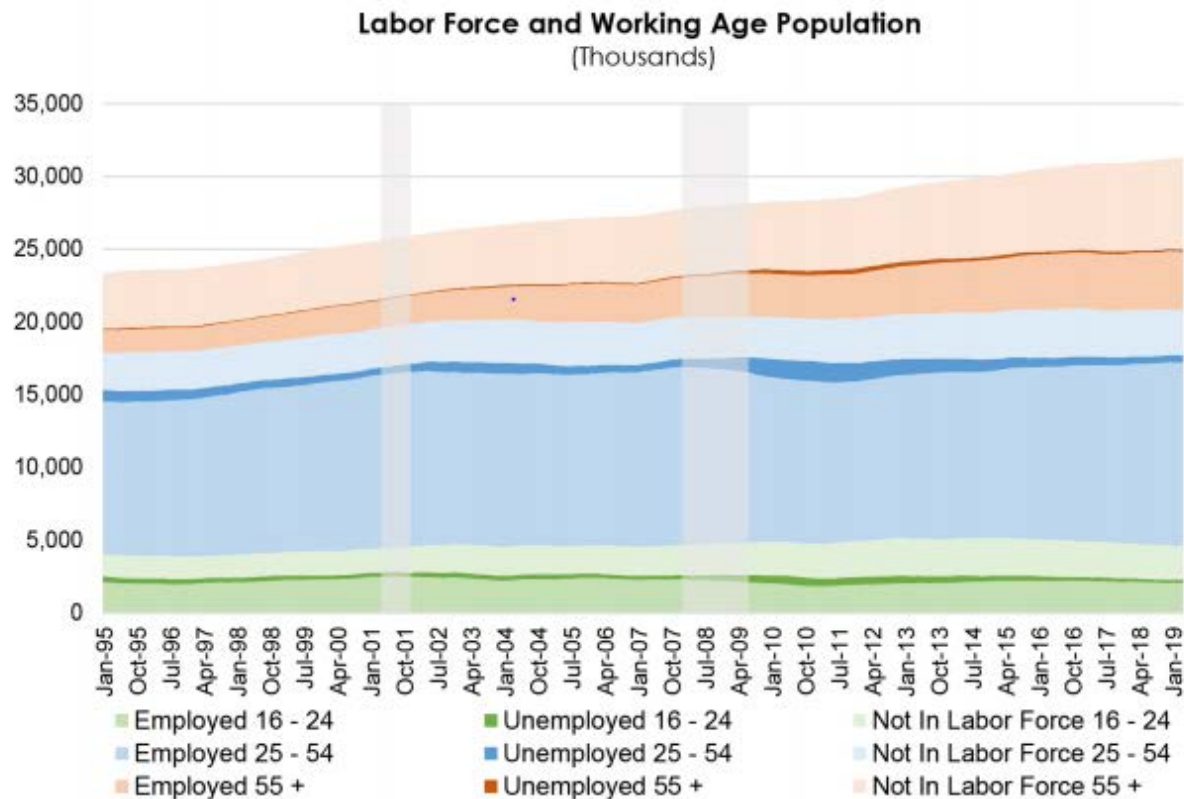
Recession: Unemployment Rises



Shaded areas indicate U.S. recessions.

Source: U.S. Bureau of Labor Statistics; CA Employment Development Department, Labor Market Information Division; CA Department of Finance, May Revision Forecast.

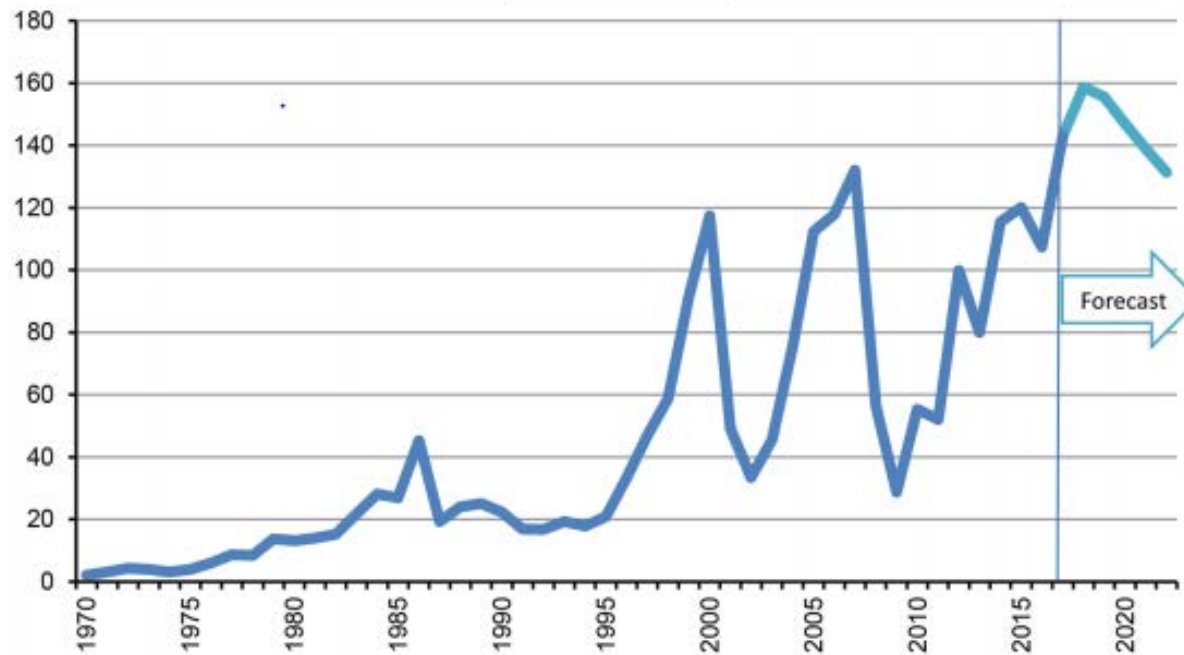
Recession: Unemployment Rises



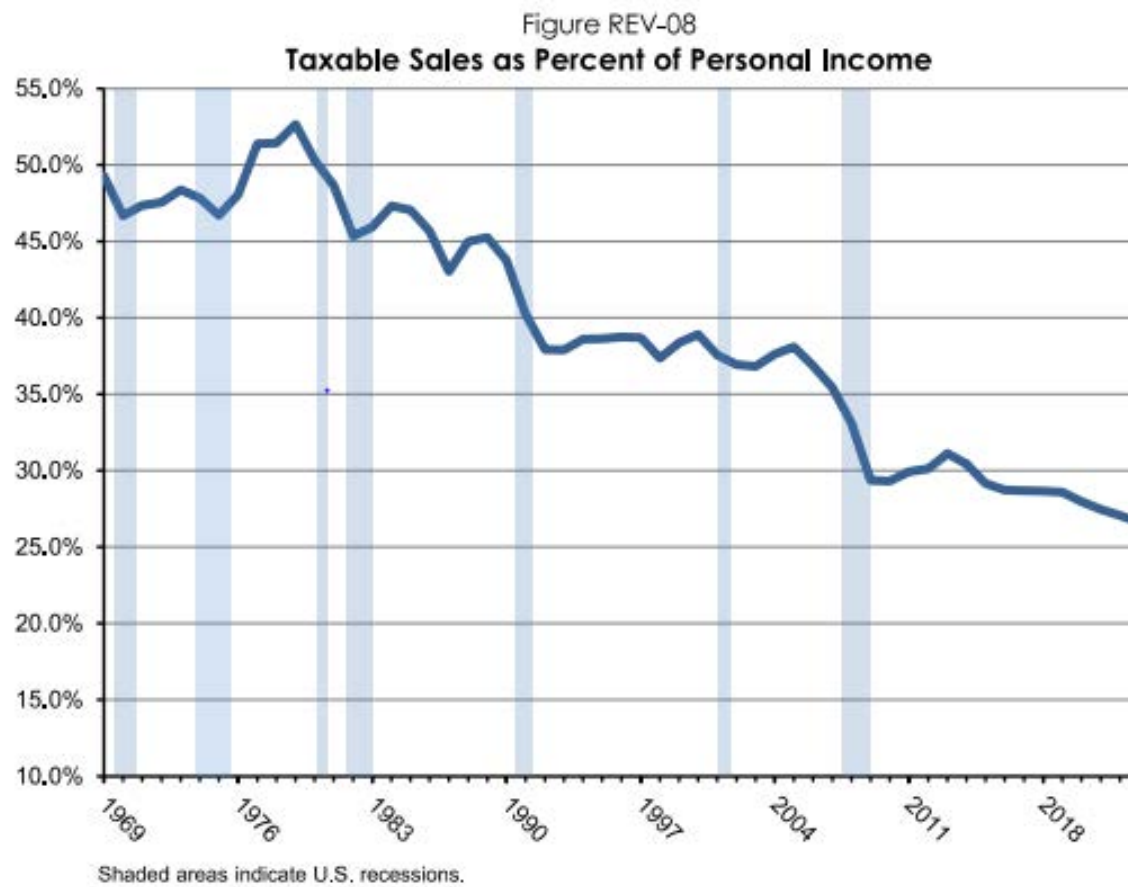
Shaded areas indicate U.S. recessions.
Source: CA Employment Development Department, LMID; CA Department of Finance.

Recession: Capital Gains Fall

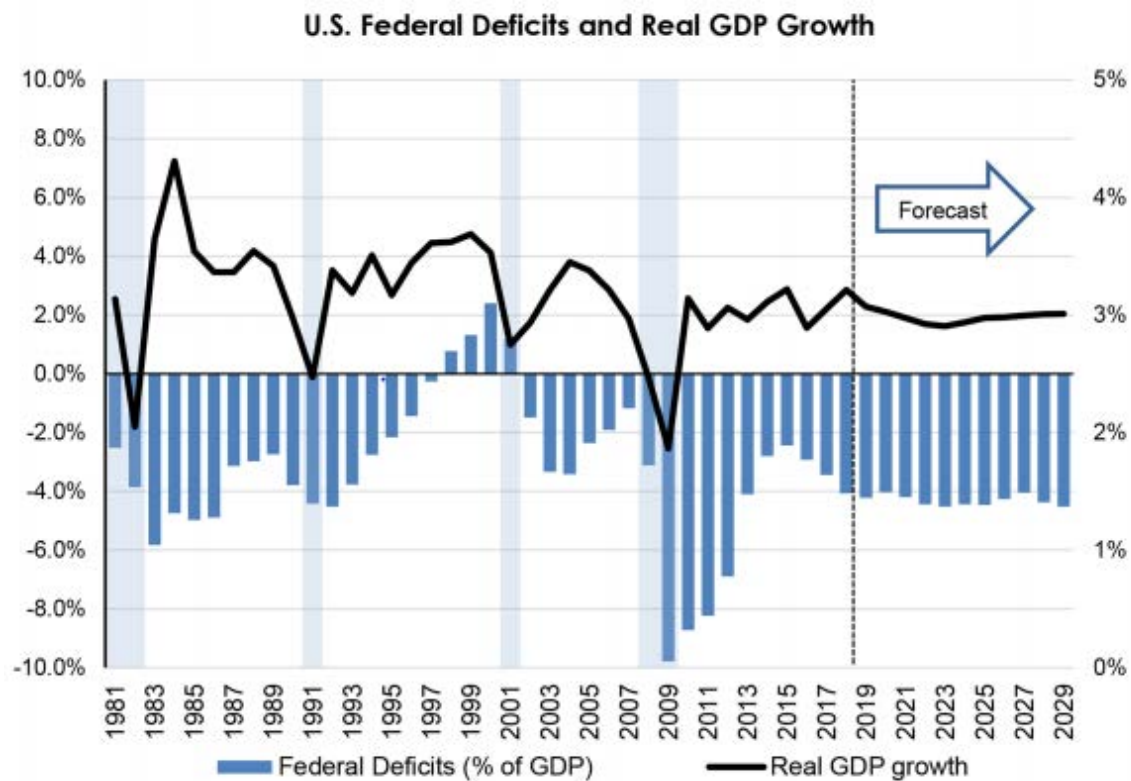
Capital Gains Realizations
(Dollars in Billions)



Recession: People Spend Less



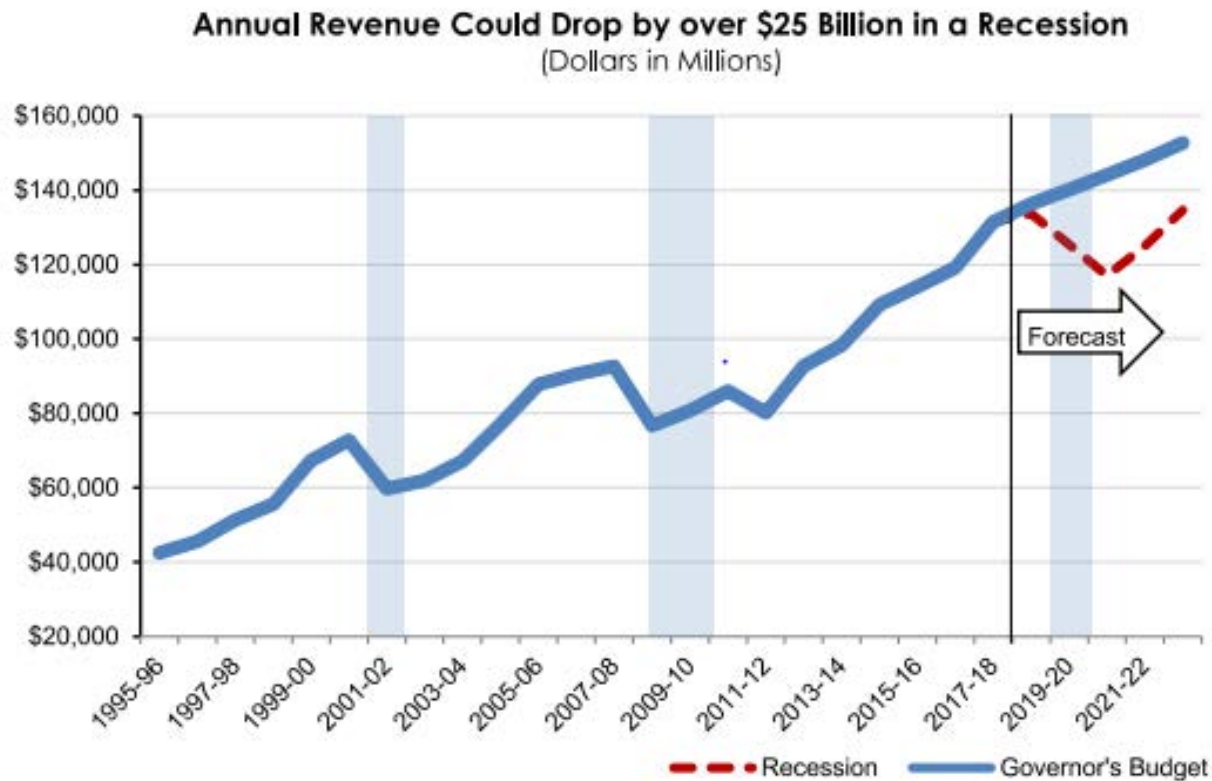
Recession: Federal Govt Constrained



Shaded areas indicate U.S. recessions.

Source: U.S. Bureau of Economic Analysis; U.S. Congressional Budget Office; CA Department of Finance, May Revision Forecast.

Recession: \$70 Billion Over 3 Years



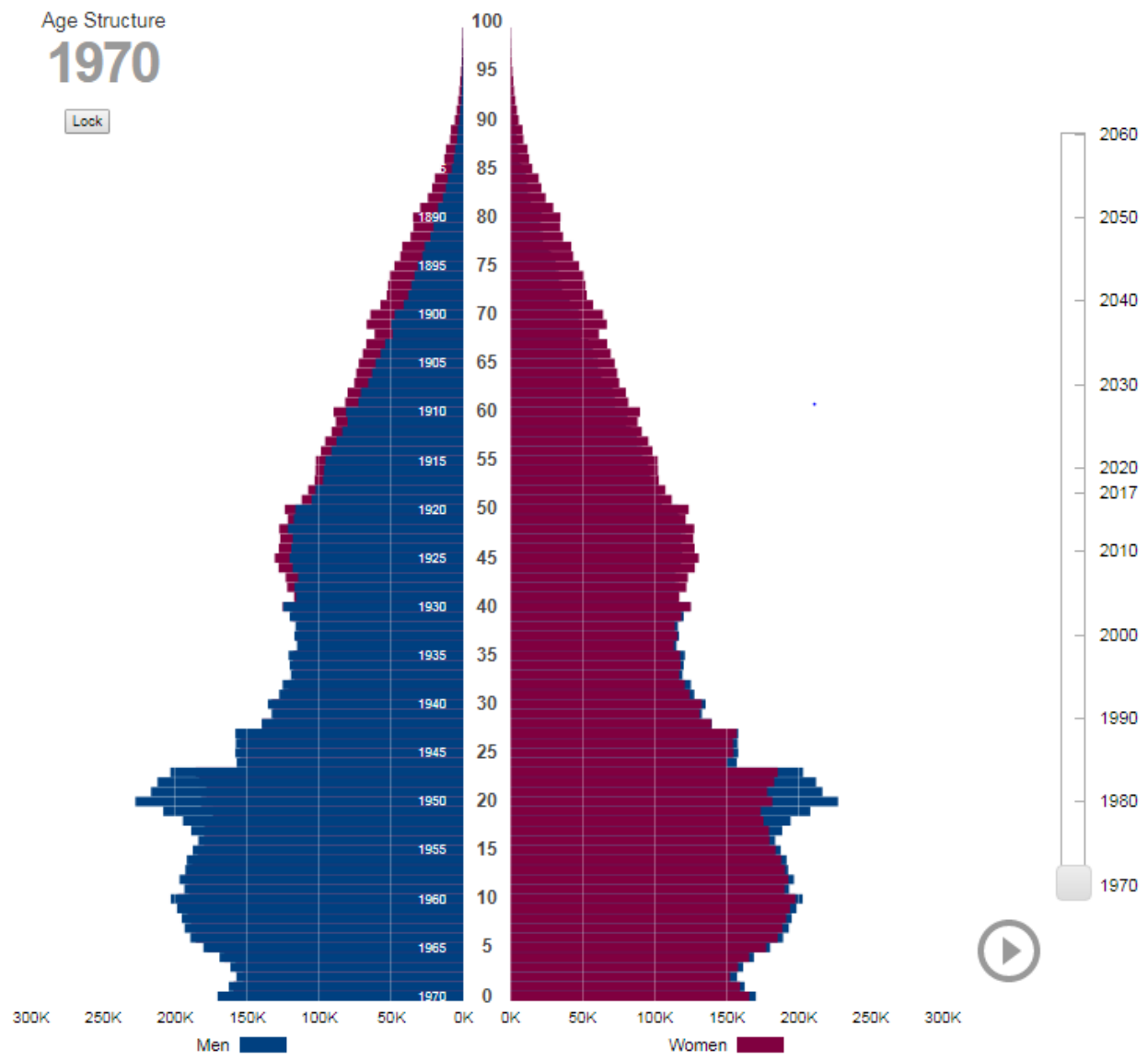


Risk: Population Aging

- People are living longer
- Fewer children are born
- Larger number/higher proportion of 65+
- Fewer people working
- More vulnerability to shocks/fixed incomes
- Also: Different infrastructure demands, higher demand for health care

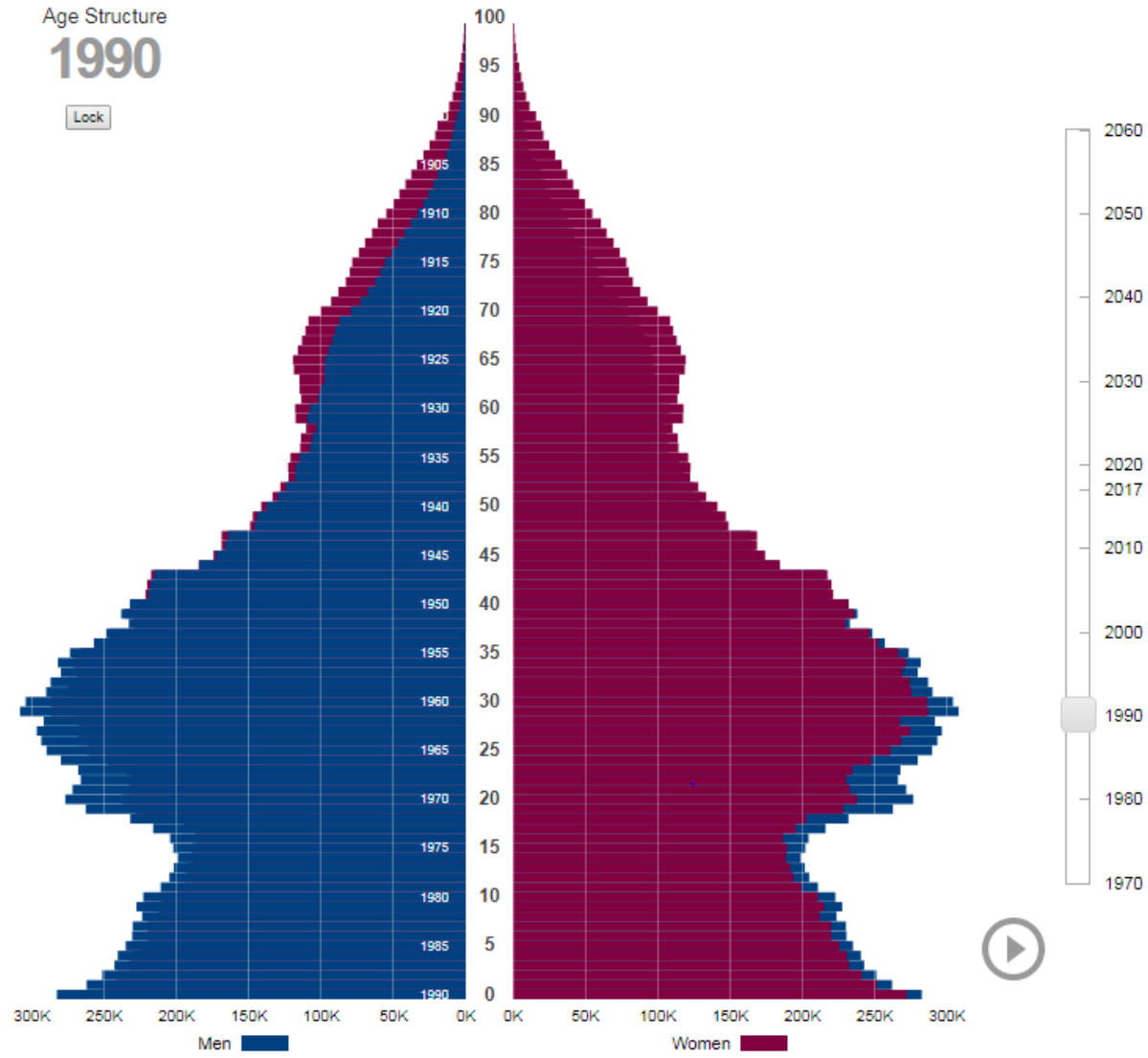
Age Structure 1970

Lock



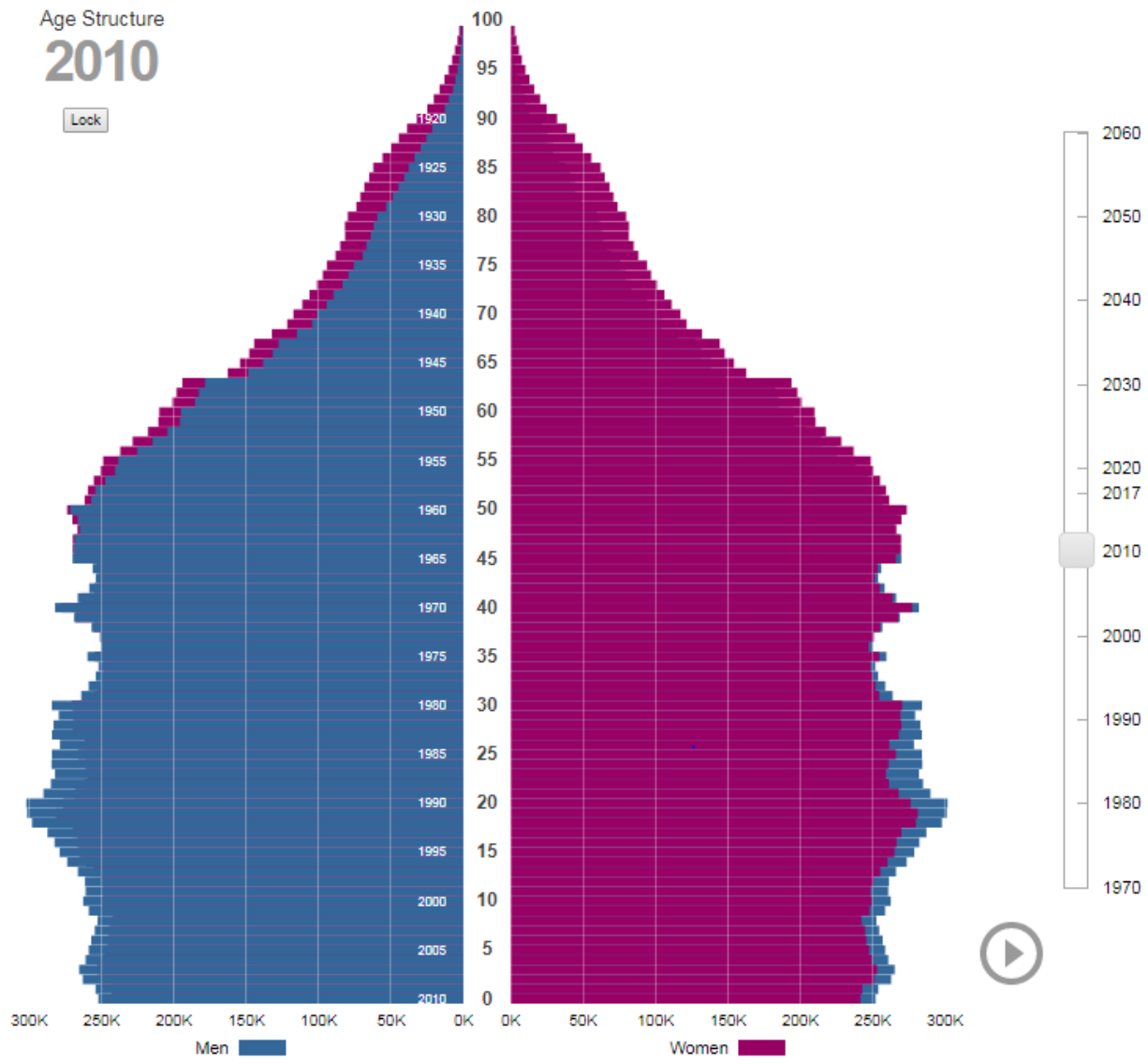
Age Structure 1990

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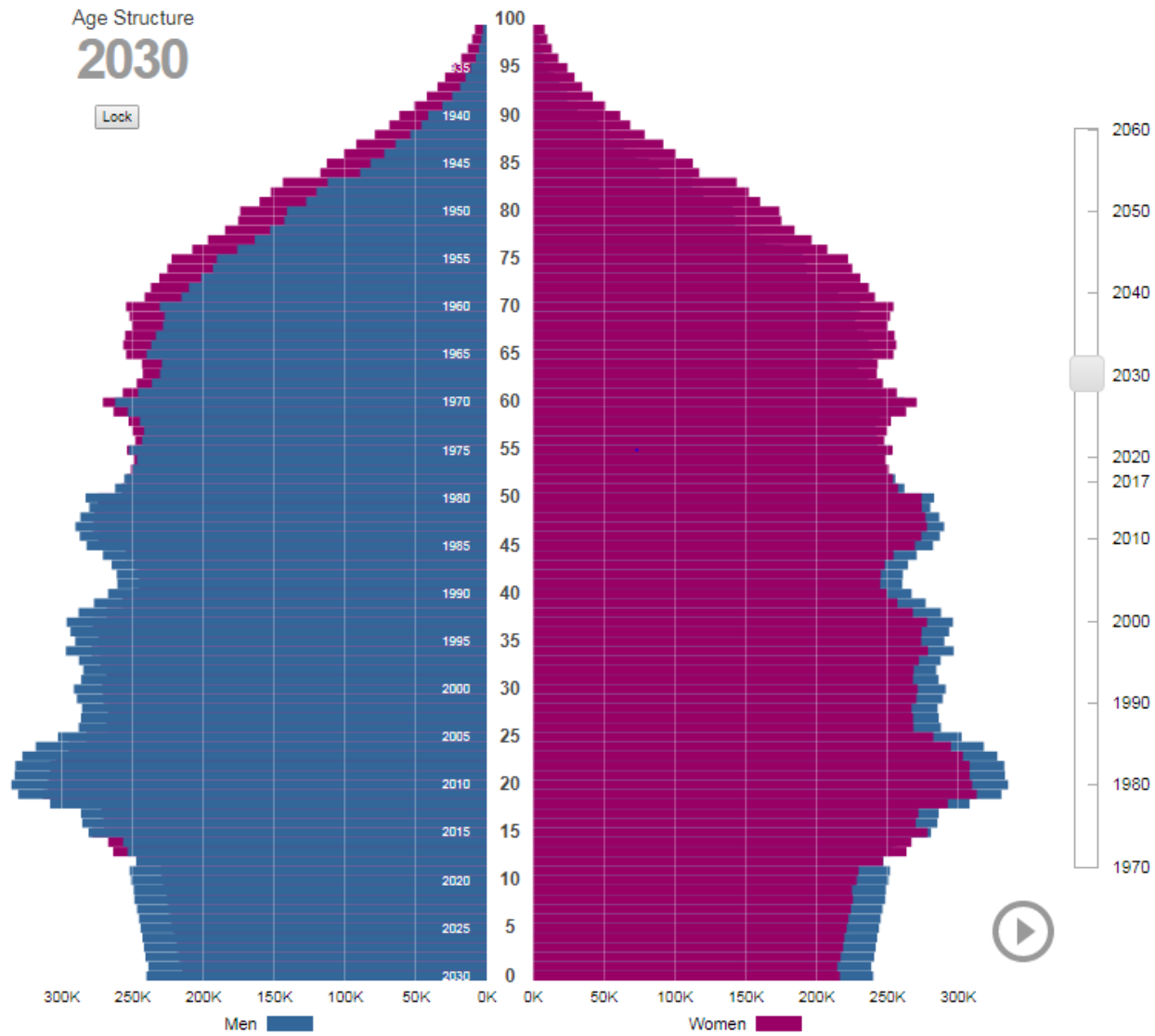
Age Structure 2010

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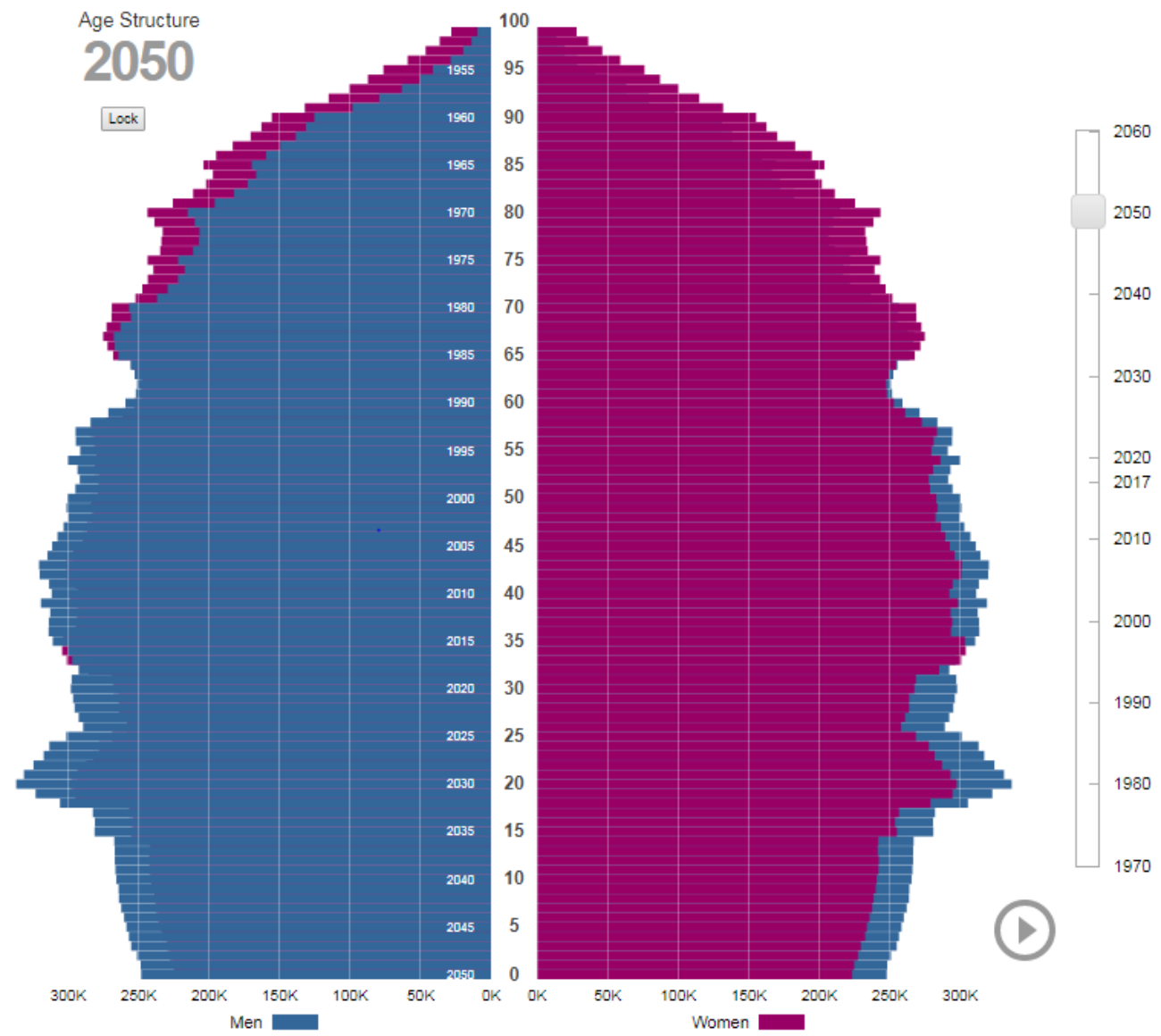
Age Structure 2030

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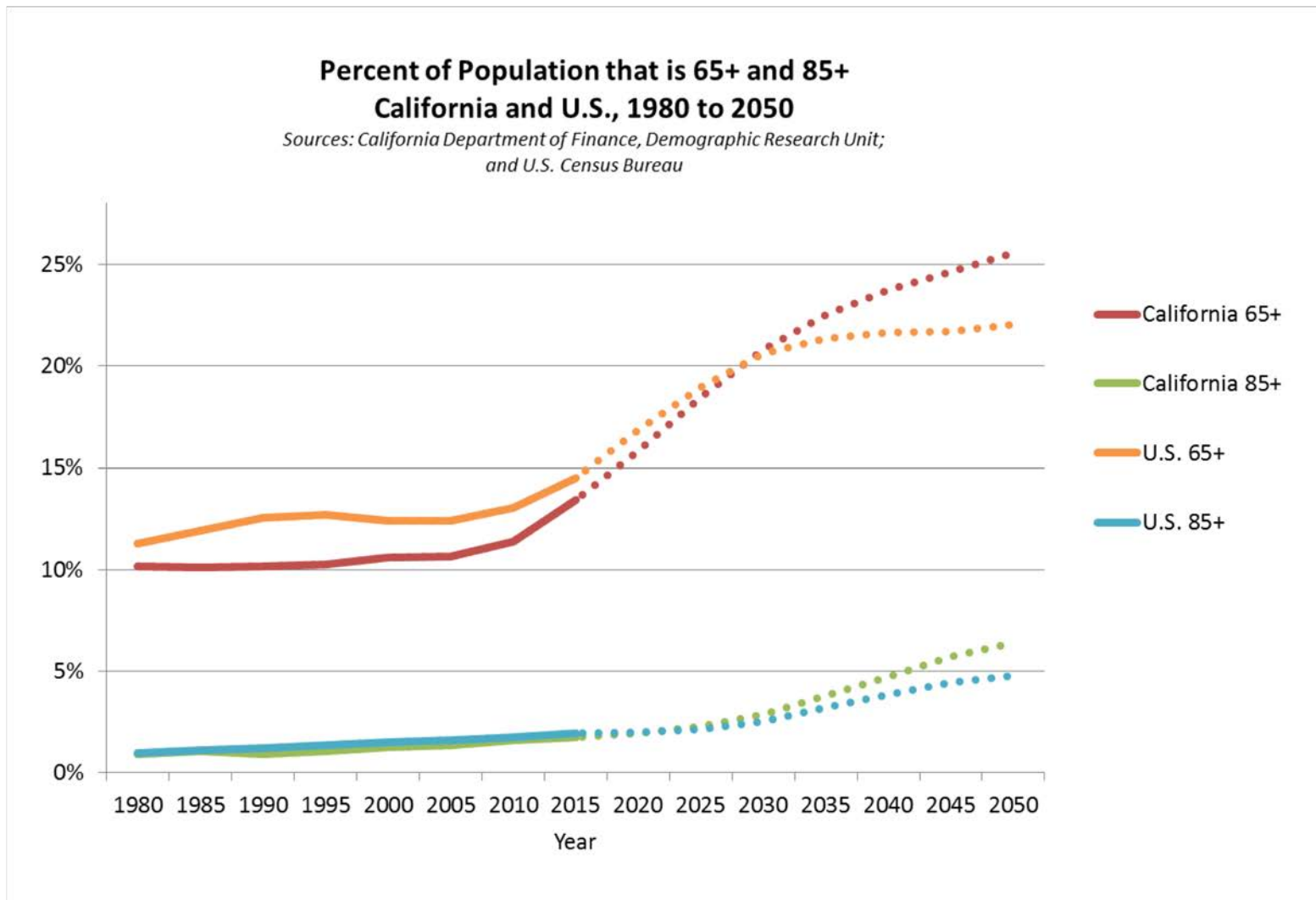


Age Structure 2050

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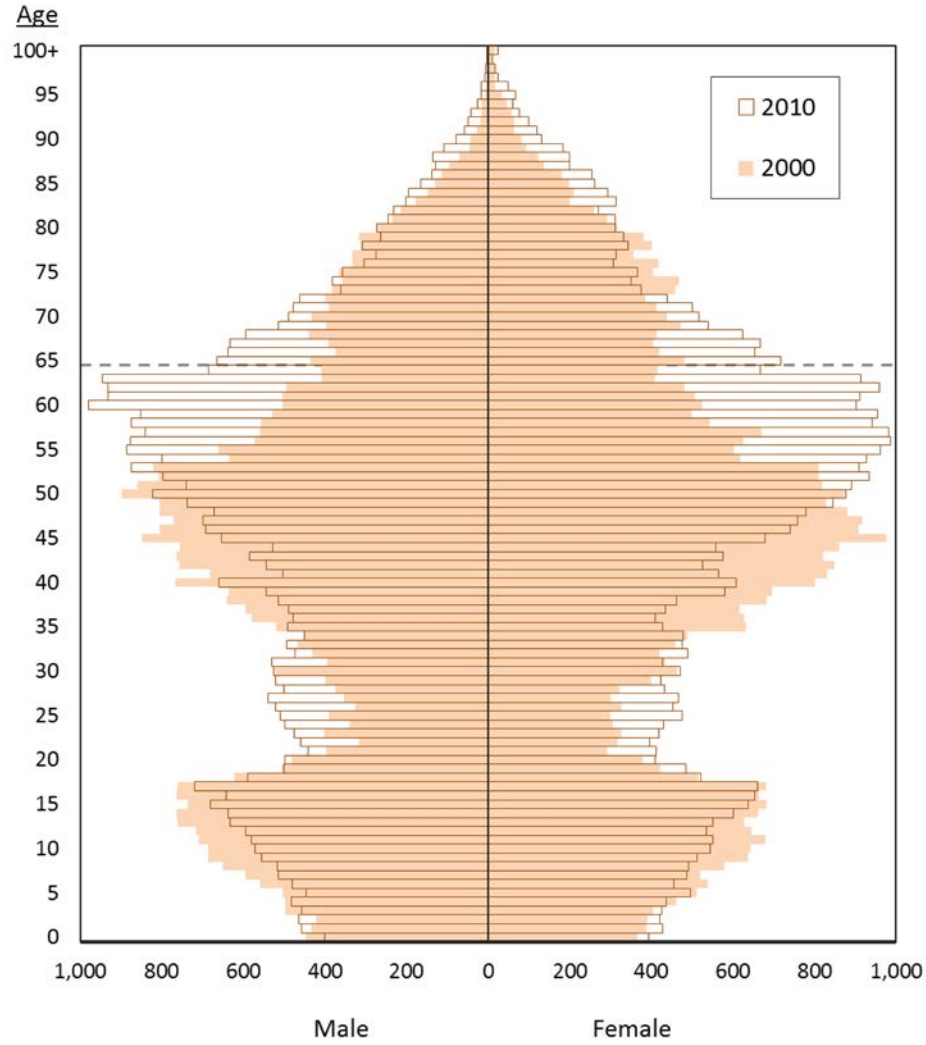


Risk: More People on Fixed Incomes



Nevada County Population by Age and Sex, 2000 and 2010

Source: California Department of Finance, Demographic Research Unit



San Francisco County Population by Age and Sex, 2000 and 2010

Source: California Department of Finance, Demographic Research Unit

