long live(d) economic growth

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department of economics, ucsb
director, ucsb economic forecast project

beautiful granada theater
may 16, 2019
roadmap for today

- global and national outlook
- the changing nature of expansions
- recent local trends
- where do we go from here?
- headwinds and tailwinds
global outlook
global outlook
kinda sucks
U.S.
U.S.
doesn’t suck
Household Leverage
Liabilities to Disposable Income

Economic Forecast Project
Source: Federal Reserve
United States Monthly Employment Change

Source: BLS
the recovery

- big question
- when will it end?
- currently the 2nd longest
Probability of Expansions Ending

- Before World War II
- After World War II

SOURCES: FRED and author's calculations.

FEDERAL RESERVE BANK of St. LOUIS
local trends
real estate
Median Transfer Price
Single Family Residence and Condos, 12-Month Moving Average

Economic Forecast Project
Source: Santa Barbara County Recorder's Office
local trends
demographics, employment and other stuff
## Population and Components of Change: Santa Barbara County

<table>
<thead>
<tr>
<th>Year</th>
<th>Population July 1</th>
<th>Population Change</th>
<th>Births</th>
<th>Deaths</th>
<th>Natural Increase</th>
<th>Net Migration</th>
<th>Population Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>411,683</td>
<td>493</td>
<td>6,301</td>
<td>2,936</td>
<td>3,365</td>
<td>-2,872</td>
<td>0.12</td>
</tr>
<tr>
<td>2006</td>
<td>412,853</td>
<td>1,170</td>
<td>6,175</td>
<td>2,860</td>
<td>3,315</td>
<td>-2,145</td>
<td>0.28</td>
</tr>
<tr>
<td>2007</td>
<td>416,648</td>
<td>3,795</td>
<td>6,252</td>
<td>2,708</td>
<td>3,544</td>
<td>251</td>
<td>0.92</td>
</tr>
<tr>
<td>2008</td>
<td>419,970</td>
<td>3,322</td>
<td>6,327</td>
<td>2,898</td>
<td>3,429</td>
<td>-107</td>
<td>0.80</td>
</tr>
<tr>
<td>2009</td>
<td>422,423</td>
<td>2,453</td>
<td>6,180</td>
<td>2,876</td>
<td>3,304</td>
<td>-851</td>
<td>0.58</td>
</tr>
<tr>
<td>2010</td>
<td>423,567</td>
<td>1,144</td>
<td>5,970</td>
<td>2,879</td>
<td>3,091</td>
<td>-1,223</td>
<td>0.27</td>
</tr>
<tr>
<td>2011</td>
<td>425,354</td>
<td>1,787</td>
<td>5,746</td>
<td>2,881</td>
<td>2,865</td>
<td>-1,078</td>
<td>0.42</td>
</tr>
<tr>
<td>2012</td>
<td>430,318</td>
<td>4,964</td>
<td>5,638</td>
<td>2,888</td>
<td>2,750</td>
<td>2,214</td>
<td>1.17</td>
</tr>
<tr>
<td>2013</td>
<td>435,329</td>
<td>5,011</td>
<td>5,701</td>
<td>2,990</td>
<td>2,711</td>
<td>2,300</td>
<td>1.16</td>
</tr>
<tr>
<td>2014</td>
<td>440,090</td>
<td>4,761</td>
<td>5,758</td>
<td>2,999</td>
<td>2,759</td>
<td>2,002</td>
<td>1.09</td>
</tr>
<tr>
<td>2015</td>
<td>444,491</td>
<td>4,401</td>
<td>5,809</td>
<td>3,016</td>
<td>2,793</td>
<td>1,608</td>
<td>1.00</td>
</tr>
<tr>
<td>2016</td>
<td>447,309</td>
<td>2,818</td>
<td>5,590</td>
<td>3,140</td>
<td>2,450</td>
<td>368</td>
<td>0.63</td>
</tr>
<tr>
<td>2017</td>
<td>450,138</td>
<td>2,907</td>
<td>5,463</td>
<td>3,256</td>
<td>2,207</td>
<td>700</td>
<td>0.65</td>
</tr>
<tr>
<td>2018</td>
<td>453,288</td>
<td>3,150</td>
<td>5,544</td>
<td>3,363</td>
<td>2,181</td>
<td>969</td>
<td>0.68</td>
</tr>
</tbody>
</table>

**Average per Year** 3,071 5,845 2,959 2,887 227 0.73

*Source: CA Department of Finance*
<table>
<thead>
<tr>
<th>Location</th>
<th>2017</th>
<th>2018</th>
<th>1-year Growth Rate</th>
<th>5-year Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buellton</td>
<td>5,098</td>
<td>5,291</td>
<td>3.8%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Carpinteria</td>
<td>13,697</td>
<td>13,704</td>
<td>0.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Goleta</td>
<td>31,622</td>
<td>31,949</td>
<td>1.0%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>7,341</td>
<td>7,604</td>
<td>3.6%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Lompoc</td>
<td>43,881</td>
<td>43,599</td>
<td>-0.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>94,244</td>
<td>94,807</td>
<td>0.6%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Santa Maria</td>
<td>107,978</td>
<td>108,470</td>
<td>0.5%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Solvang</td>
<td>5,653</td>
<td>5,771</td>
<td>2.1%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Unincorp Area</td>
<td>140,511</td>
<td>142,262</td>
<td>1.2%</td>
<td>4.4%</td>
</tr>
<tr>
<td>SB County</td>
<td>450,025</td>
<td>453,457</td>
<td>0.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Tri-Counties</td>
<td>1,585,145</td>
<td>1,592,631</td>
<td>0.5%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

*Source: CA Department of Finance*
### Population and Housing: Santa Barbara County

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (Jan. 1)</th>
<th>% change</th>
<th>Total Housing Units</th>
<th>% change</th>
<th>Vacancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>428,194</td>
<td>0.89</td>
<td>153,689</td>
<td>0.28</td>
<td>6.70</td>
</tr>
<tr>
<td>2013</td>
<td>433,073</td>
<td>1.14</td>
<td>154,170</td>
<td>0.31</td>
<td>6.60</td>
</tr>
<tr>
<td>2014</td>
<td>438,512</td>
<td>1.26</td>
<td>154,733</td>
<td>0.37</td>
<td>6.50</td>
</tr>
<tr>
<td>2015</td>
<td>442,987</td>
<td>1.02</td>
<td>155,353</td>
<td>0.40</td>
<td>6.20</td>
</tr>
<tr>
<td>2016</td>
<td>447,073</td>
<td>0.92</td>
<td>156,520</td>
<td>0.75</td>
<td>6.00</td>
</tr>
<tr>
<td>2017</td>
<td>450,025</td>
<td>0.66</td>
<td>157,578</td>
<td>0.68</td>
<td>6.10</td>
</tr>
<tr>
<td>2018</td>
<td>453,457</td>
<td>0.76</td>
<td>158,622</td>
<td>0.66</td>
<td>6.20</td>
</tr>
</tbody>
</table>

*Source: CA Department of Finance

*All values are January 1 estimates.

- Population is growing faster than housing.
Percentage of Total Employment, by Industry
Santa Barbara County

Source: CA Employment Development Department, Current Employment Survey (CES)
Annual Employment Growth by Industry
Santa Barbara County

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent of Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>19</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>13.7</td>
</tr>
<tr>
<td>Educ. &amp; Health Services</td>
<td>13.3</td>
</tr>
<tr>
<td>Prof. &amp; Bus. Services</td>
<td>10.9</td>
</tr>
<tr>
<td>Total Farm</td>
<td>10.8</td>
</tr>
<tr>
<td>Goods−Producing</td>
<td>10.7</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>9.2</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>3.3</td>
</tr>
<tr>
<td>Trans., Ware. &amp; Util.</td>
<td>2.5</td>
</tr>
<tr>
<td>Information</td>
<td>1.6</td>
</tr>
<tr>
<td>Other Services</td>
<td>0</td>
</tr>
</tbody>
</table>

Jan 2018 − Jan 2019 Growth Rate (%)

Percent of Total Employment
Occupations by Highest Employment
Santa Barbara County, 2018 Q1

Source: CA Employment Development Department, Occupational Employment Statistics (OES)
headwind or tailwind?
tariffs
tariffs
headwind
monday: tariff war

- US: increase from 10% to 25%
- China: tariff increase on $60 billion

bottom line: makes both parties poorer

it is not a zero-sum game

SP 500 and Dow down 2.4% as a result
fed independence
fed independence
tailwind
“Paper money has almost always been a curse on those who produce it.”

Irving Fisher (1867–1947)
Succumbing to the Temptation of Seigniorage

“A wagon load of money will scarcely purchase a wagon load of provisions.”

General George Washington
Yugoslavia, 1993
Zimbabwe, 2008
wtf!?

- this can't happen here!
read the book
On 5 December 1965, President Lyndon Johnson was pacing in the office at his ranch in Johnson City, Texas, while he waited for William McChesney Martin Jr., the chairman of the Federal Reserve Board, to visit for what Johnson called "a trip to the woodshed." Two days before, Martin had led the Fed's board of governors to an increase in the Federal Reserve discount rate, the first in more than five years of uninterrupted economic growth. Through Henry "Joe" Fowler, his Treasury secretary, and Gardner Ackley, his Council of Economic Advisors (CEA) chairman, Johnson had advised Martin to delay the rate increase, and his instructions had been rejected. Few people ignored Lyndon Johnson's instructions, and he was furious when he heard of the Fed's move. He had growled at Fowler over the telephone: "Those marble tower boys. Joe, you find a tough guy to head the Reserve. If Martin resigns, it won't wreck the country."¹

Their meeting was a classic confrontation. Johnson was a powerful and manipulative president who believed that a Fed tightening would jeopardize the economic expansion and the tax revenues he needed to finance the most important goals of his presidency: his war on poverty and continued involvement in the war in Vietnam, whose costs were growing. Martin was com-
more meddling

- fast forward to 1969
- burns and nixon
- what happened next?
PCE, Chain-type Price Index
Monthly, annualized rate of change

Economic Forecast Project
Source: BEA
30-Year Fixed Rate Mortgage

Percent

Economic Forecast Project

Source: BEA
unfunded pension liabilities
unfunded pension liabilities

headwind
pensions

- defined benefit pension liabilities
  - how are we doing?

- we will look at perf, ca teachers and UC

- what is a pension?
  - a promise to pay

- so what is the problem?
pensions

- underfunded pensions
- ok, but how much?
  - how to value pension liabilities?
  - it is a debt owed by the government
  - like any other debt (treasuries)?
  - pensions are promises, not risky investments!
Portfolio Allocation: California Teachers
2018 Fiscal Year End Holdings

- Commodities: 8.9%
- Equities: 12.8%
- Fixed Income: 12.3%
- Hedge Fund: 8.2%
- Private Equity: 2.1%
- Real Estate: 53.7%

Source: Center for Retirement Research
www.efp.ucsb.edu
Portfolio Allocation: California PERF
2018 Fiscal Year End Holdings

- Equities: 48.9%
- Fixed Income: 22.5%
- Hedge Fund: 7.7%
- Private Equity: 6.8%
- Real Estate: 10.8%

Source: Center for Retirement Research
www.efp.ucsb.edu
Portfolio Allocation: University of California
2018 Fiscal Year End Holdings

- Equities: 51%
- Fixed Income: 25%
- Private Equity: 15%
- Real Estate: 4%
- Misc. Other: 5%

Source: Center for Retirement Research
www.efp.ucsb.edu
how to value

- should use risk-free rate from yield curve
- current practice: 7.3%
  - recall rule of 70
  - doubles in about 9.5 years
- so, if owe $100k in 10 years
  - then $50k in assets is “fully funded” (gasb 67)
Table 1: Summary Table

<table>
<thead>
<tr>
<th>Number of Plans Total</th>
<th>State Pensions</th>
<th>Local Pensions</th>
<th>State &amp; Local Pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>263</td>
<td>386</td>
<td>649</td>
</tr>
</tbody>
</table>

I. Assets and Liabilities

**GASB 67 Standards**

<table>
<thead>
<tr>
<th></th>
<th>State Pensions</th>
<th>Local Pensions</th>
<th>State &amp; Local Pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Pension Liability (TPL)</td>
<td>$4,160</td>
<td>$807</td>
<td>$4,967</td>
</tr>
<tr>
<td>Assets</td>
<td>$3,034</td>
<td>$555</td>
<td>$3,589</td>
</tr>
<tr>
<td>Net Pension Liability (NPL)</td>
<td>$1,126</td>
<td>$252</td>
<td>$1,378</td>
</tr>
<tr>
<td>Funding Ratio</td>
<td>72.9%</td>
<td>68.8%</td>
<td>72.3%</td>
</tr>
</tbody>
</table>

**Market Value Standards**

<table>
<thead>
<tr>
<th></th>
<th>State Pensions</th>
<th>Local Pensions</th>
<th>State &amp; Local Pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Benefits Obligation (ABO)</td>
<td>$6,228</td>
<td>$1,206</td>
<td>$7,435</td>
</tr>
<tr>
<td>Assets</td>
<td>$3,034</td>
<td>$555</td>
<td>$3,589</td>
</tr>
<tr>
<td>Unfunded Market Value Liability (UMVL)</td>
<td>$3,194</td>
<td>$651</td>
<td>$3,846</td>
</tr>
<tr>
<td>Funding Ratio</td>
<td>48.7%</td>
<td>46.0%</td>
<td>48.3%</td>
</tr>
</tbody>
</table>
Accrued Pension Liabilities
2017-2018 FY End

Assumption
- Assumed Rate
- 10YR Treasury Rate

Percent Unfunded

- calPERS - PERF: $130 Bill.
- calTeachers: $317 Bill.
- UCRP: $77 Bill.
Accrued Pension Liabilities
2017-2018 FY End

Assumption
- Assumed Rate
- 10YR Treasury Rate

Percent Unfunded

- calPERS - PERF: $130 Bill.
- calTeachers: $317 Bill.
- UCRP: $77 Bill.

Total:
- $236 Bill.
- $571 Bill.
- $135 Bill.
cannabis
cannabis
tailwind
a burgeoning industry

- uncertain growth

- big potential?
Girl Scout sells 300 boxes of cookies outside marijuana dispensary in 6 hours

A Girl Scout in San Diego did brisk business tugging a wagon-load of cookies outside a local marijuana dispensary.
Overview of Licensed Cultivation Capacity in California's Adult-Use Market

Estimated Annual Production Capacity of Current Licensees by Grow Type (grams)

- Outdoor: 326.0M
- Tier 1 Mixed-Light: 618.8M
- Tier 2 Mixed-Light (Greenhouse): 415.4M
- Indoor: 506.3M

Portion of Estimated Annual Production Capacity by County

- Santa Barbara: 22.1%
- Humboldt: 20.4%
- Monterey: 12.6%
- Mendocino: 9.2%
- Los Angeles: 6.1%

Note: Includes only active licenses, data current as of 11/21/18.
Source: Marijuana Business Daily, California Department of Food & Agriculture
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Marijuana Licenses

Top 10 Counties

Source: Bureau of Cannabis Control
Average Marijuana Employment Salaries

**Dispensary Managers**
- Massachusetts: $70,000
- Maryland: $75,500
- Illinois: $36,000
- Colorado: $45,000
- California: $52,500
- Oregon: $37,500

**Master Cultivators**
- Massachusetts: $135,000
- Maryland: $110,000
- Illinois: $90,000
- Colorado: $85,000
- California: $120,000
- Alaska: $75,000

Source: HempStaff, Vangst, Viridian Staffing
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Marijuana Tax Revenue by Source

State of Colorado

Source: Colorado Department of Revenue
minimum wages
minimum wages
headwind
- 30% in CA make < $12.50/hr
- 16% in bay area
- 38% in Imperial county
- source: legislative analysts office
Figure 1
Low-Wage Workers' Occupations

Percent of Total Low-Wage Workers

- Sales: 18%
- Food Preparation and Service: 16%
- Administrative Support: 11%
- Personal Care and Services: 10%
- Transportation and Moving: 8%
Figure 2
Low-Wage Workers' Ages

Percent of Total Low-Wage Workers

Age

- Under 20
- 20-29
- 30-39
- 40-49
- 50 or Older
minimum wages

- a better solution

- earned income tax credit
non-profit sector
non-profit sector
tailwind
Total Contributions to Non-Profits
Santa Barbara County

Source: Guidestar.org
Total Contributions to Non-Profits

Santa Barbara County

Source: Guidestar.org
Percentage of Contributions by Type of Organization
Santa Barbara County, 2017

86.87%

1.61%  3.26%  3.65%  4.6%

Source: Guidestar.org
final remarks

- economy continues strong growth
- signs of slowing?
  - always some signs of slowing
- recession coming? yes
final remarks

- economy continues strong growth
- signs of slowing?
  - always some signs of slowing
- recession coming? yes
  - when? don’t know, sorry