BEACON ECONOMICS

Analysis. Answers

The Economic Outlook

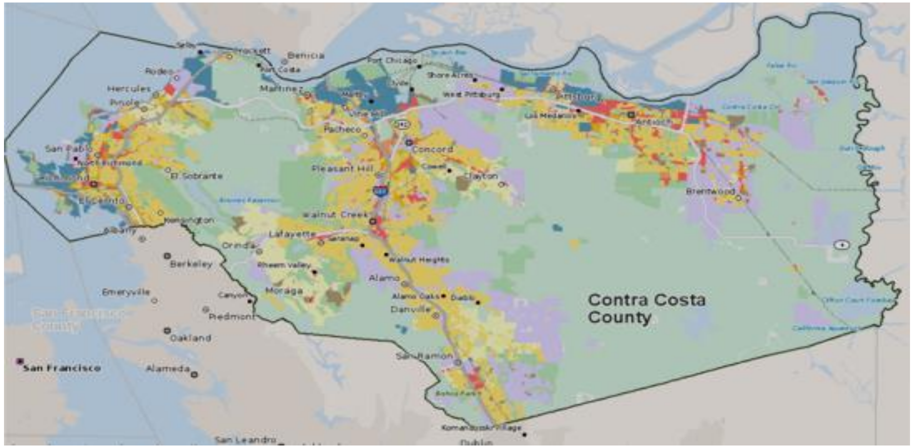
Focus on the Contra Costa Economy

January 2018

Christopher Thornberg

Founding Partner, Beacon Economics

Director, UC Riverside Center for Forecasting and Development



It was an interesting year…

The Victory of Miserabilism

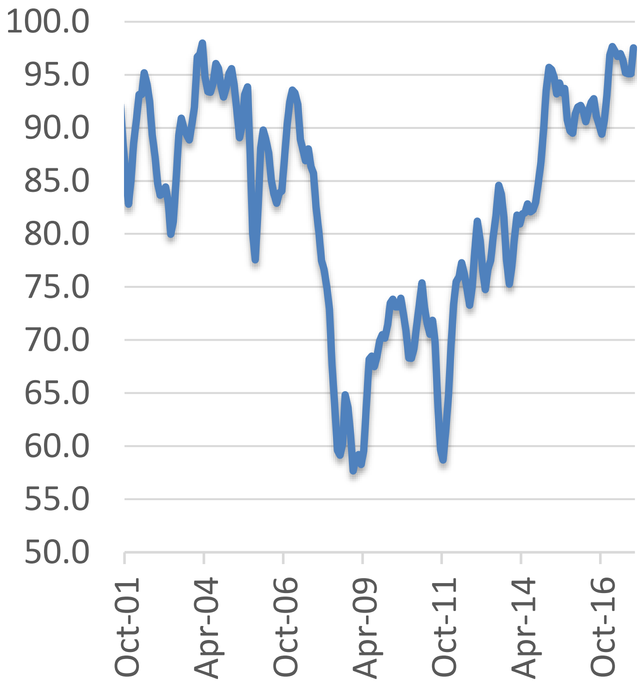
- **The Good: Meet the new economy, same as the old economy**
  - For all the sound and fury, very little actually happened (x taxes)
  - 2017 solid year for growth: looked a lot like 2013-2016
  - 2018 likely to be better: the tax cut stimulus will boost the economy
  - Still a low chance of recession in next 24 months

- **The Bad: Economic Brakes and Growing Imbalances**
  - Labor shortage Issues (particularly in California)
  - Consumer savings declines, another bubble forming
  - Aggressive Fed: rising rates, flattening yield curves

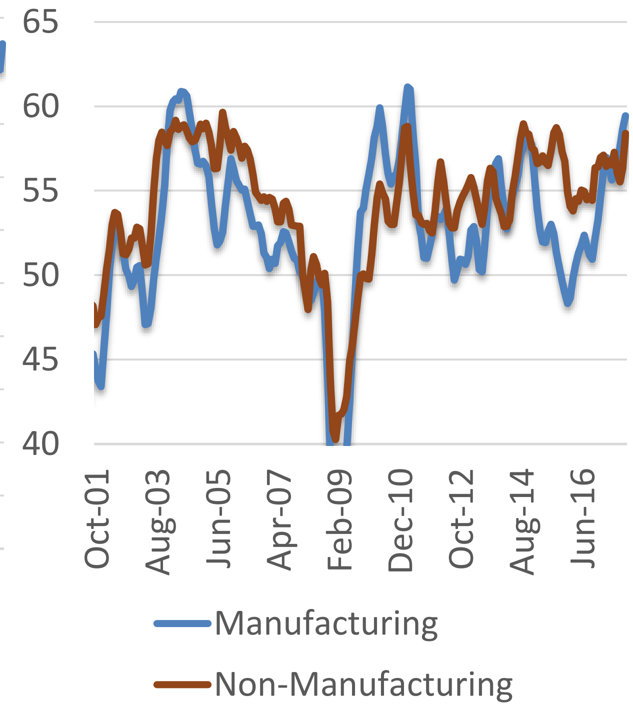
- **The Ugly: 2018 will be seen as a historic turning point**
  - Little effort to deal with underinvestment in infrastructure, rising wealth and income inequality, healthcare cost inflation, housing
  - Sharp growth in entitlement spending and government deficits
  - Breakdown in basic norms of political leadership

Optimism Abounds

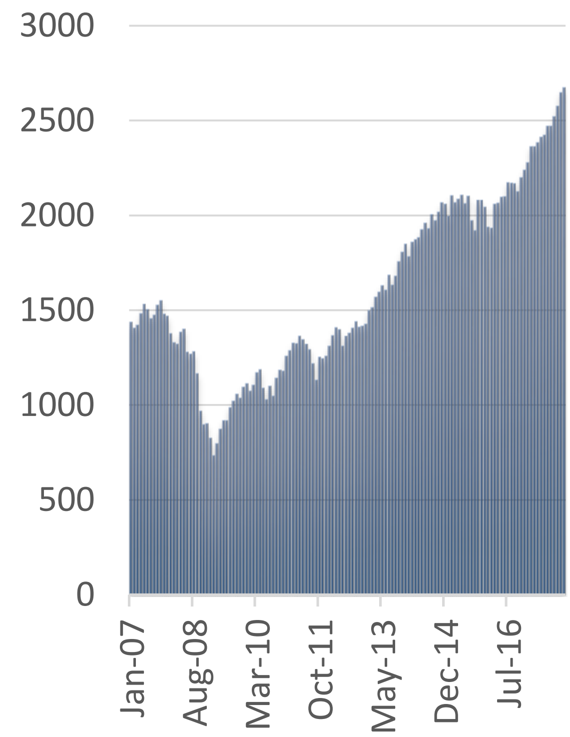
UM Consumer Sentiment 3 Month MA



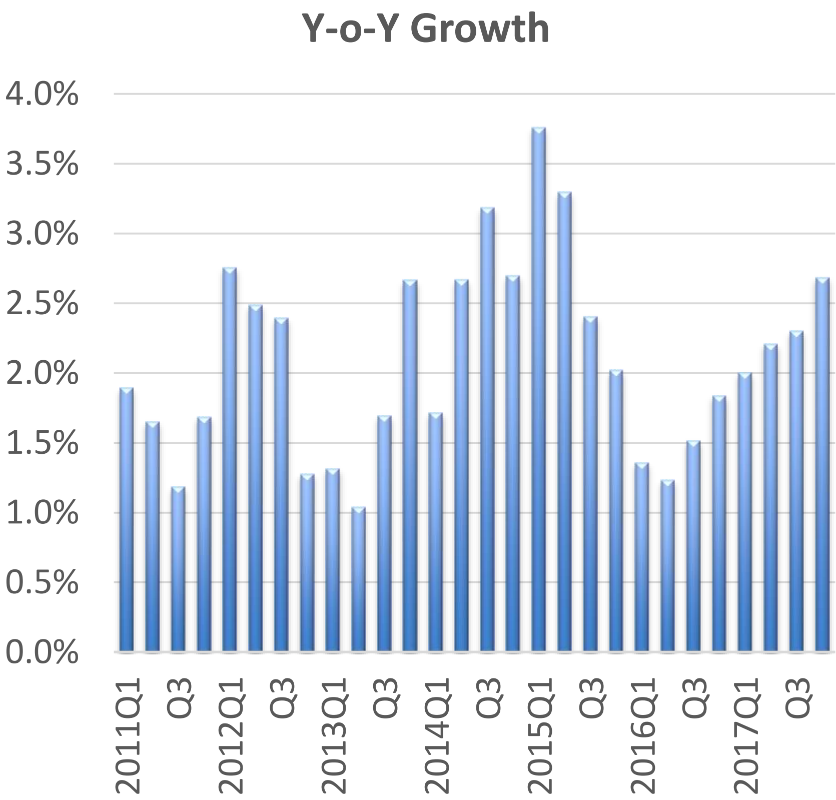
ISM Diffusion Indexes 3 Month MA



S&P 500 Index

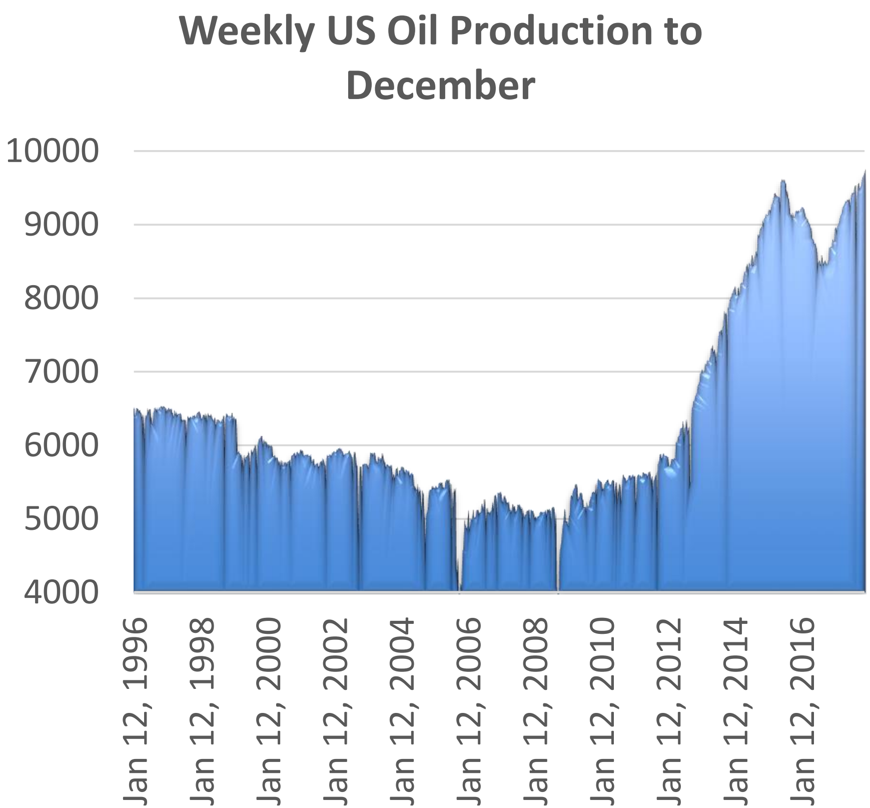


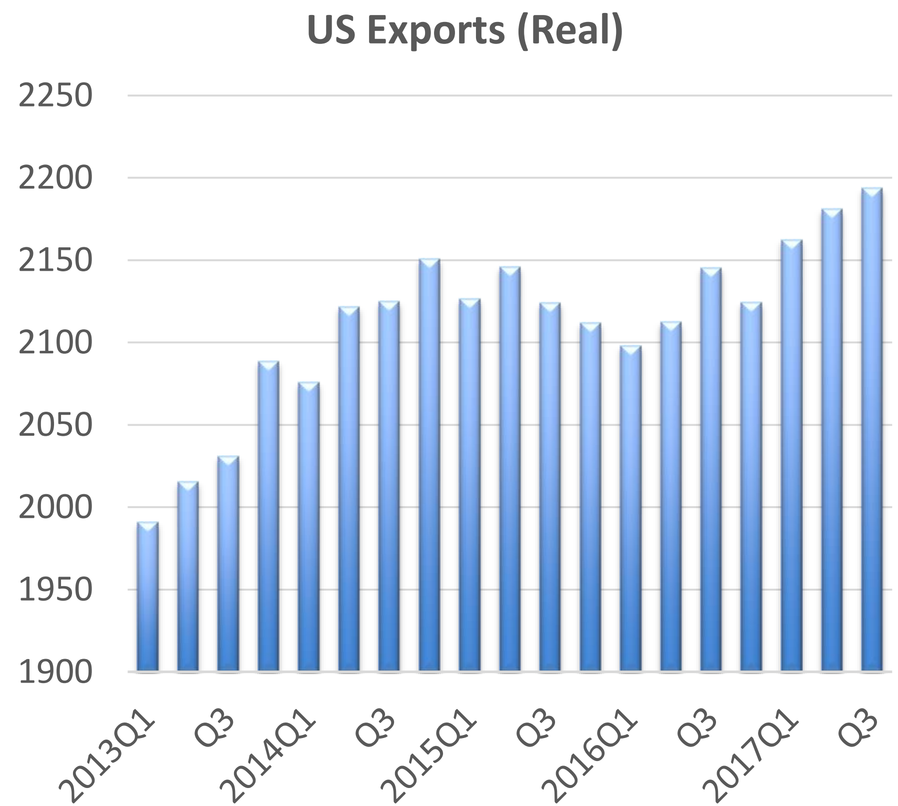
GDP Growth: 2017 back to 3%



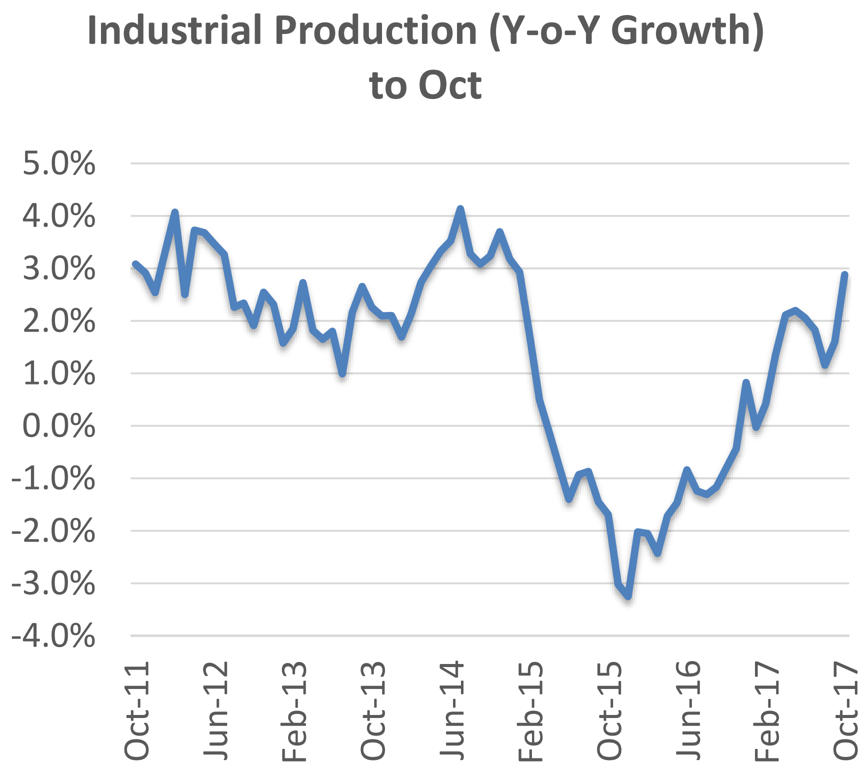
	2013	2014	2015	2016	2017	2017 Q3	2017 Q4
GDP	2.68	2.73	2.00	1.85	2.73	3.20	2.60
FD	1.68	3.45	2.70	2.19	2.79	2.05	3.88
PCE	1.37	2.40	2.04	1.93	1.95	1.49	2.58
Fixed Inv	0.83	0.95	0.40	0.18	0.86	0.40	1.27
Struct	0.16	0.26	-0.28	0.10	0.07	-0.21	0.04
Equip	0.39	0.24	0.21	-0.22	0.52	0.58	0.62
IPP	0.09	0.26	0.13	0.21	0.20	0.21	0.18
Res	0.20	0.20	0.35	0.09	0.08	-0.18	0.42
Invent	0.62	-0.15	-0.02	-0.02	-0.11	0.79	-0.67
Net exports	0.38	-0.57	-0.68	-0.31	0.05	0.36	-1.13
Government	-0.53	0.09	0.28	0.07	0.12	0.12	0.50

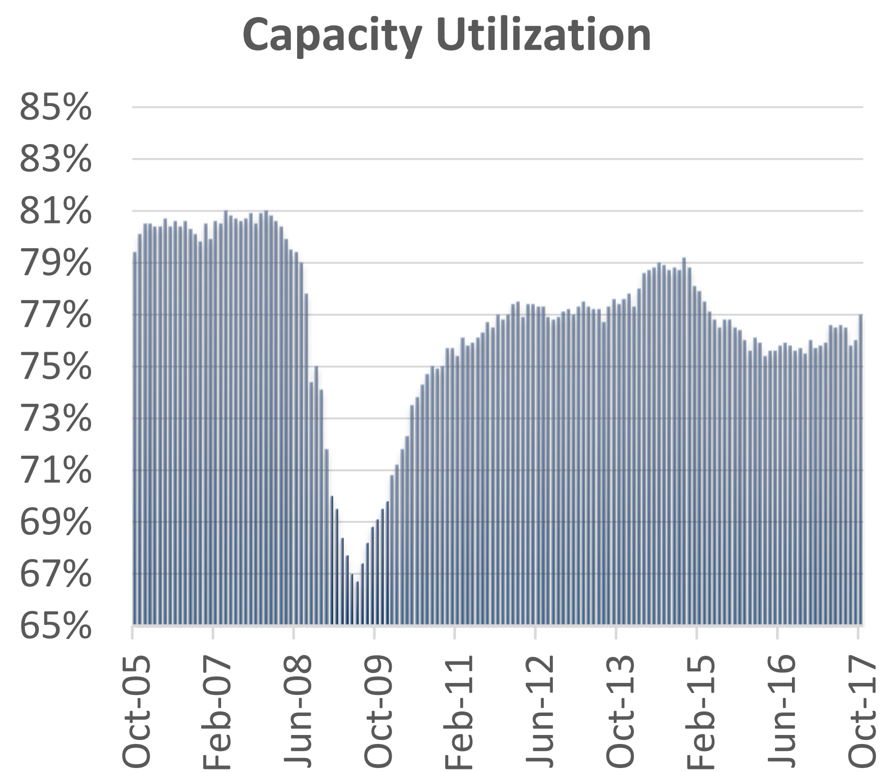
Oil and Exports



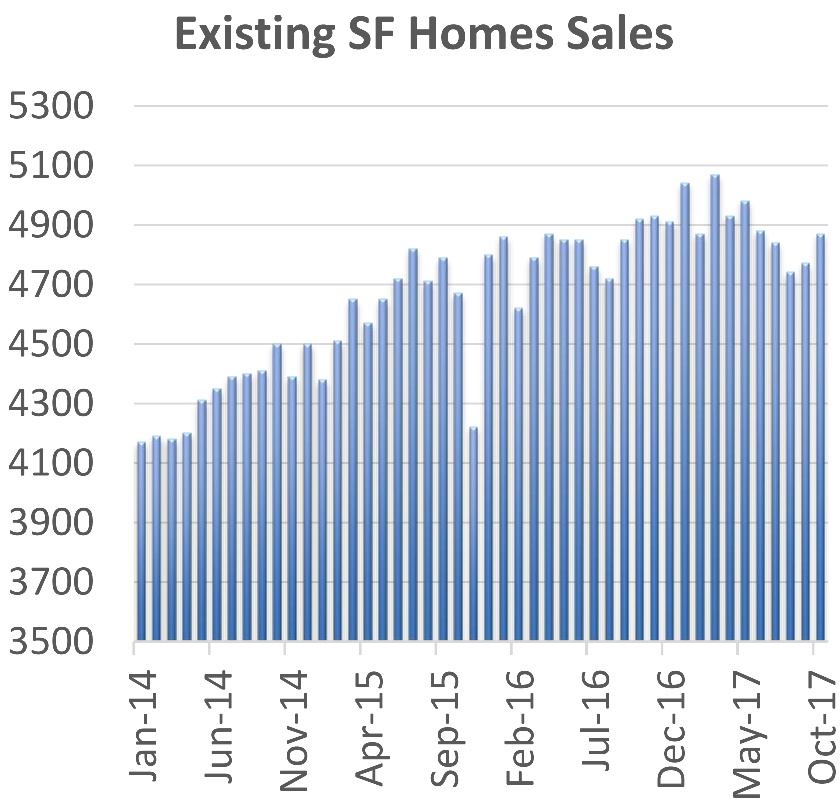


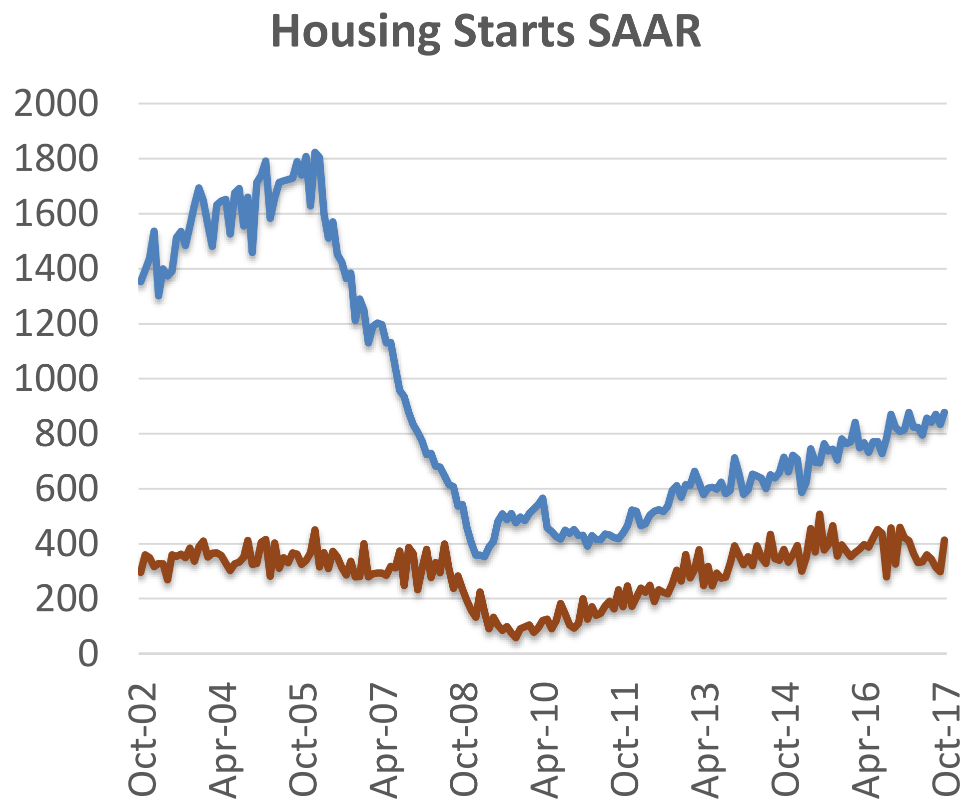
Industrial Stats: Meh.





Housing

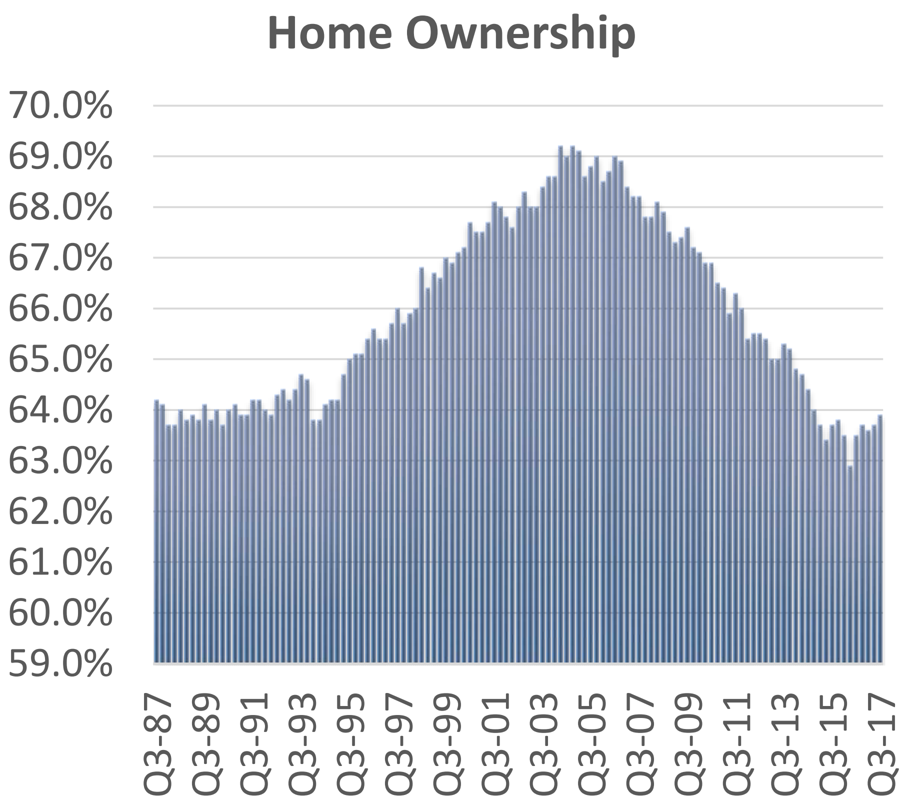

Existing SF Homes Sales
5300
5100
4900
4700
4500
4300
4100
3900
3700
3500
Jan-14
Jun-14
Nov-14
Apr-15
Sep-15
Feb-16
Jul-16
Dec-16
May-17
Oct-17

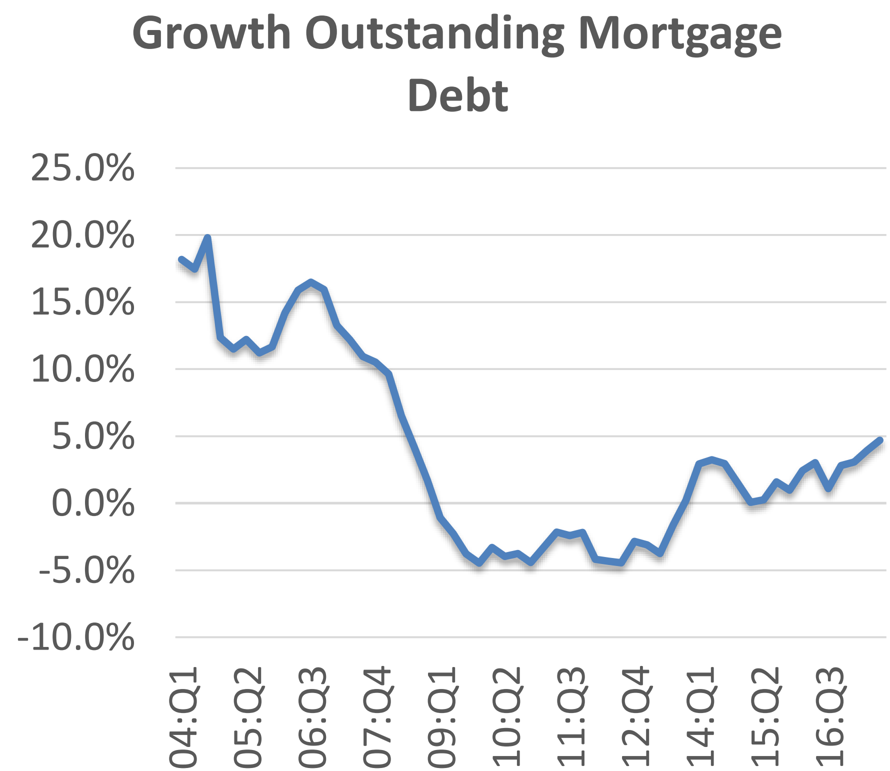

Housing Starts SAAR
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Oct-02
Apr-04
Oct-05
Apr-07
Oct-08
Apr-10
Oct-11
Apr-13
Oct-14
Apr-16
Oct-17

Home Prices

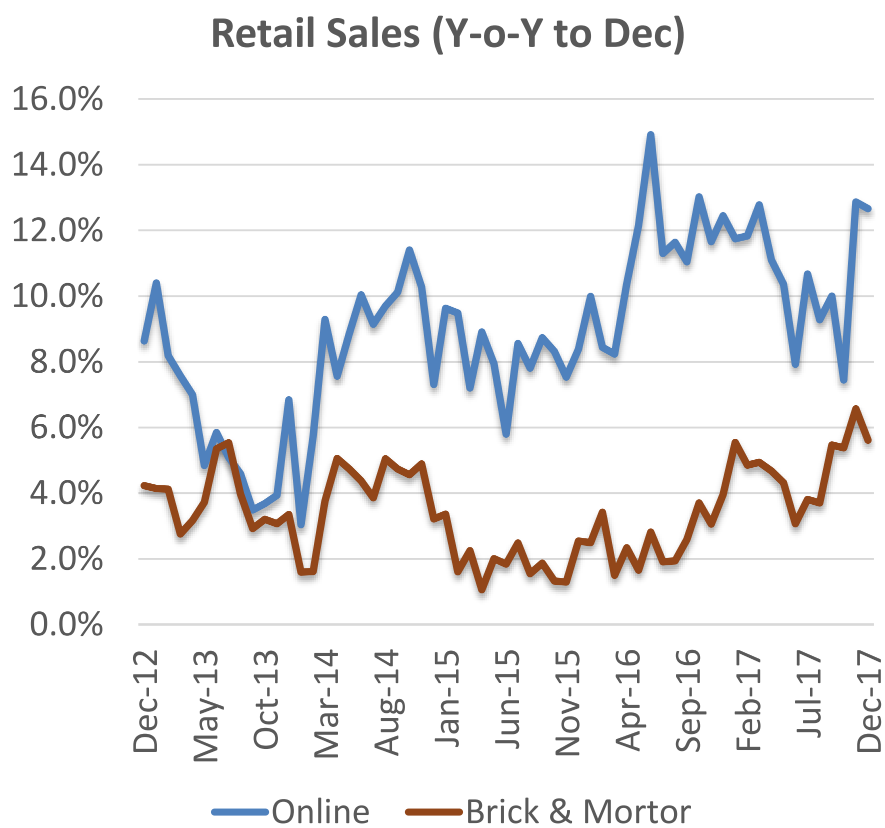
	2016	2017		2016	2017
WA-Seattle	10.6%	12.7%	NC-Charlotte	5.9%	6.4%
NV-Las Vegas	5.6%	10.2%	**Composite-20**	**5.0%**	**6.4%**
CA-San Diego	5.8%	8.1%	**National-US**	**5.2%**	**6.2%**
CA-San Francisco	5.6%	7.7%	AZ-Phoenix	5.1%	6.0%
CO-Denver	8.3%	7.2%	NY-New York	2.1%	5.9%
MI-Detroit	6.6%	7.1%	MN-Minneapolis	5.4%	5.4%
TX-Dallas	8.1%	7.1%	GA-Atlanta	5.8%	5.0%
OR-Portland	10.2%	7.1%	OH-Cleveland	4.0%	4.7%
MA-Boston	4.4%	6.9%	FL-Miami	6.4%	4.4%
FL-Tampa	7.8%	6.9%	IL-Chicago	2.9%	4.1%
CA-Los Angeles	5.5%	6.5%	DC-Washington	2.1%	3.1%

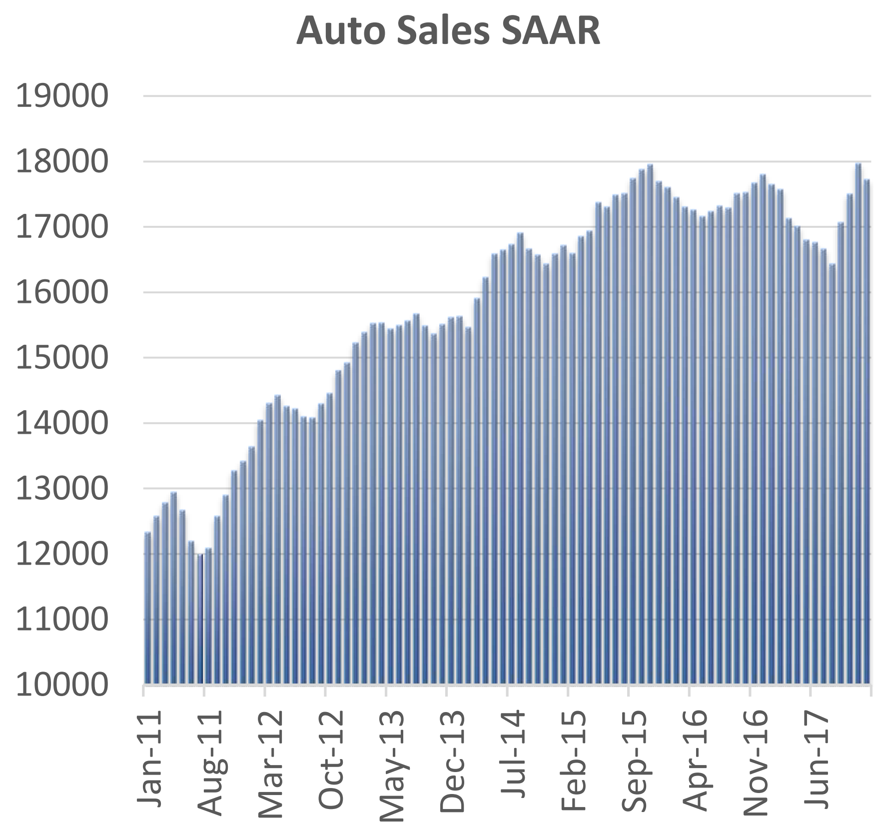
Ownership- Slight Up



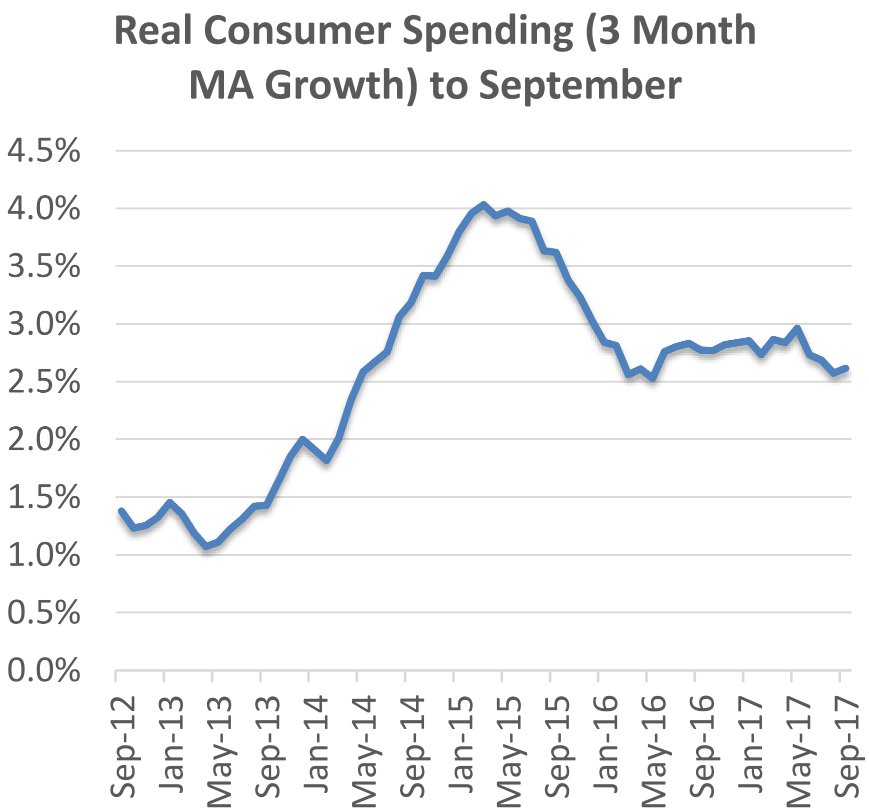


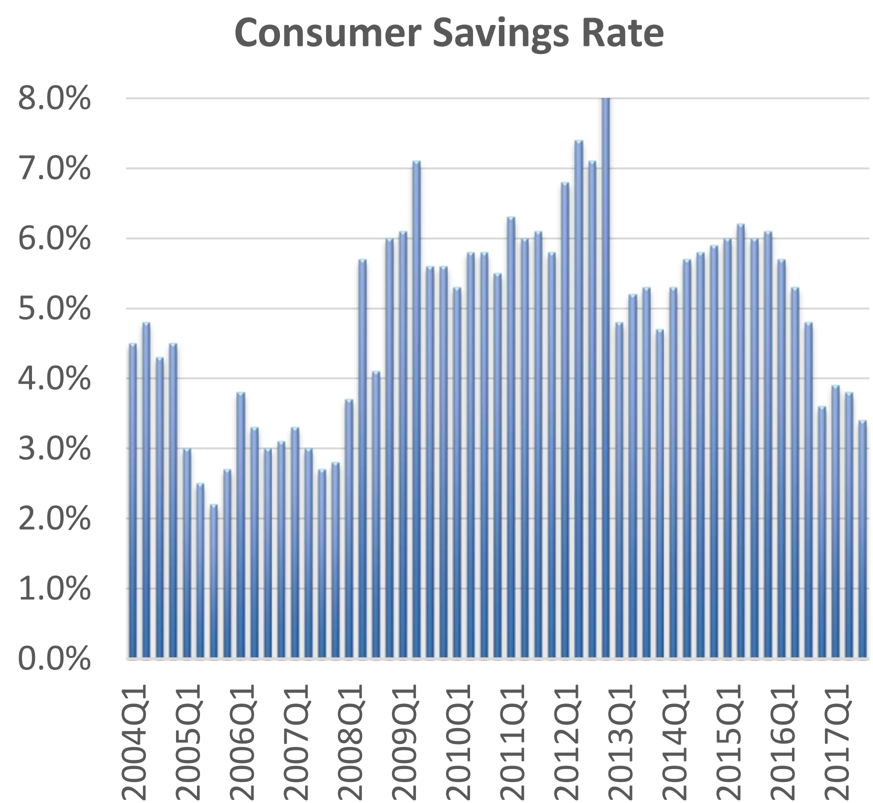
Retail Sales



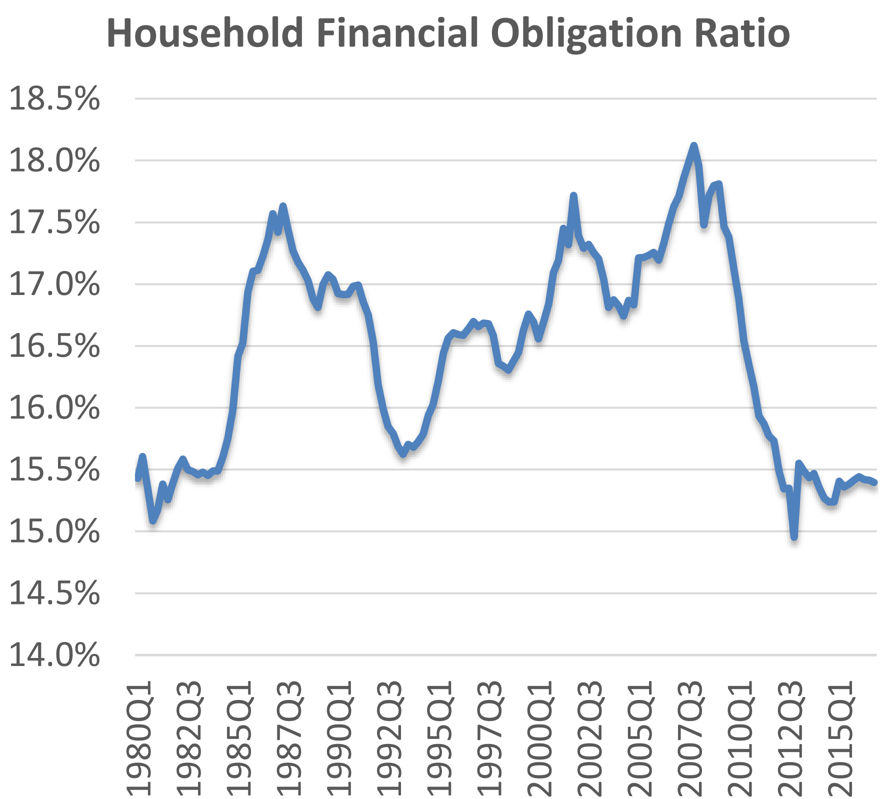


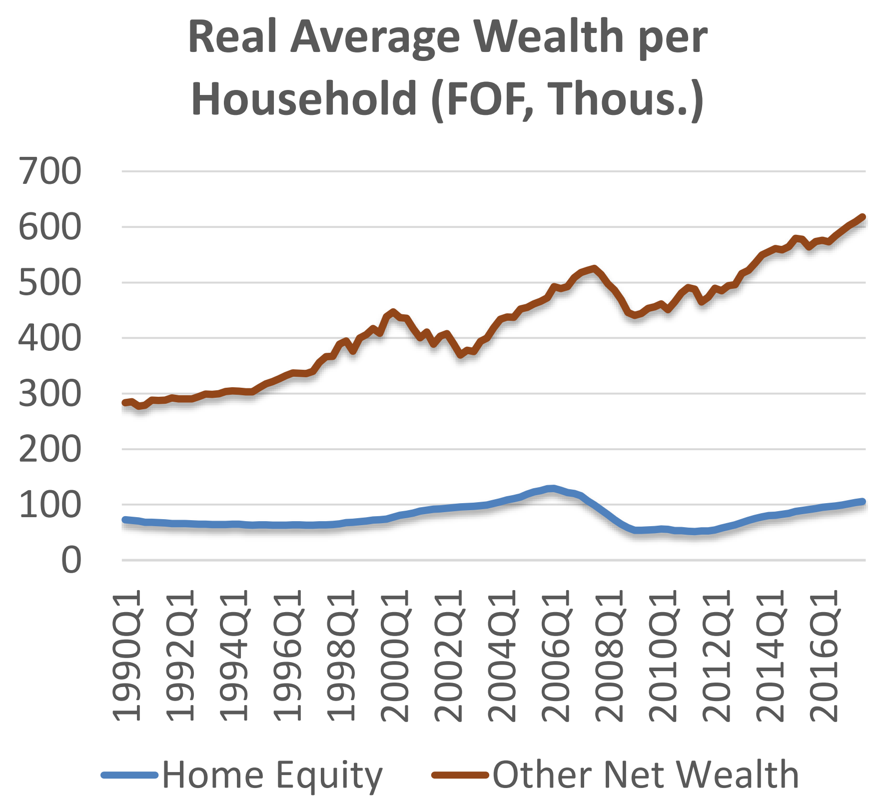
Consumer Spending



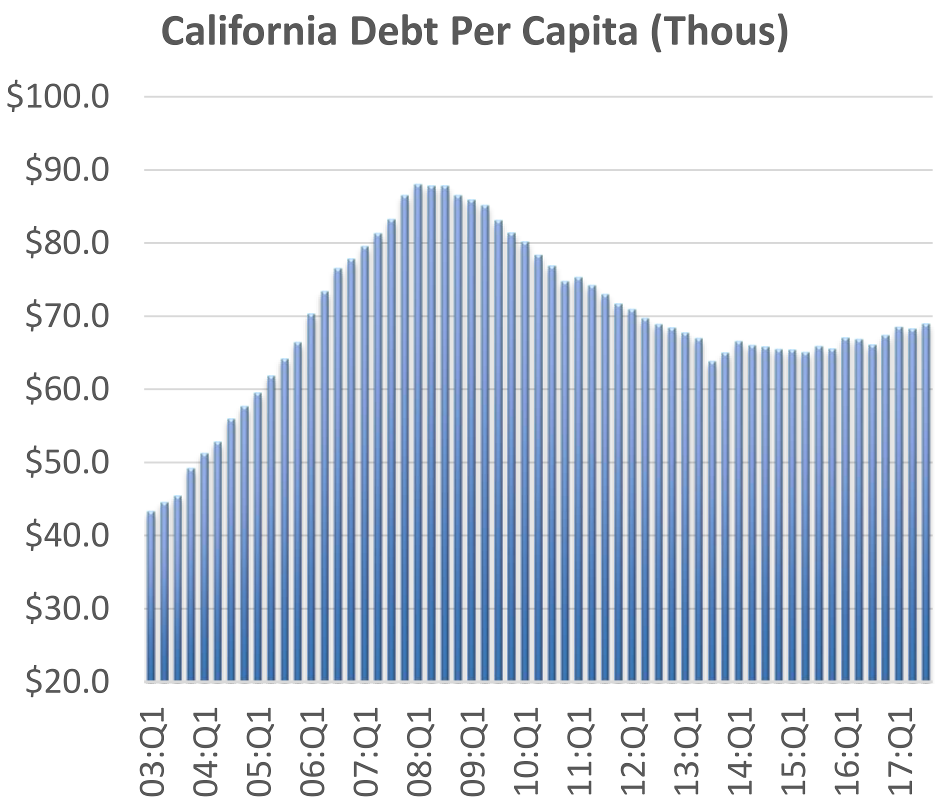


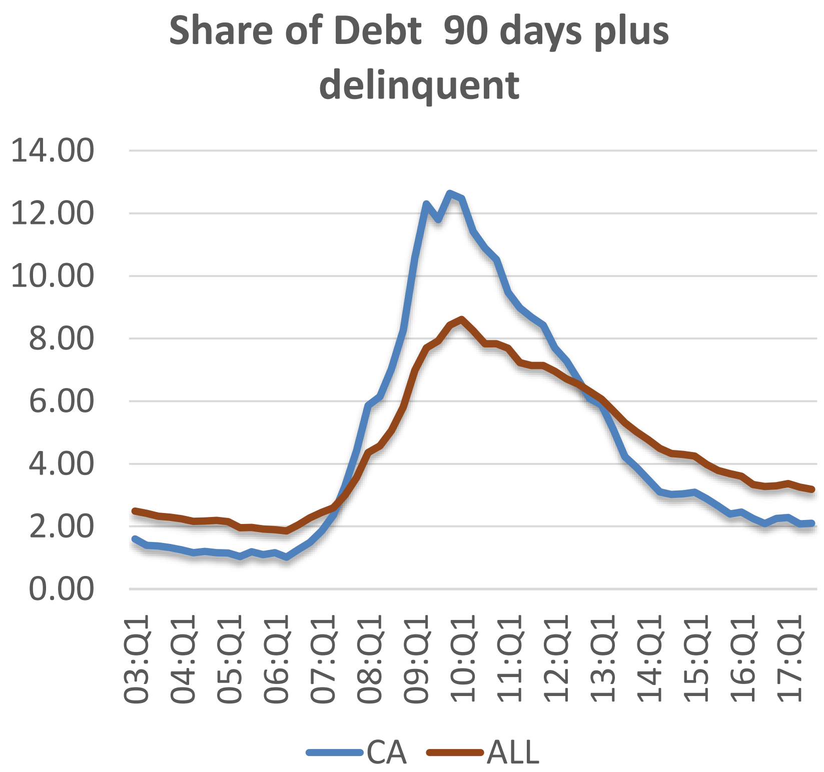
Wealth and Debt



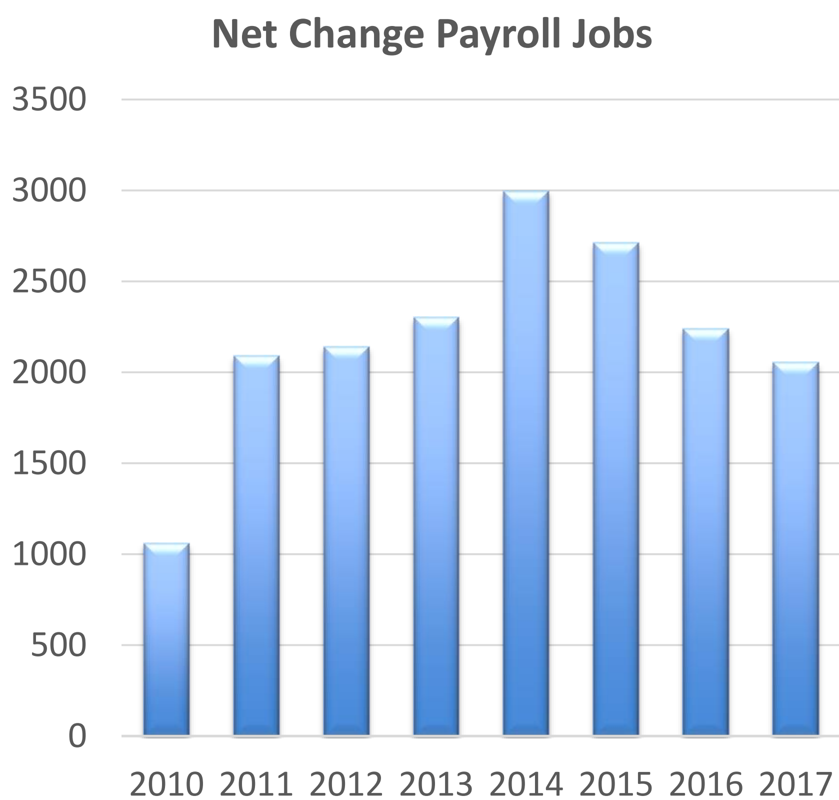


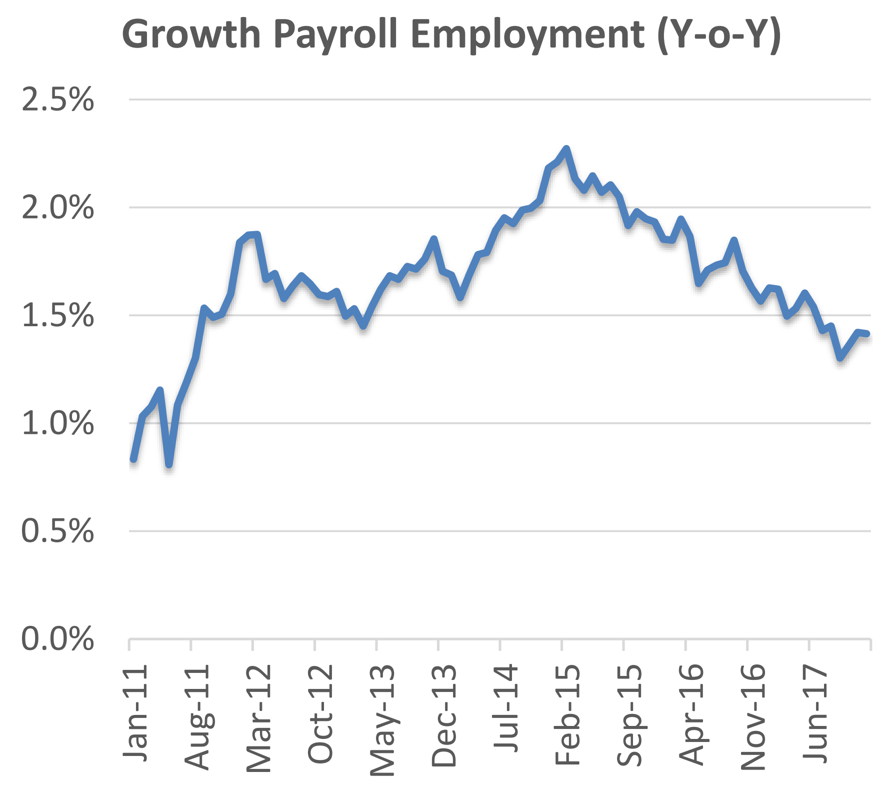
California Debt



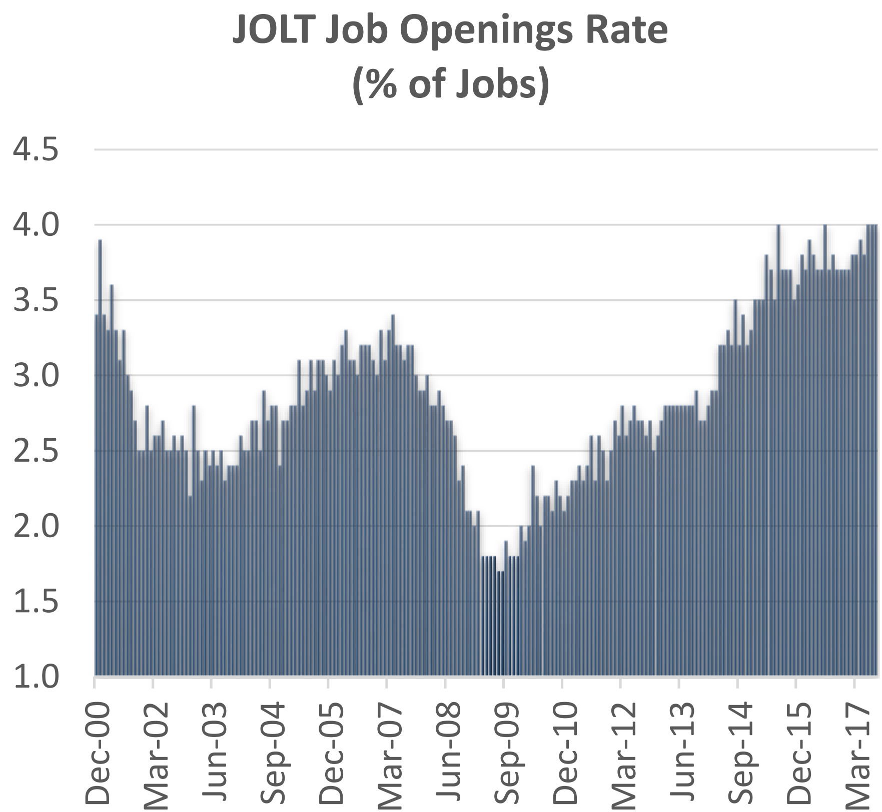


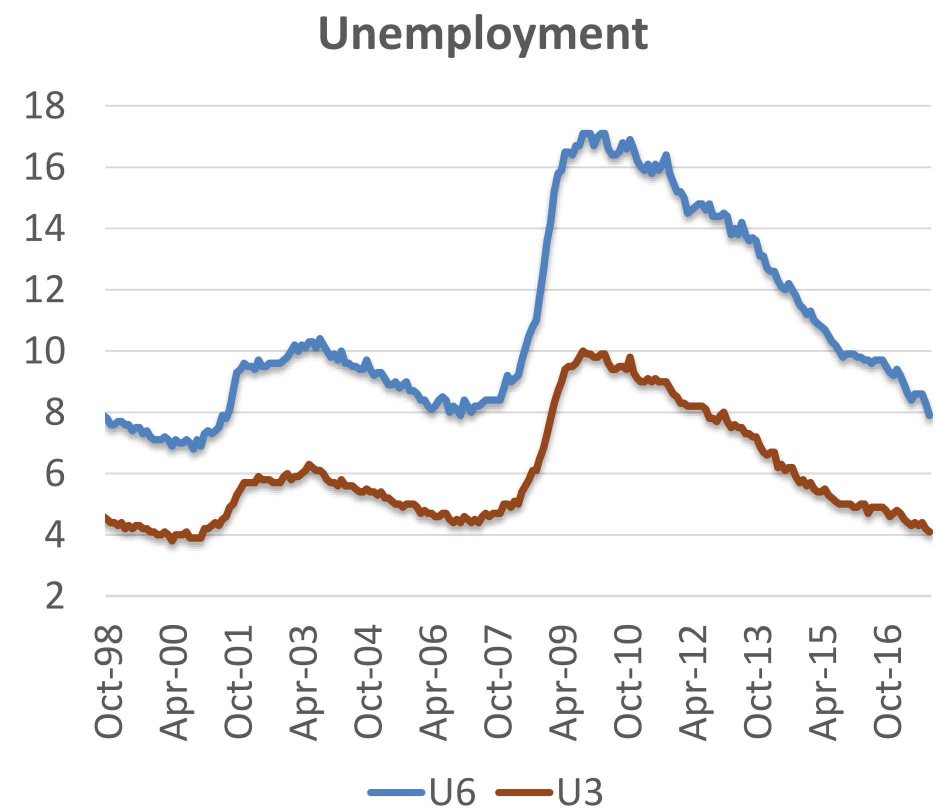
Labor Markets



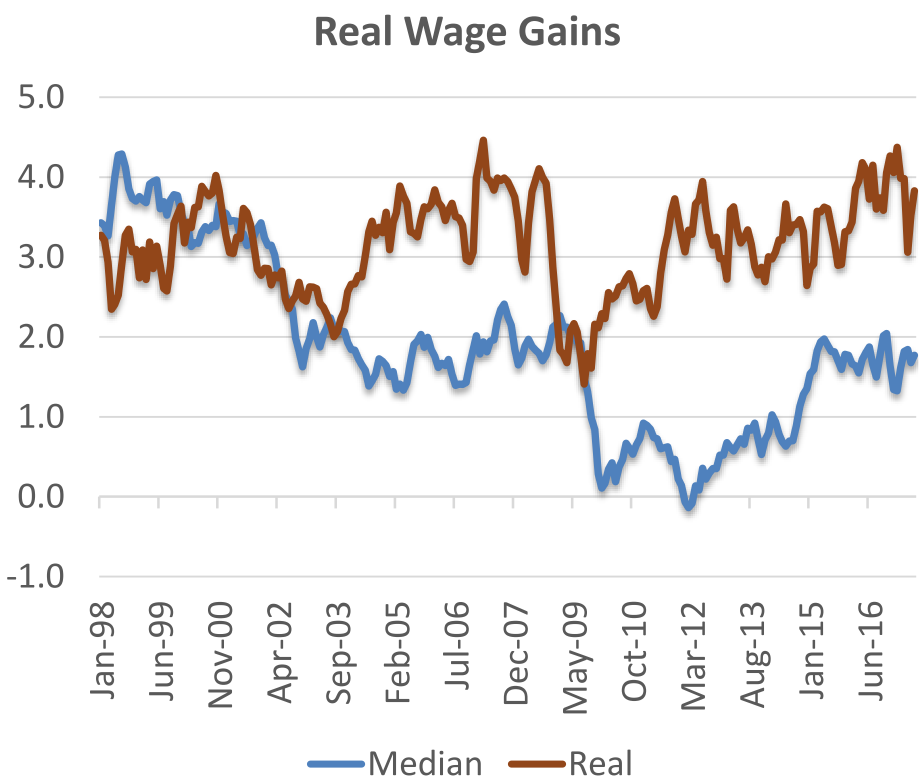


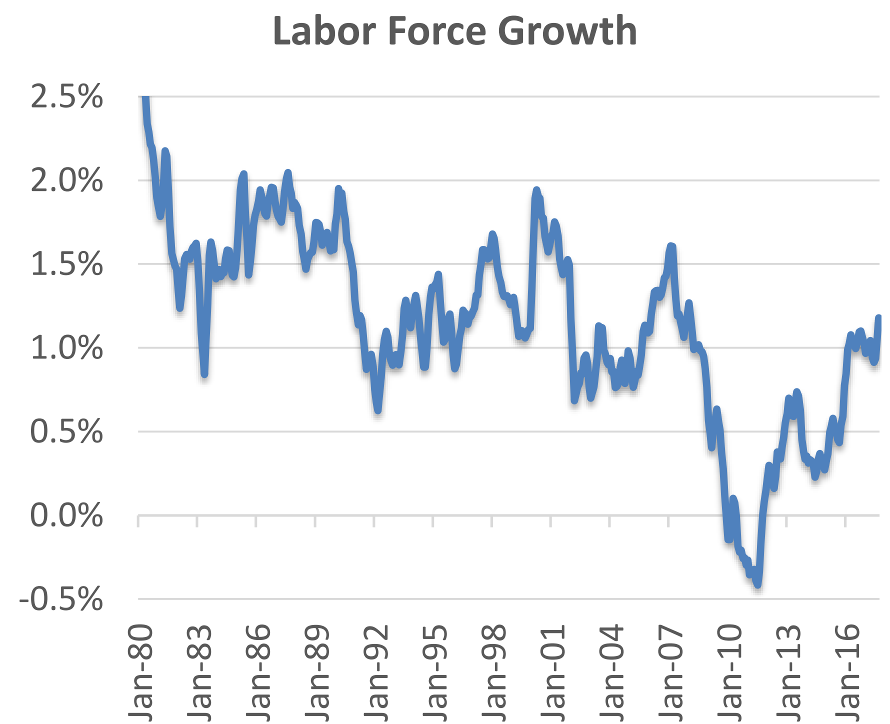
Why Slowing Job Growth?



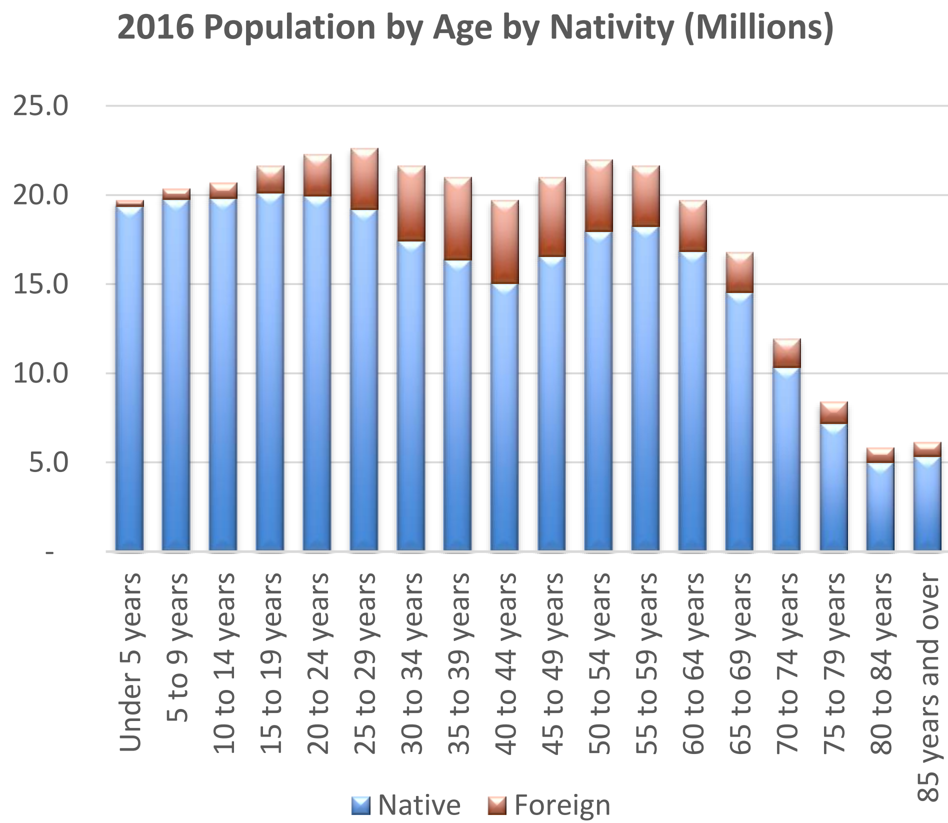


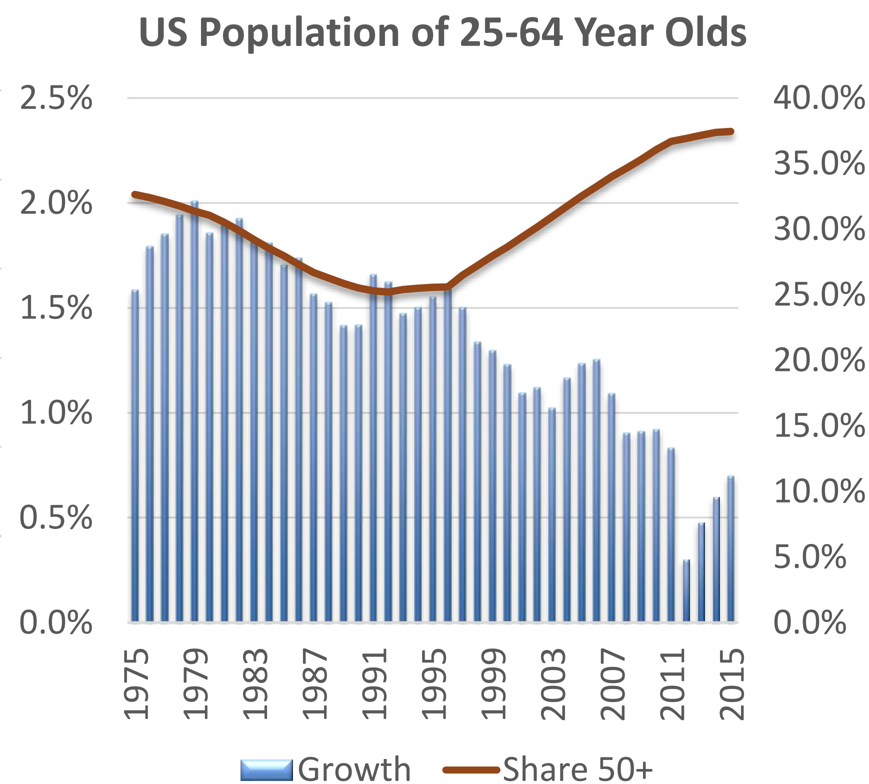
Consequences





Demographic Limits



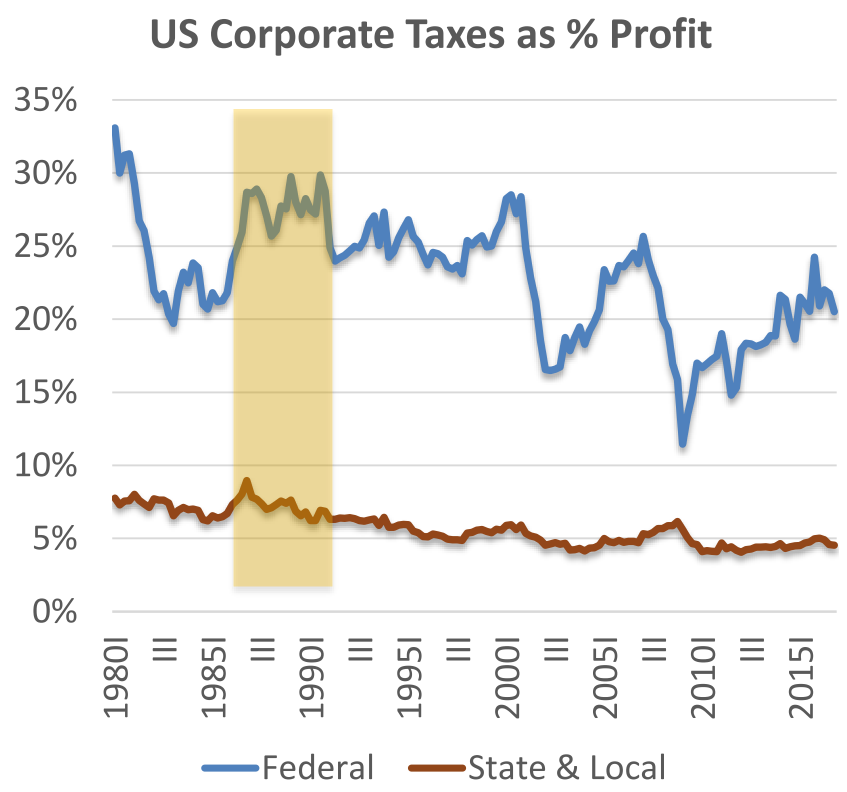


The Cure for Secular Stagnation

Figure 8: Increase in Average Annual Growth Rate With Estimated Policy Shifts

Policy Change	Boost in Annual Growth Rate	Estimated By
Enact immigration reform to increase number of workers	0.3%	CBO
Reform the income tax code	0.05% - 0.3%	JCT, Treasury
Increase the Social Security retirement ages by two years	0.15%	CBO
Reduce deficits by $4 trillion over ten years	0.1%	CBO
Expand energy production at level of shale boom*	0.09%	CBO
Repeal the Affordable Care Act ("Obamacare")	0.08%	CBO
Ratify the Trans-Pacific Partnership	0.01%	U.S. ITC
Increase public investment in infrastructure, education, and research by $400 billion	0 - 0.01%	CBO

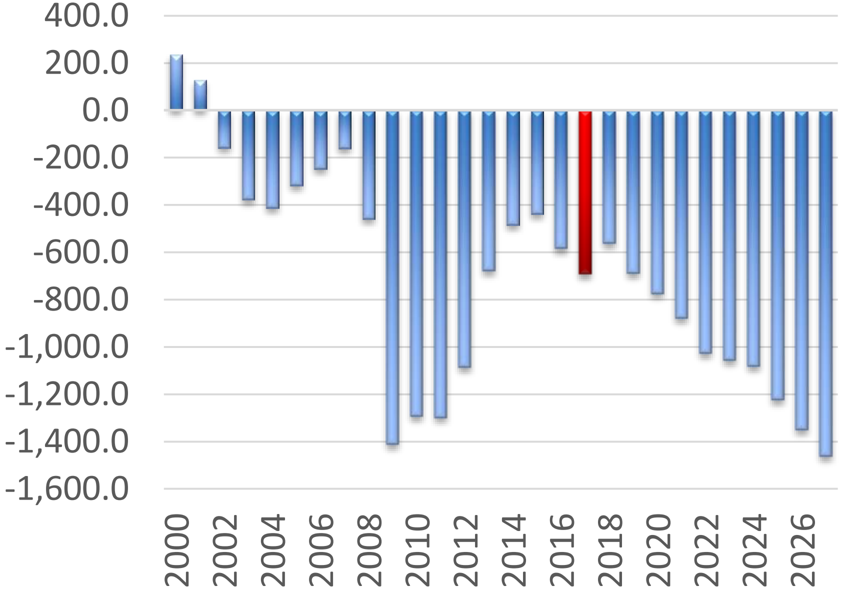
Tax Reform vs Tax Cuts



A. Most corporations and households will pay less in taxes
B. The plan will give a small short term boost to the economy
C. The plan is regressive
D. Will add $1.5 trillion to $3.5 trillion to the debt over 10 Years

Implications

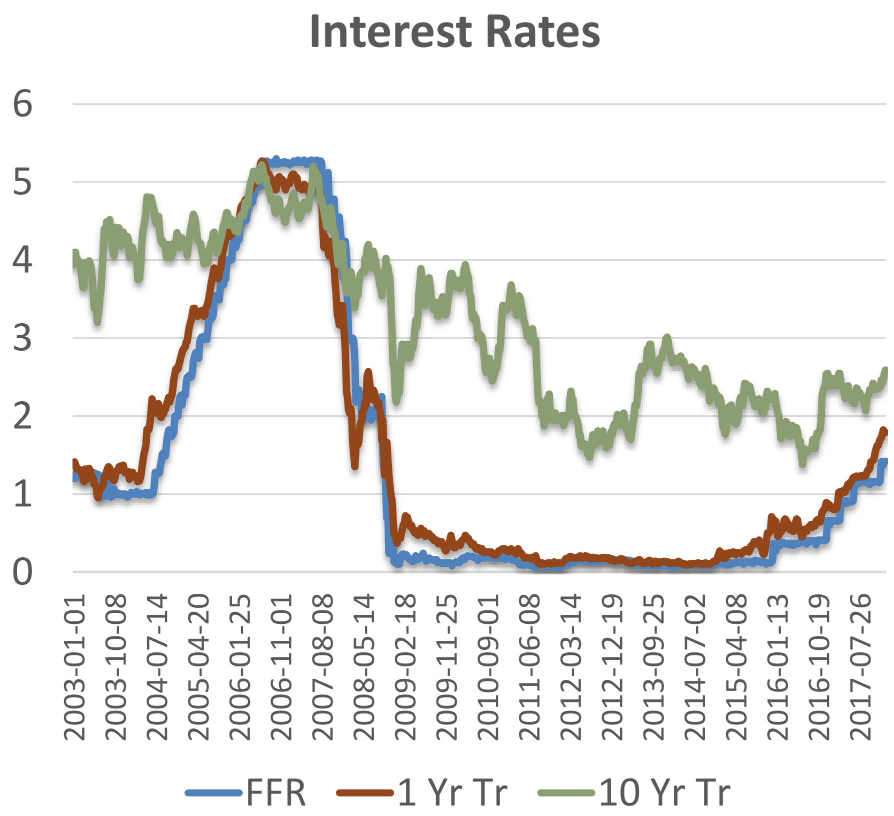
CBO: Past and Projected Federal Budget Gap

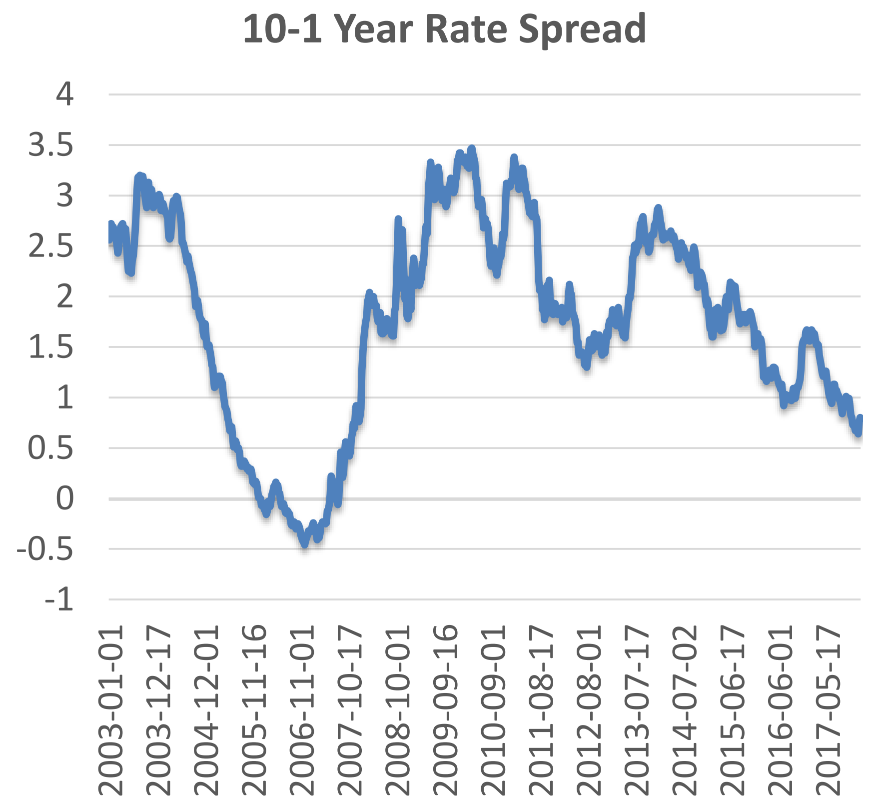


Real Average Net Worth by Bracket

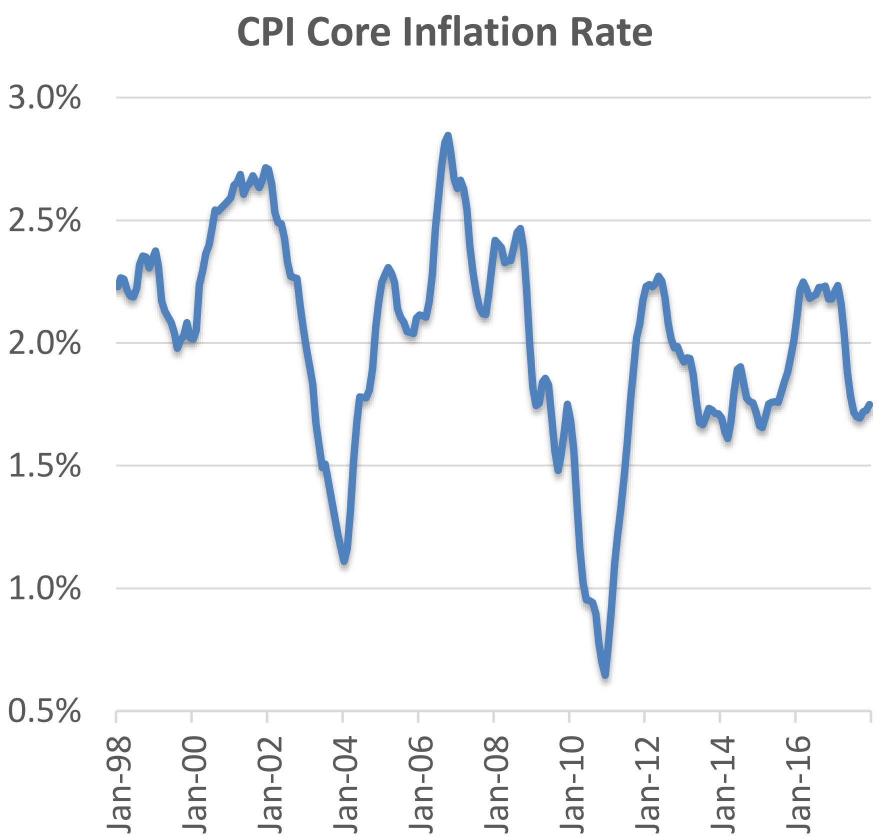
	1989	2001	2016
< 25	$(1)	$0	$(12)
	0%	*0%*	*0%*
25–49.9	$43	$60	$45
	3%	*3%*	*2%*
50–74.9	$166	$227	$204
	12%	*11%*	*7%*
75–89.9	$422	$612	$659
	18%	*17%*	*14%*
90–100	$2,317	$3,748	$5,336
	67%	*70%*	*77%*
Top 1%	$10,407	$17,772	$26,645
	30%	*33%*	*39%*

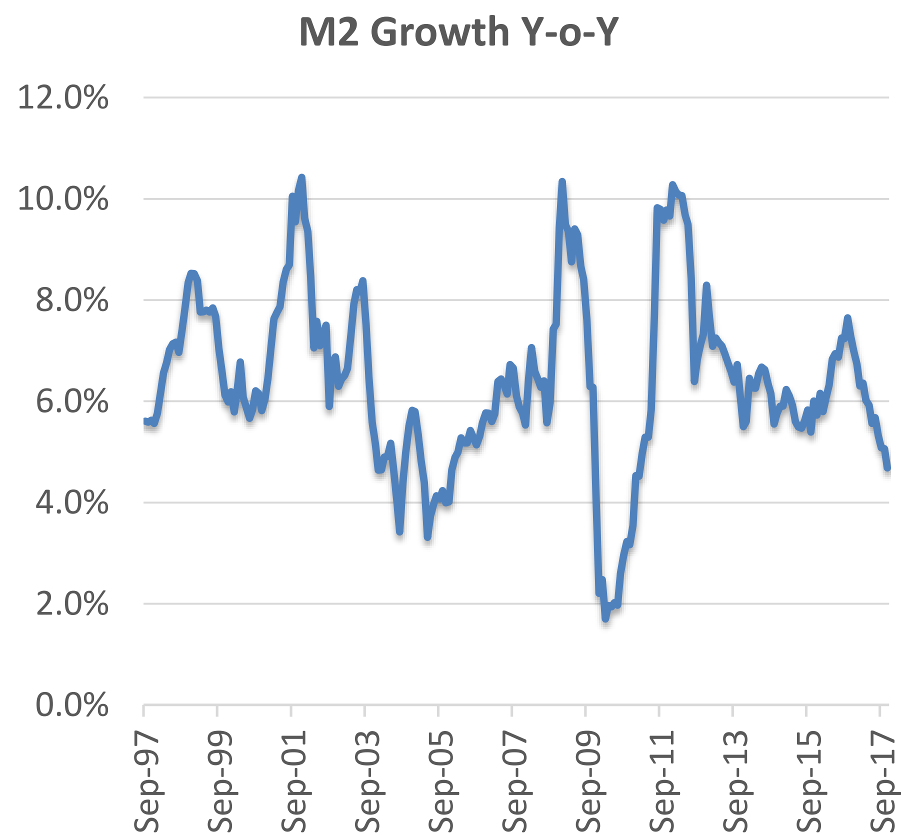
Fed Tightening



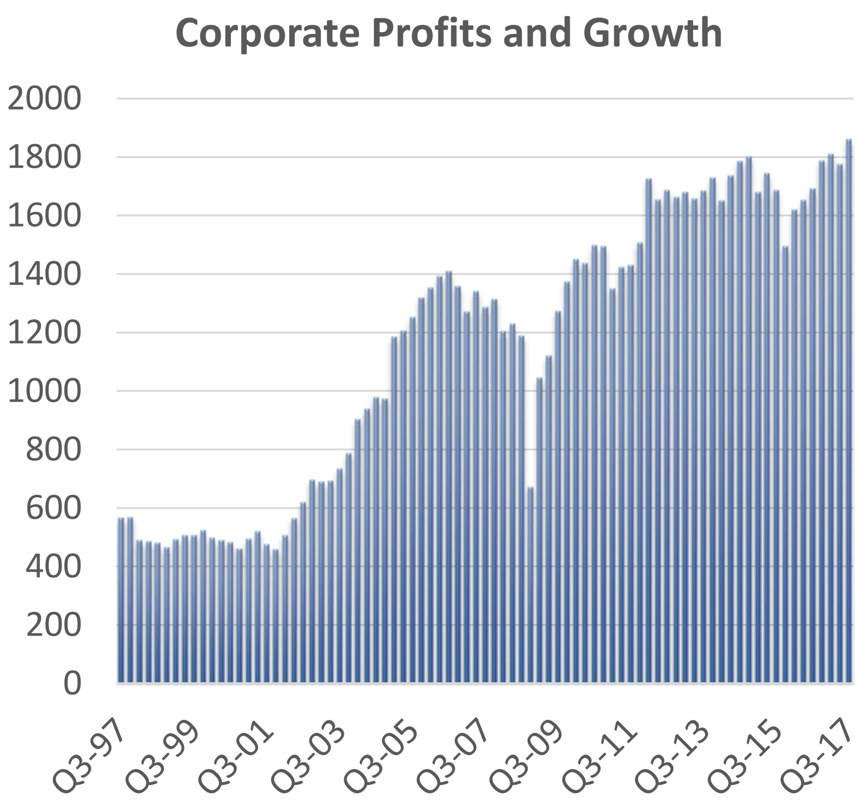


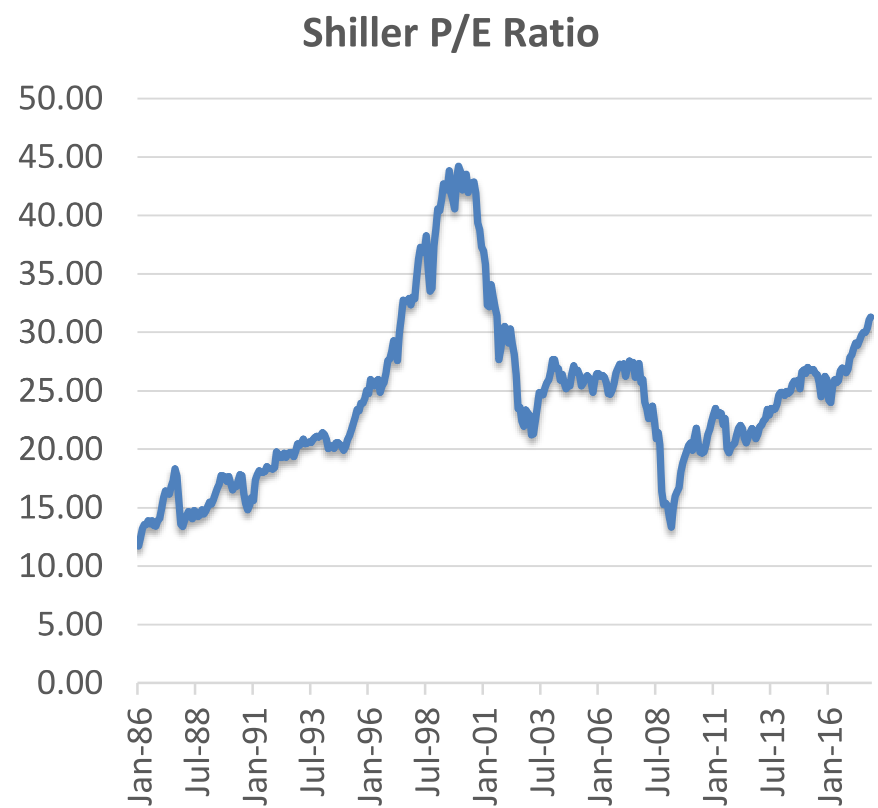
Inflation: Slowing



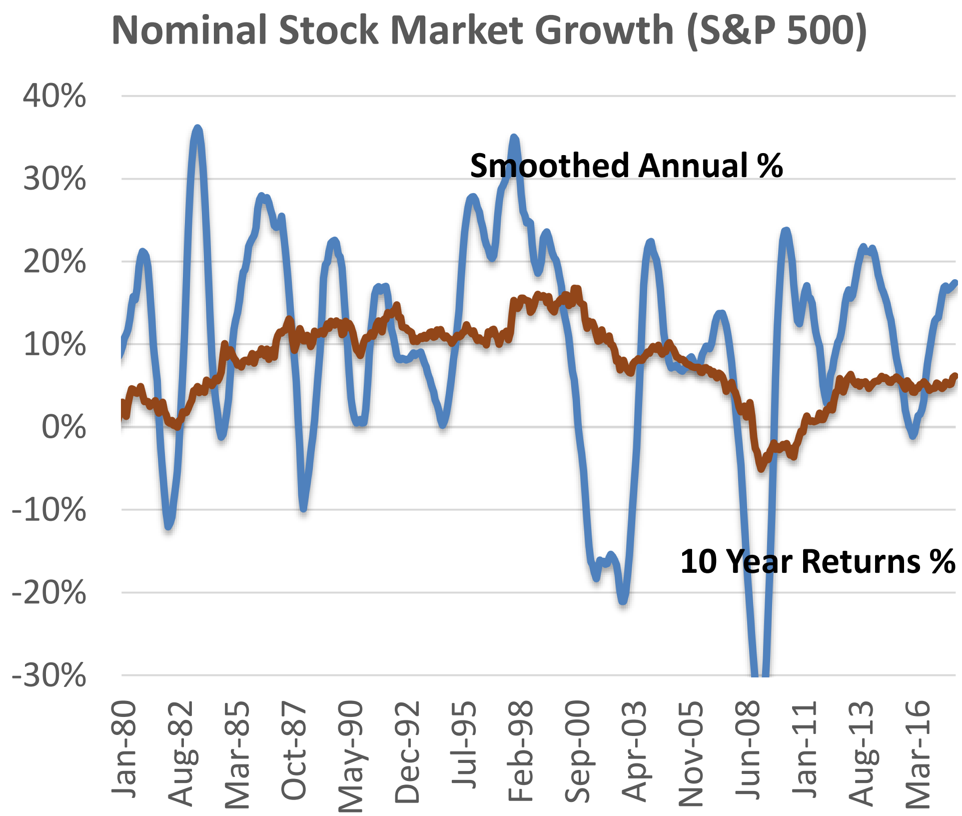


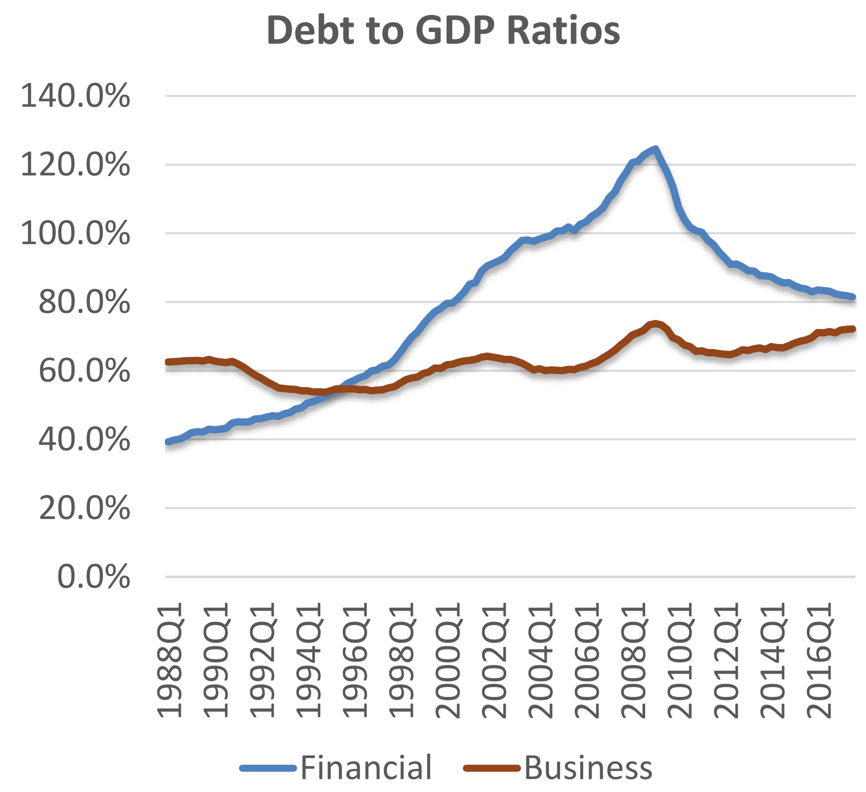
Frothy Equities



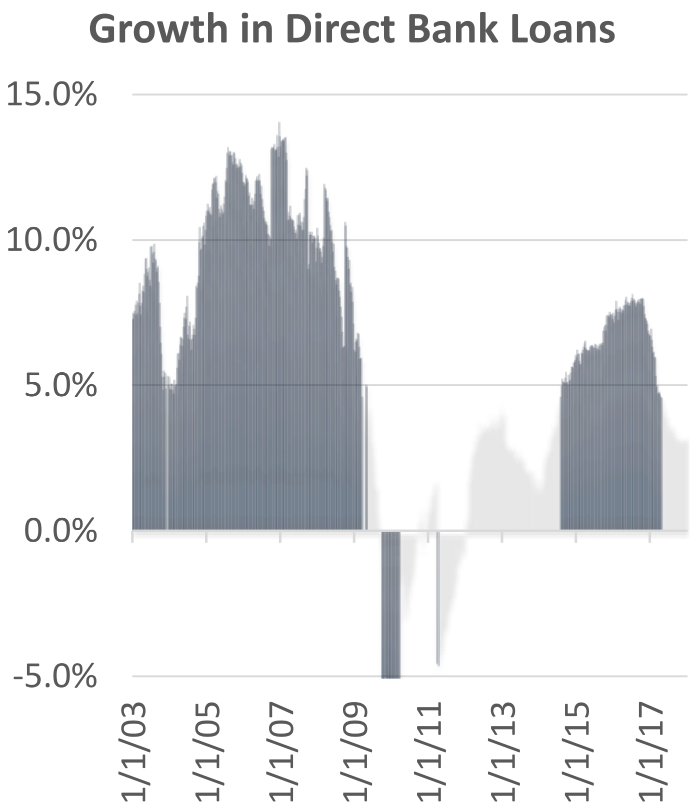


Frothy? Crisis. Crisis? No.





Slowing Lending

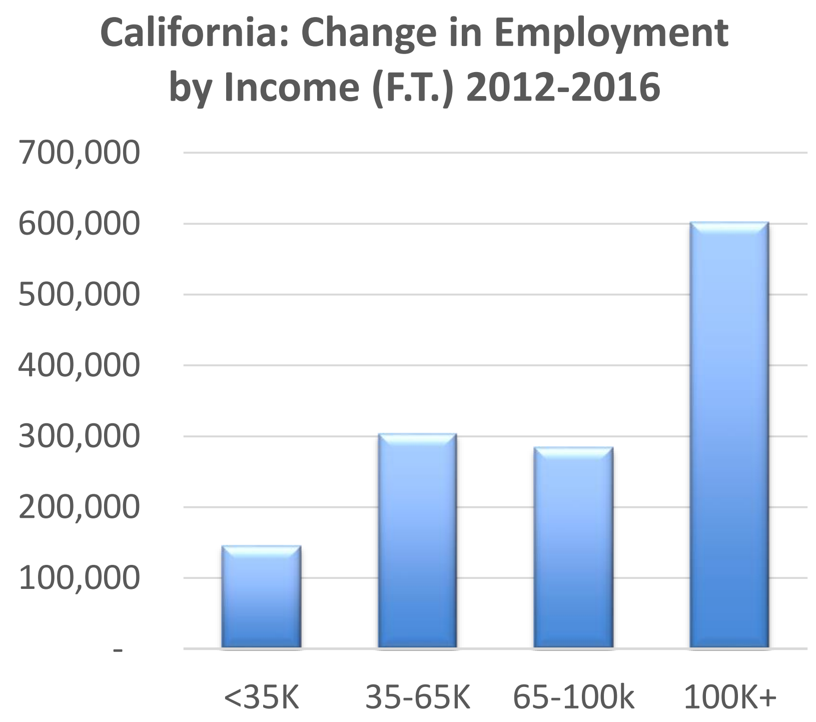


Net % Banks Responding Yes	Demand		Standards	
	2016Q4	2017Q4	2016Q4	2017Q4
auto loans	16.7	5.0	3.3	9.8
credit card loans	14.9	0.0	0.0	9.1
construction & land development	10.1	-10.0	27.5	2.9
commercial real estate	4.3	-5.6	18.8	4.2
multifamily residential structures	2.9	-18.1	42.0	22.2
C&I loans from large Firms	-5.9	-11.3	1.5	-8.5
C&I loans from small firms	-1.5	-2.9	-1.5	-8.8
QM jumbo mortgage loans	19.0	-10.9	-6.3	-6.2

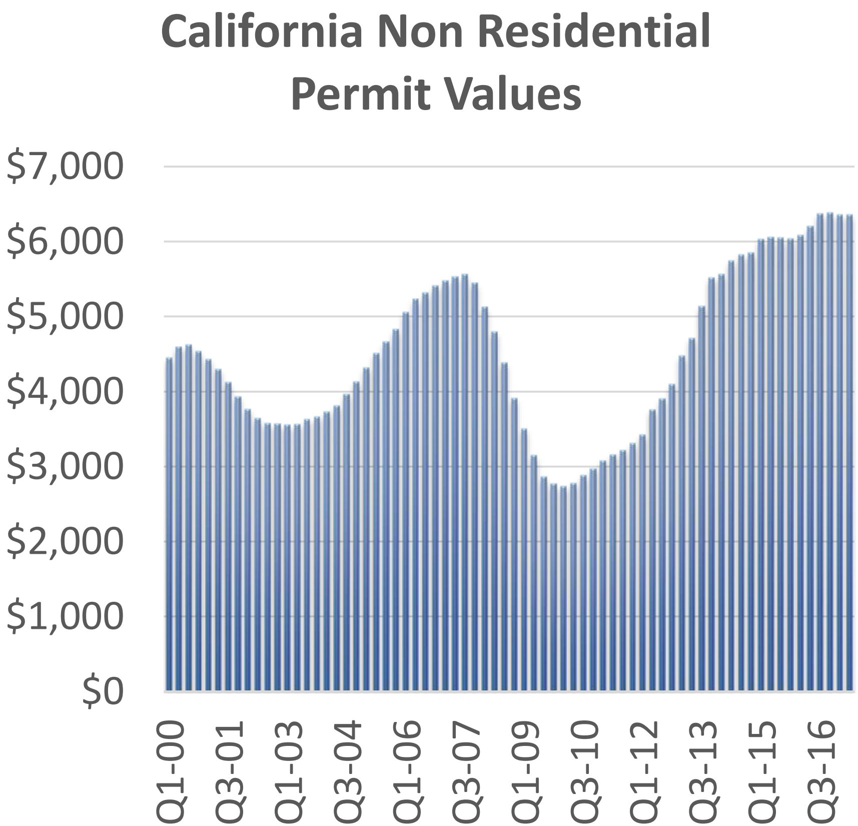
State Economic Performance

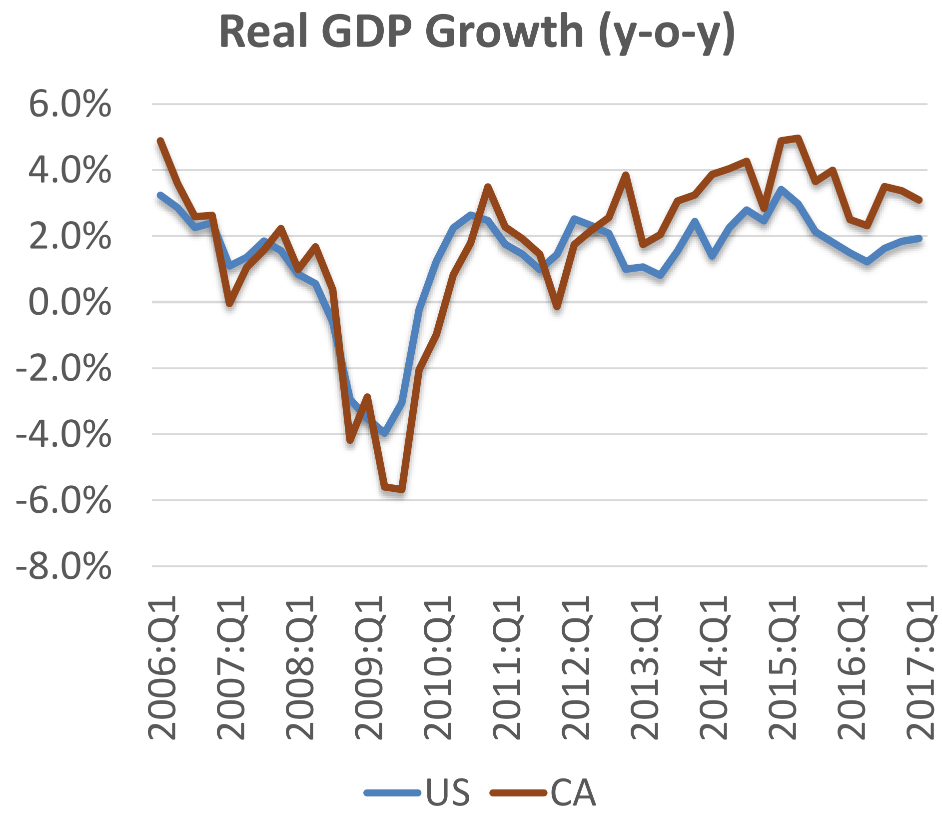
5 Year Change in Payroll Jobs by State

	New Jobs	Ann Gr	US Share
Utah	**226**	**3.5%**	**1.8%**
Nevada	**188**	**3.1%**	**1.5%**
Florida	1,207	3.1%	9.5%
Idaho	**96**	**3.0%**	**0.8%**
Colorado	**344**	**2.9%**	**2.7%**
Oregon	**228**	**2.7%**	**1.8%**
Washington	**401**	**2.7%**	**3.2%**
California	**2,038**	**2.7%**	**16.1%**
Georgia	521	2.5%	4.1%
Texas	**1,425**	**2.5%**	**11.2%**
Arizona	**298**	**2.3%**	**2.3%**
South Carolina	220	2.3%	1.7%
Tennessee	314	2.3%	2.5%
North Carolina	421	2.1%	3.3%
Montana	**40**	**1.8%**	**0.3%**

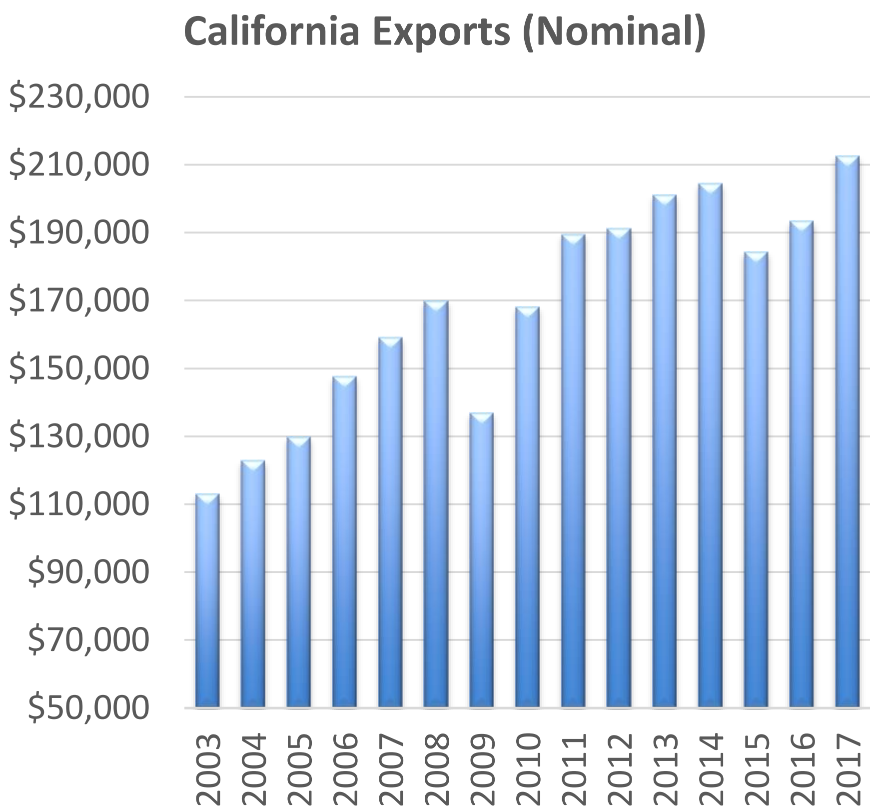


Still Strong Indicators

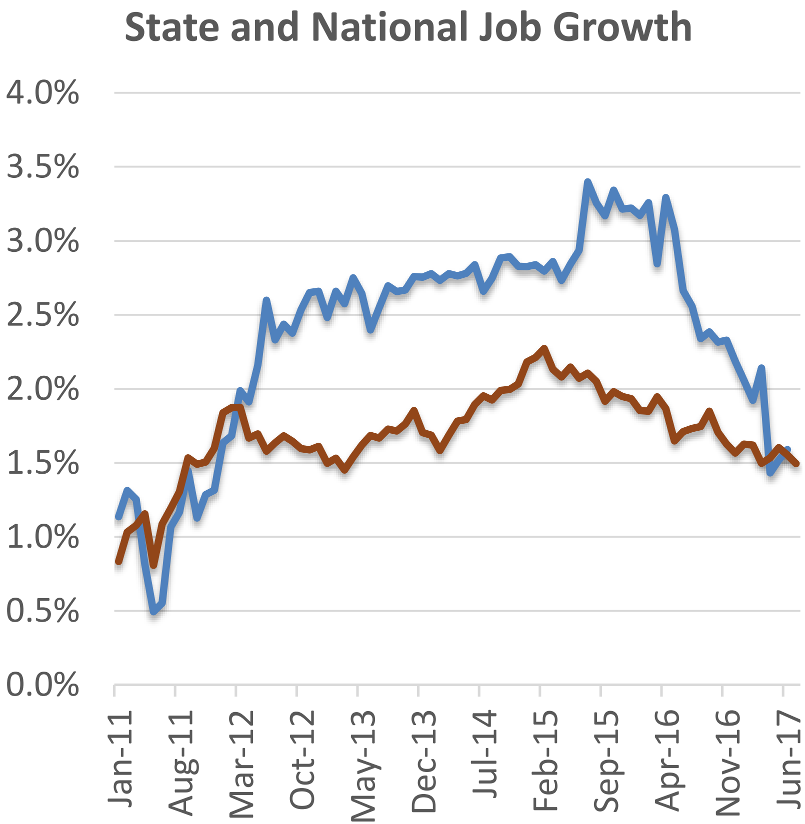




Exports / Travel

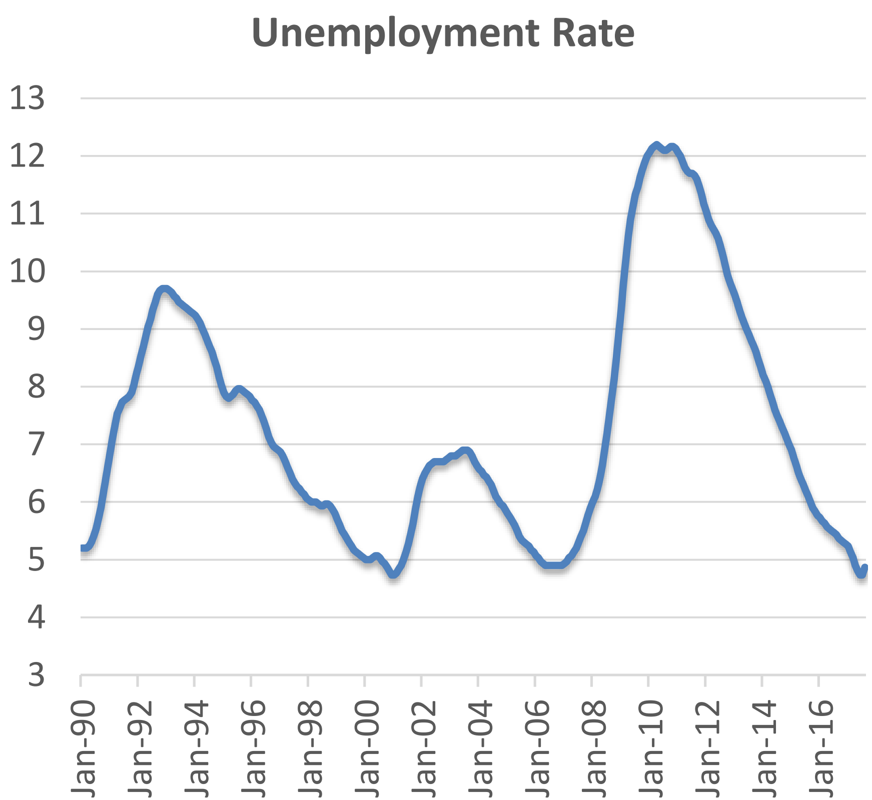


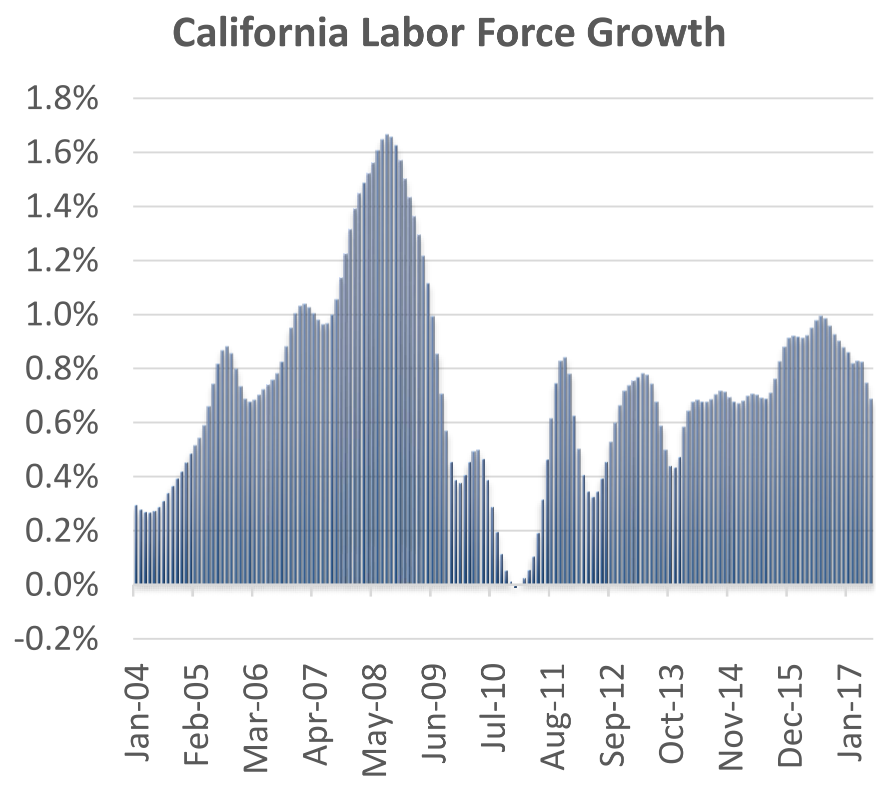
The Big Slowdown



	Nov-17	14-15	15-16	16-17
Inland Empire	1,470,000	4.8%	3.4%	3.2%
Ventura	309,700	1.5%	1.5%	2.2%
Sacramento	978,700	3.5%	3.1%	2.1%
San Francisco	**1,125,700**	**4.9%**	**3.3%**	**2.0%**
Fresno	346,000	3.9%	3.2%	1.7%
San Jose	**1,102,100**	**3.9%**	**2.8%**	**1.7%**
Kern	260,400	-0.5%	-0.5%	1.6%
San Diego	1,457,400	3.2%	2.3%	1.5%
East Bay	**1,162,400**	**3.5%**	**2.9%**	**1.4%**
Stockton	231,300	4.3%	2.8%	1.4%
Sonoma	203,900	2.8%	1.6%	1.1%
Orange	1,600,700	3.2%	1.6%	0.8%
Los Angeles	4,465,200	2.8%	2.3%	0.8%

Labor Supply Constraints

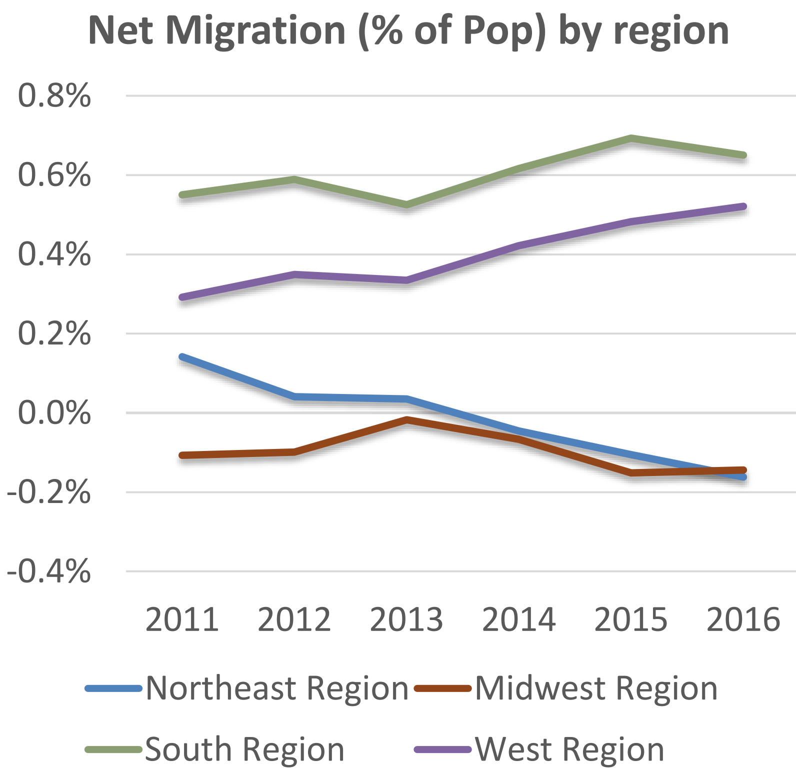




The Upside of Labor Shortages

	Number (Mil)	Median Income 2016	Change 13-16	Part Rate 2016	Change 13-16	Unemp 2016	Change 13-16
Total	20.96	40,005	10.2%	77.1%	0.2%	5.5%	-3.0%
No High School	3.52	21,558	13.1%	65.4%	-0.5%	8.2%	-3.7%
High School	4.26	30,231	10.9%	72.6%	-0.4%	7.0%	-4.0%
Some College	6.14	36,985	3.1%	77.4%	0.1%	5.5%	-3.4%
Bachelor	7.03	60,121	9.4%	85.4%	0.4%	3.6%	-1.6%
Graduate		82,271					

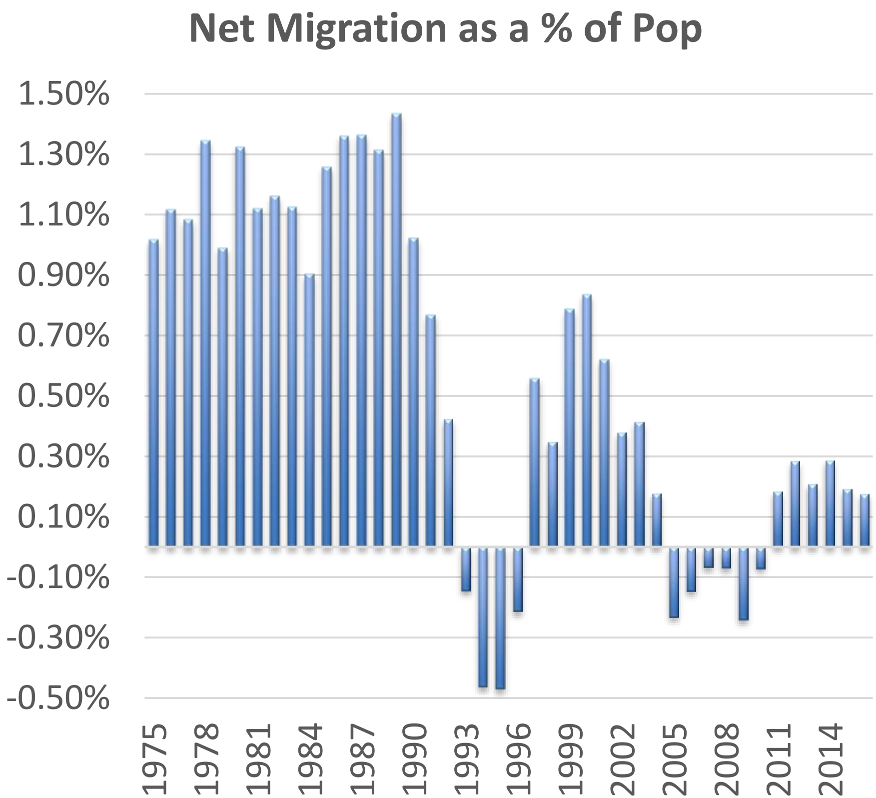
Population Shifts

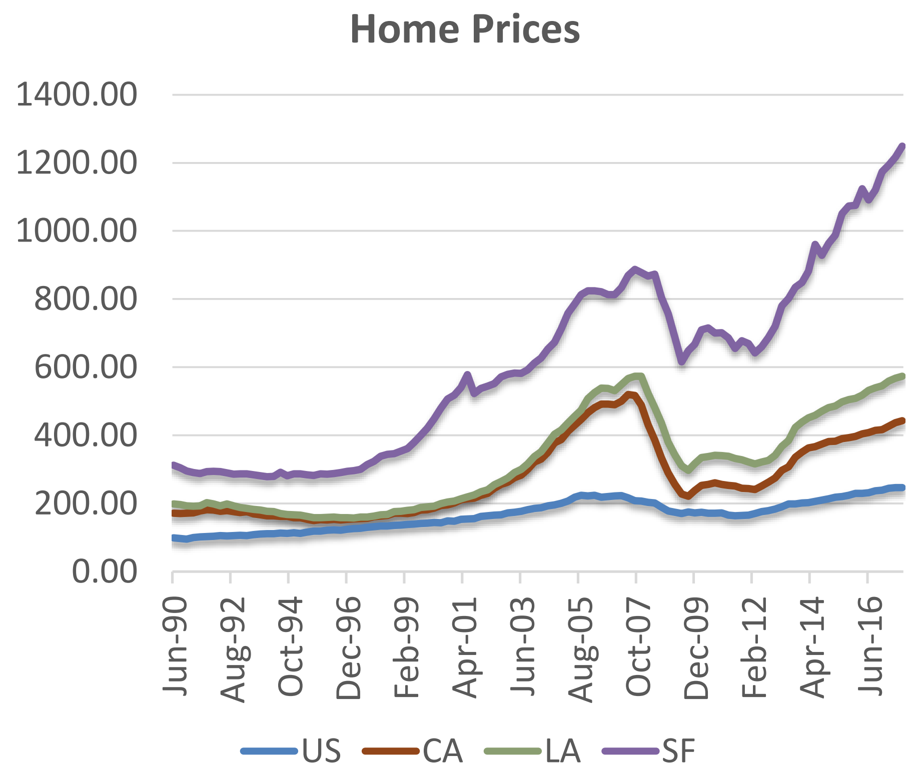


Net Migration by State 14-16

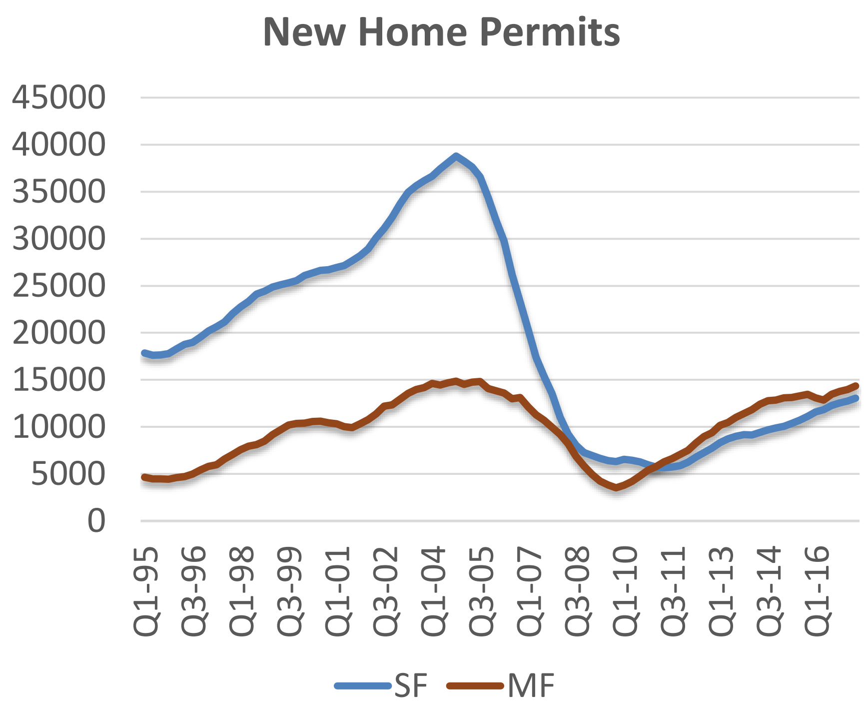
Florida	1.51%	Ohio	-0.05%
Nevada	1.27%	Penn	-0.06%
Colorado	1.10%	Wisconsin	-0.08%
Oregon	1.08%	Michigan	-0.08%
South Carolina	1.04%	New Jersey	-0.14%
Washington	0.99%	Vermont	-0.19%
Arizona	0.96%	W Virginia	-0.26%
Texas	0.90%	New York	-0.27%
North Dakota	0.79%	Mississippi	-0.28%
Idaho	0.77%	Kansas	-0.30%
Delaware	0.66%	Connecticut	-0.32%
North Carolina	0.66%	Wyoming	-0.35%
Montana	0.60%	New Mexico	-0.47%
Georgia	0.54%	Illinois	-0.58%
Tennessee	0.53%	Alaska	-0.73%

Don't Go West, Young Man?





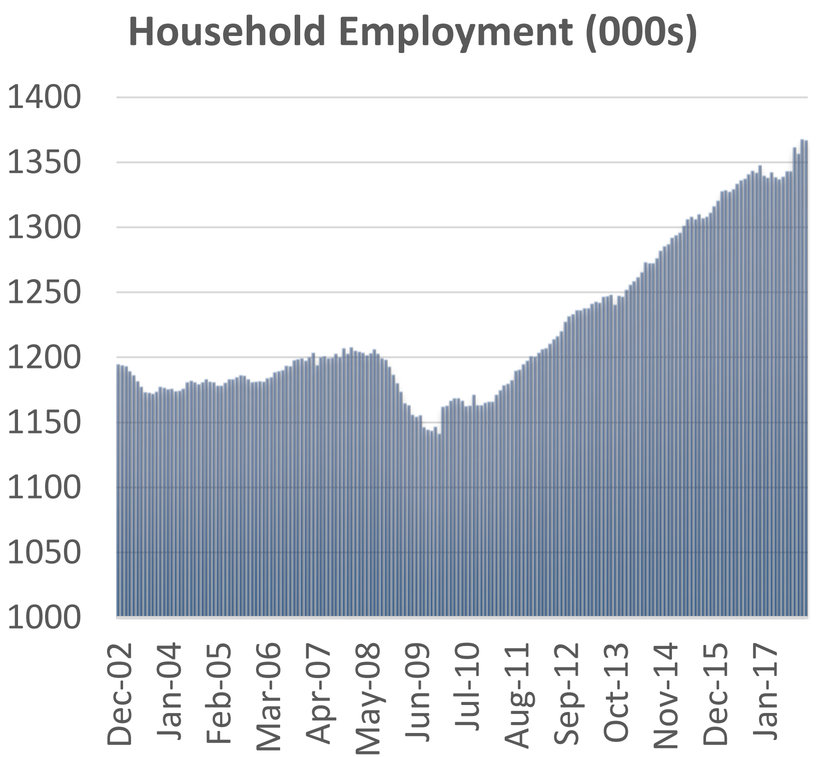
New Housing Supply

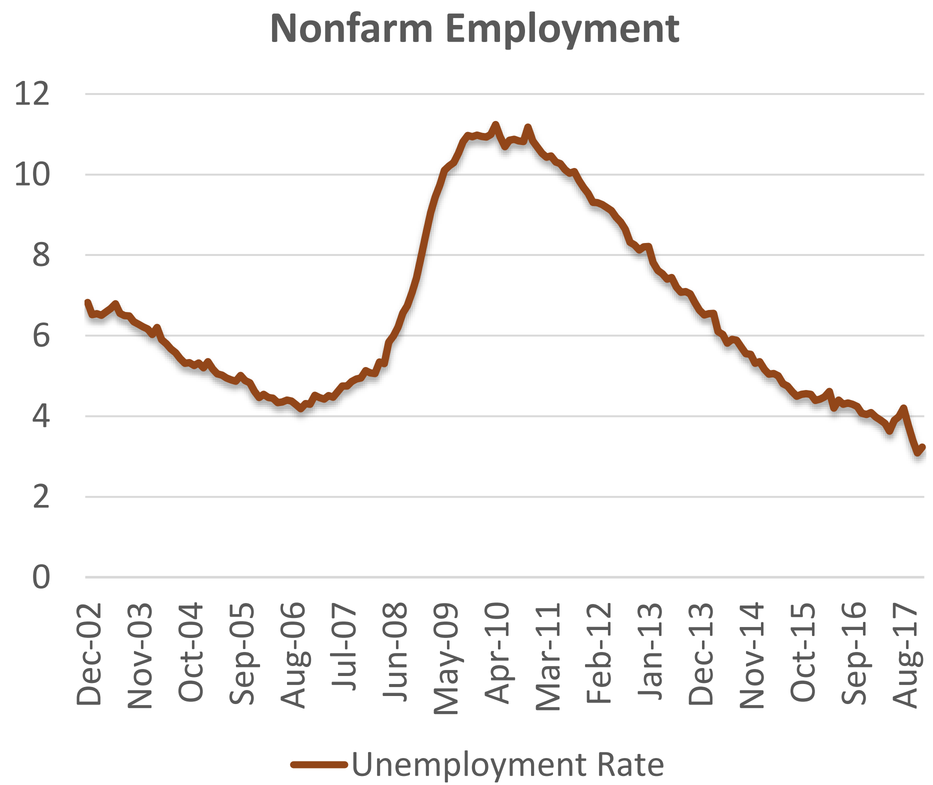


How Much Housing Needed?
Housing Needed to maintain 2% State Job Growth

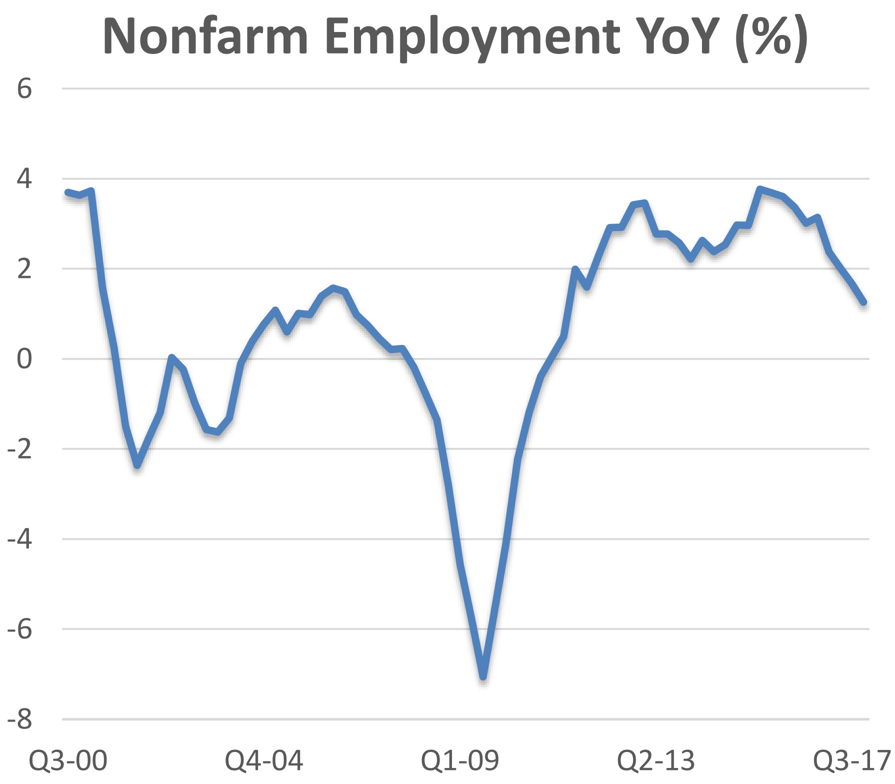
Method 1	
Total	722,022
Per Year	206,674
Current	106,185
Shortfall	100,489
Method 2	
Total	911,001
Per Year	263,667
Current	106,185
Shortfall	157,482

Employment Cont'd



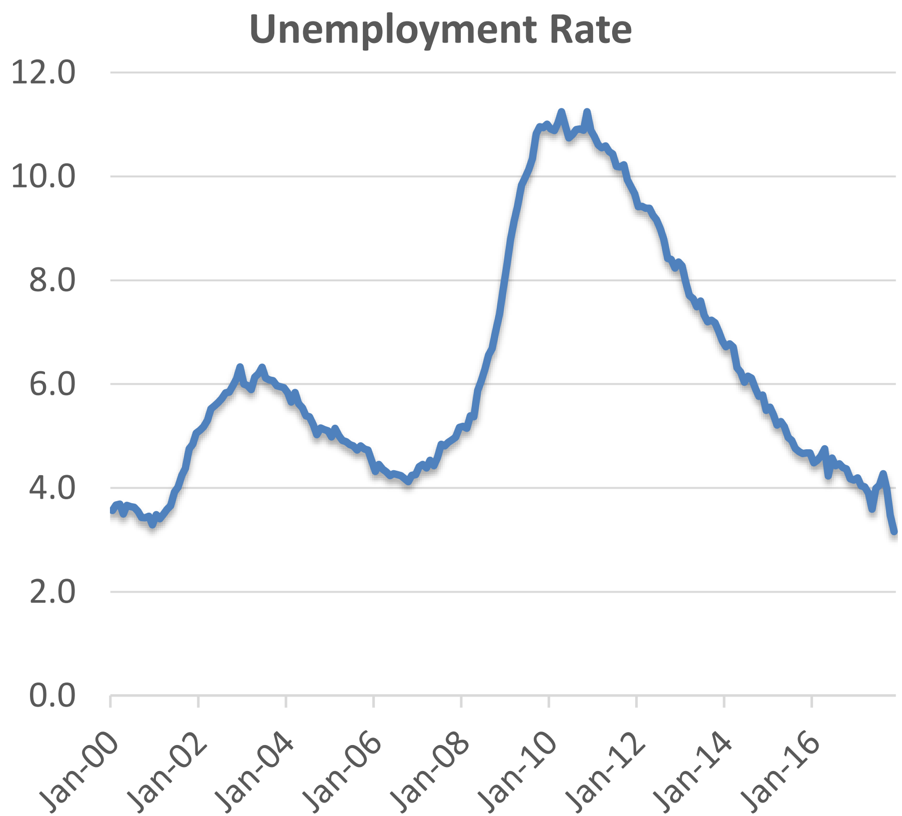


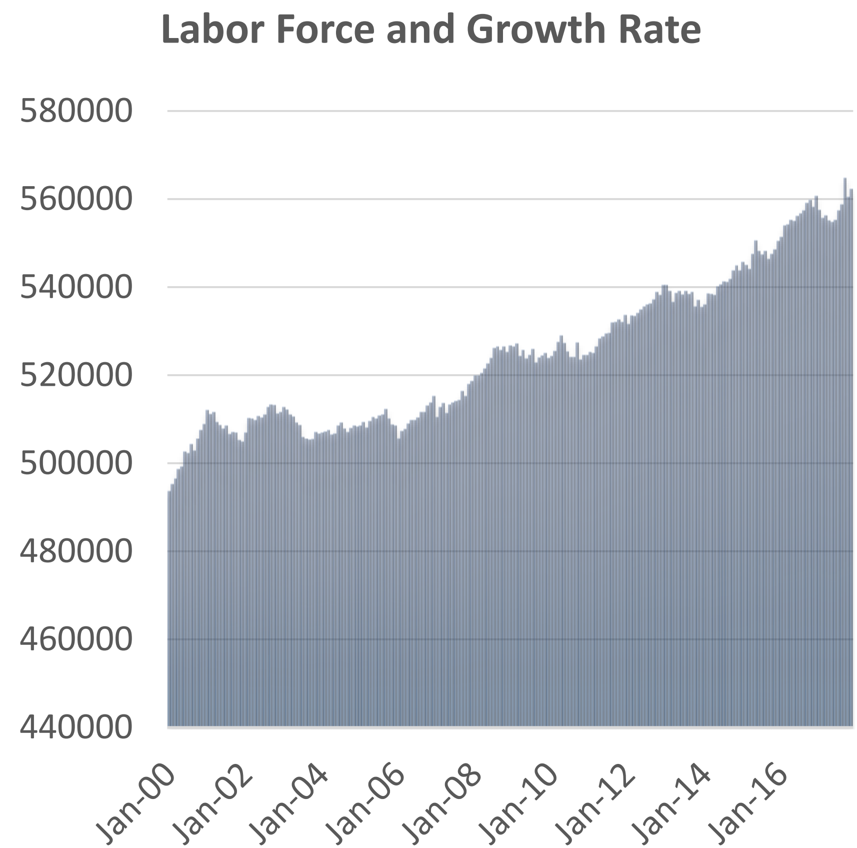
East Bay Employment



Industry	2017	Change (000s)	Annual Growth (%)
Total Nonfarm	1,155.6	20.7	1.8
Construction	71.3	3.8	5.6
Wholesale Trade	51.3	2.3	4.7
Education/Health	191.4	6.5	3.5
Real Estate	17.6	0.6	3.4
Prof Sci and Tech	98.8	3.1	3.2
Finance and Insurance	41.6	1.3	3.2
Leisure and Hospitality	114.0	2.6	2.3
Government	177.3	3.5	2.0
Other Services	39.9	0.7	1.8
Information	26.8	0.4	1.5
Management	22.7	0.3	1.4
NR/Mining	0.9	0.0	0.0
Manufacturing	89.7	-0.2	-0.2
Logistics	38.5	-0.2	-0.5
Retail Trade	112.5	-2.5	-2.2
Admin Support	61.4	-1.4	-2.2

Employment

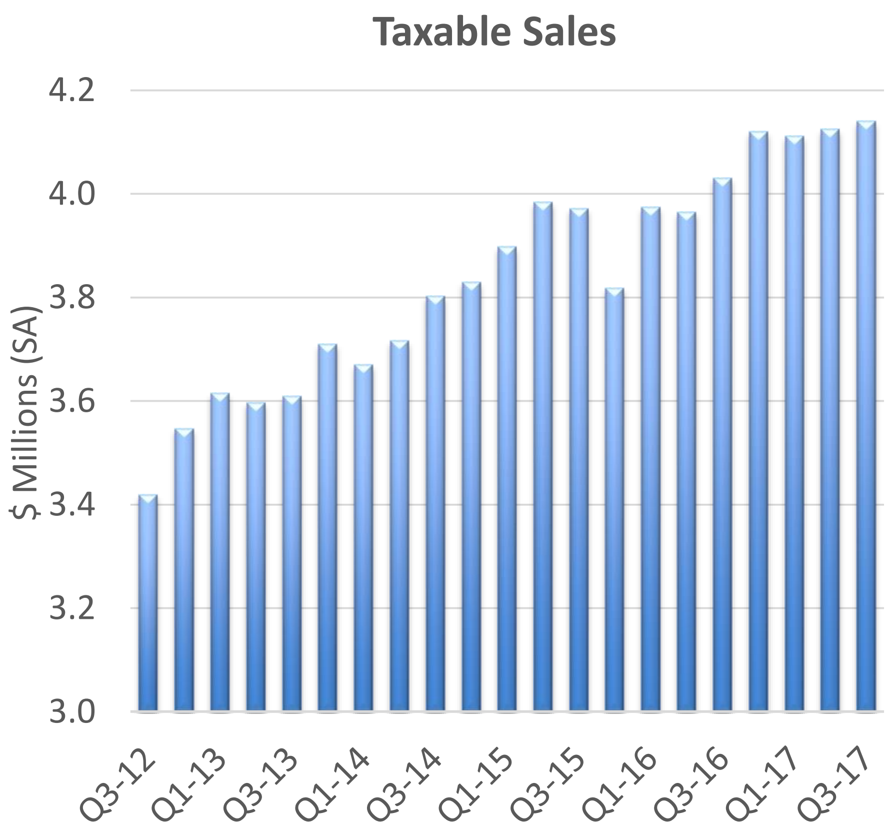

Unemployment Rate
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16


Labor Force and Growth Rate
580000
560000
540000
520000
500000
480000
460000
440000
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16

Contra Costs Industry

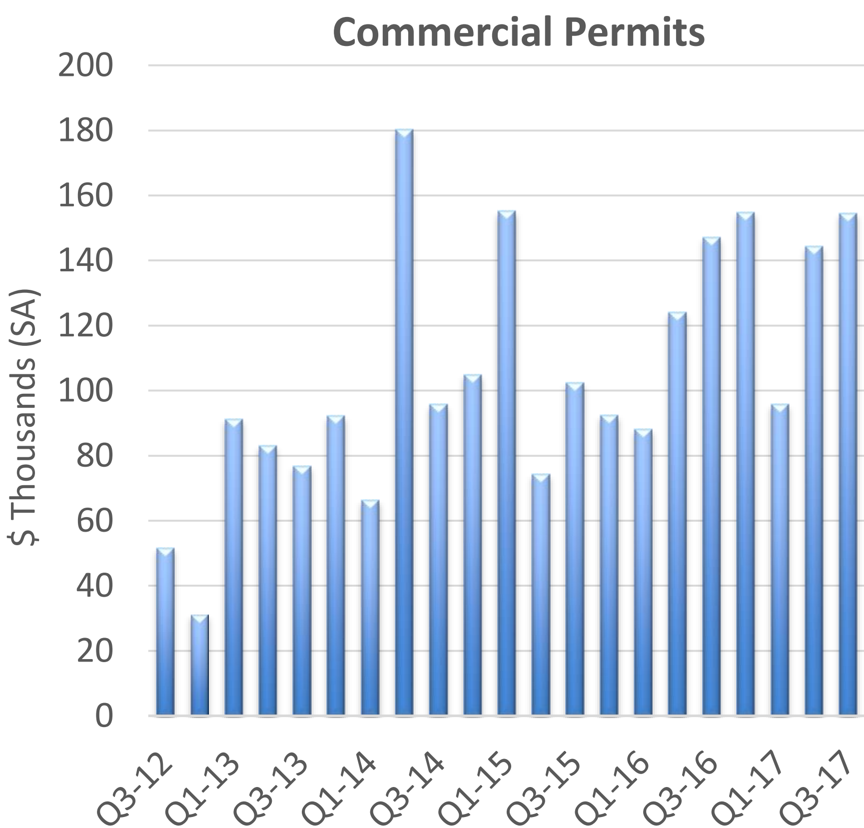
Industry	Q2-17	1 Yr Chg.	5 Yr Chg.	Location Quotient
Total Employment	**367.2**	**2.3**	**13.8**	**-**
Admin Support	23.3	15.3	25.6	1.0
Manufacturing	15.6	5.4	-10.9	0.6
Other Svcs.	14.5	3.9	19.6	1.1
Education	7.3	3.3	10.6	1.1
Health Care	61	3.0	23.7	1.3
Wholesale Trade	10.6	2.8	28.5	0.7
Leisure and Hospitality	40.8	1.8	22.4	1.0
Government	47	1.0	4.6	0.4
Fin. Svcs. and Real Estate	27.2	1.0	7.2	1.5
Retail Trade	43.3	0.6	5.4	1.2
NR/Construction	25.3	-0.3	30	1.4
Information	8	-0.5	-5.5	0.7
Prof, Sci, Tech, and Mgmt	31.4	-0.9	6.5	1.0

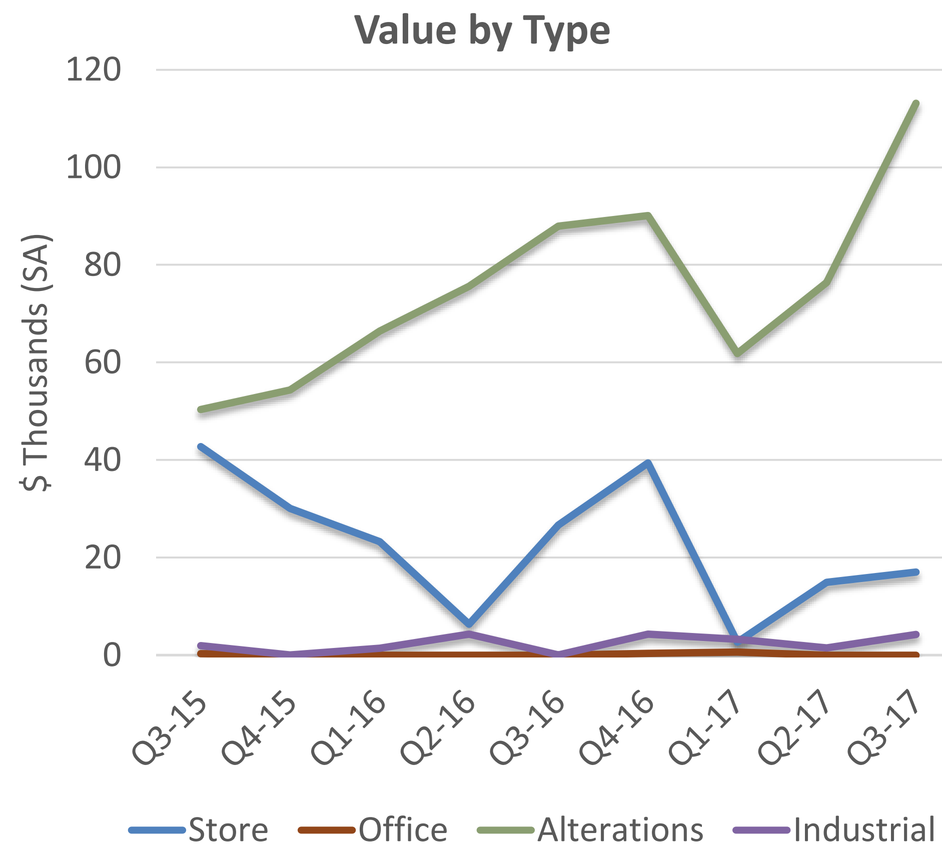
Taxable Sales & Receipts



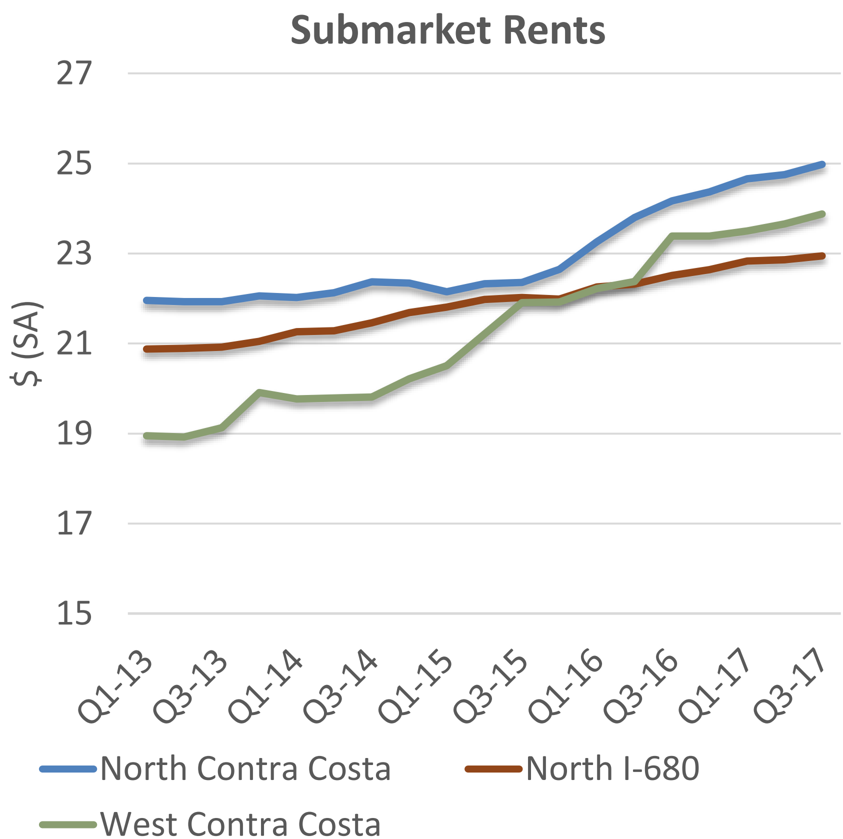
Category	($Millions)	% Change	
		1 yr	5 yr
Total	**41.6**	**2.7%**	**20.9%**
General Consumer Goods	9.3	1.7%	4.5%
Autos and Transportation	7.3	1.5%	46.3%
Restaurants and hotels	4.8	3.1%	39.9%
Fuel and service stations	3.9	10.0%	-10.0%
Building and Construction	3.7	9.2%	44.5%
Business and Industry	3.5	-6.9%	-0.1%
Food and Drugs	2.7	3.9%	13.9%

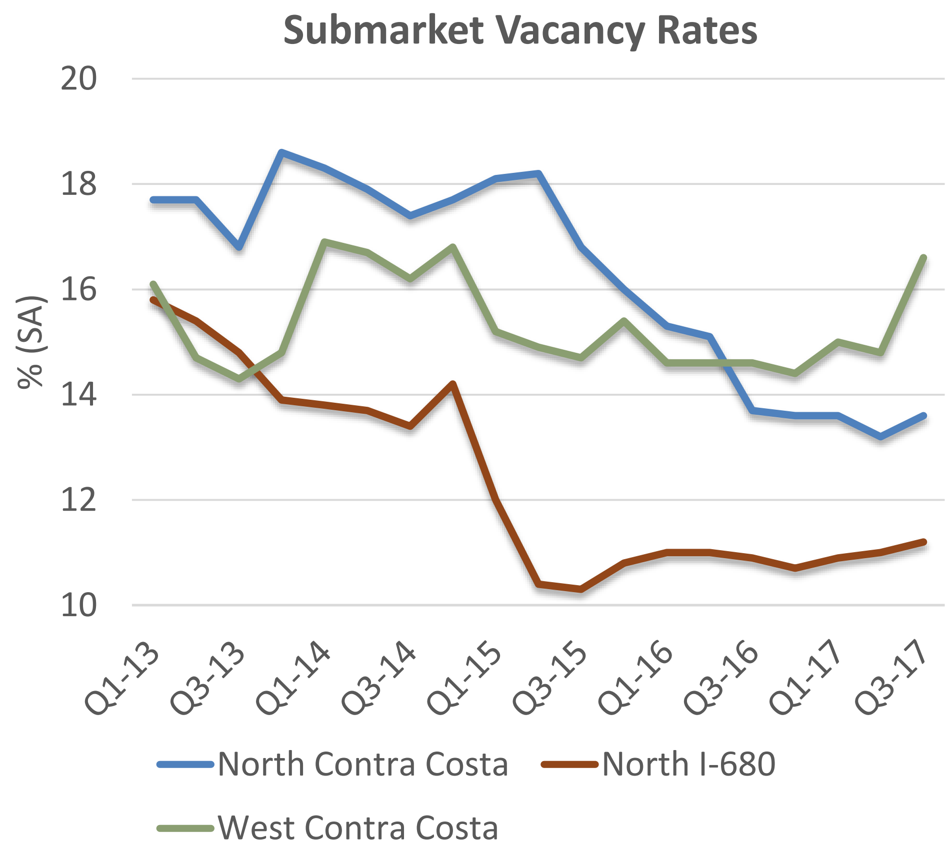
Commercial Permitting



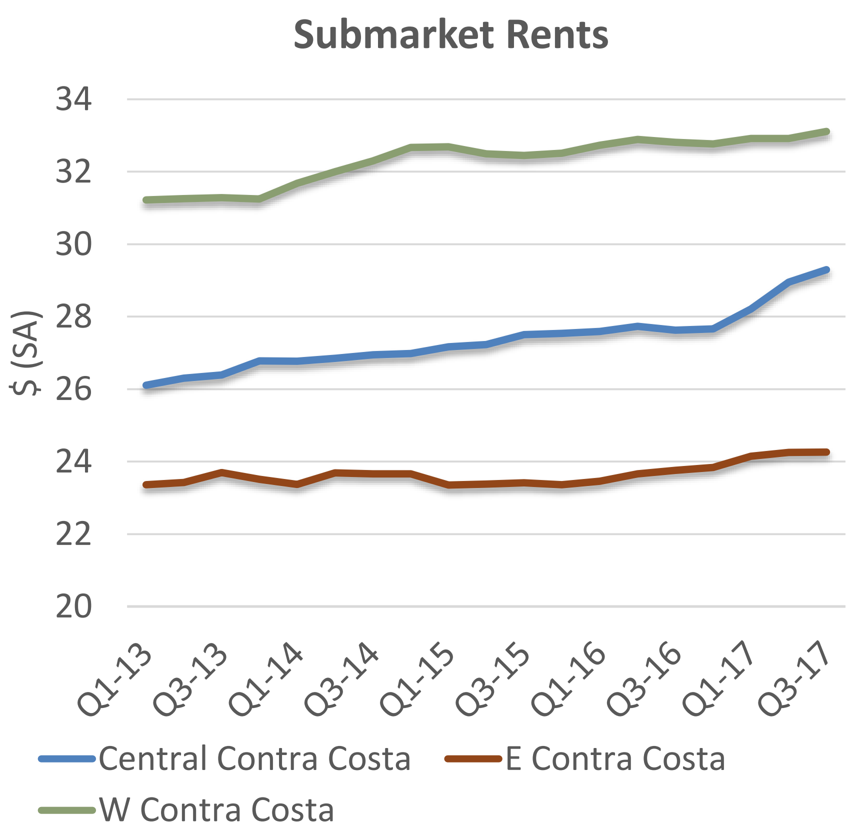


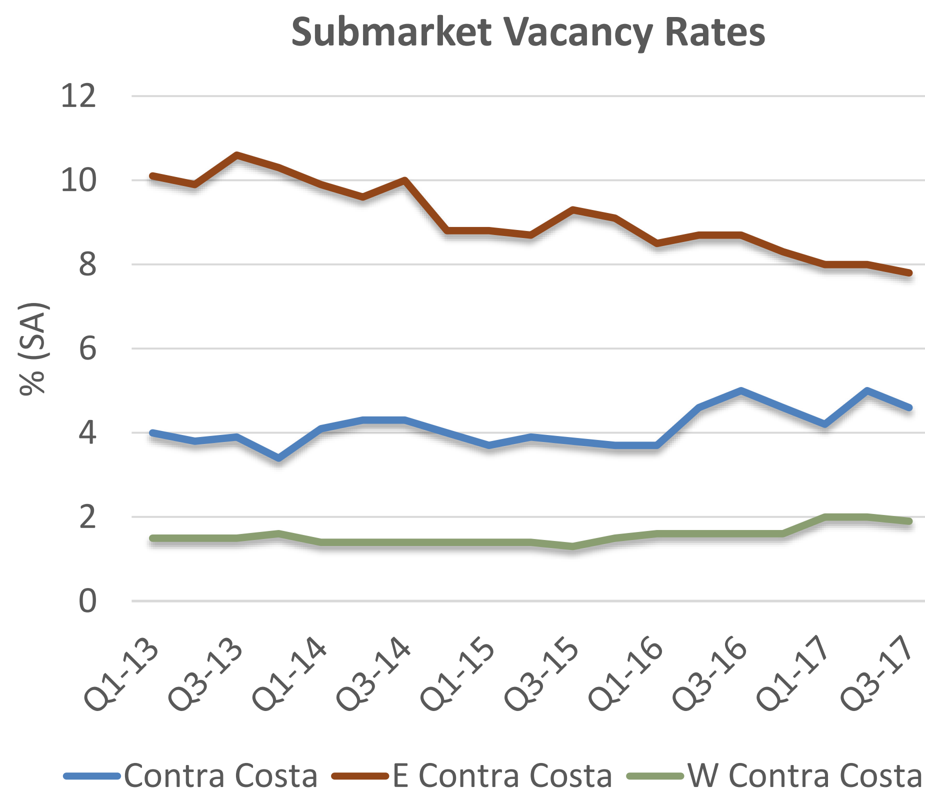
Office Market



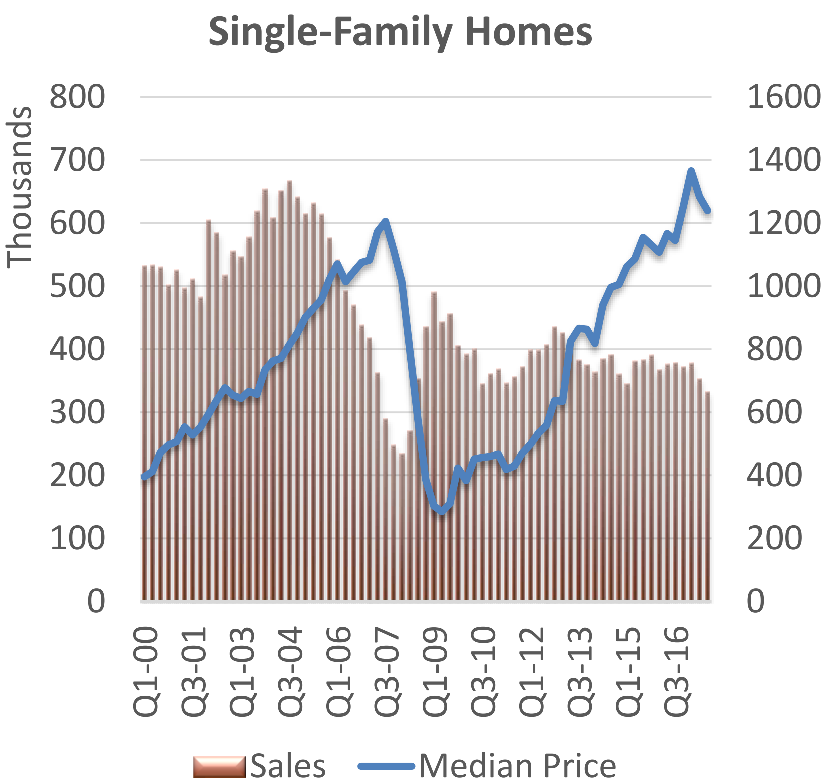


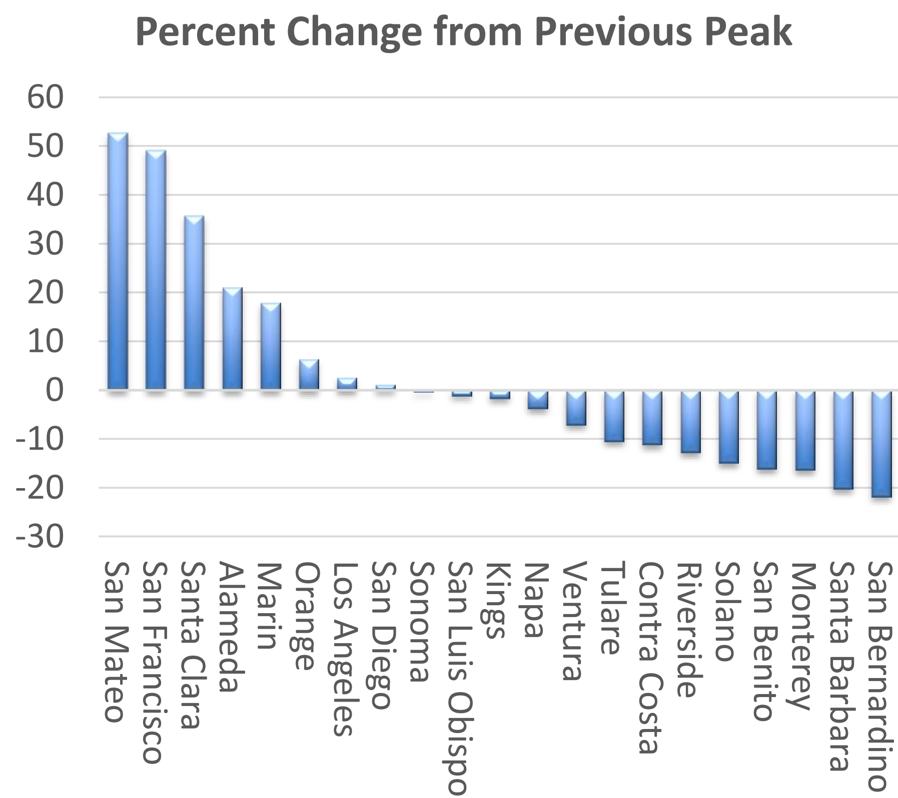
Retail Market



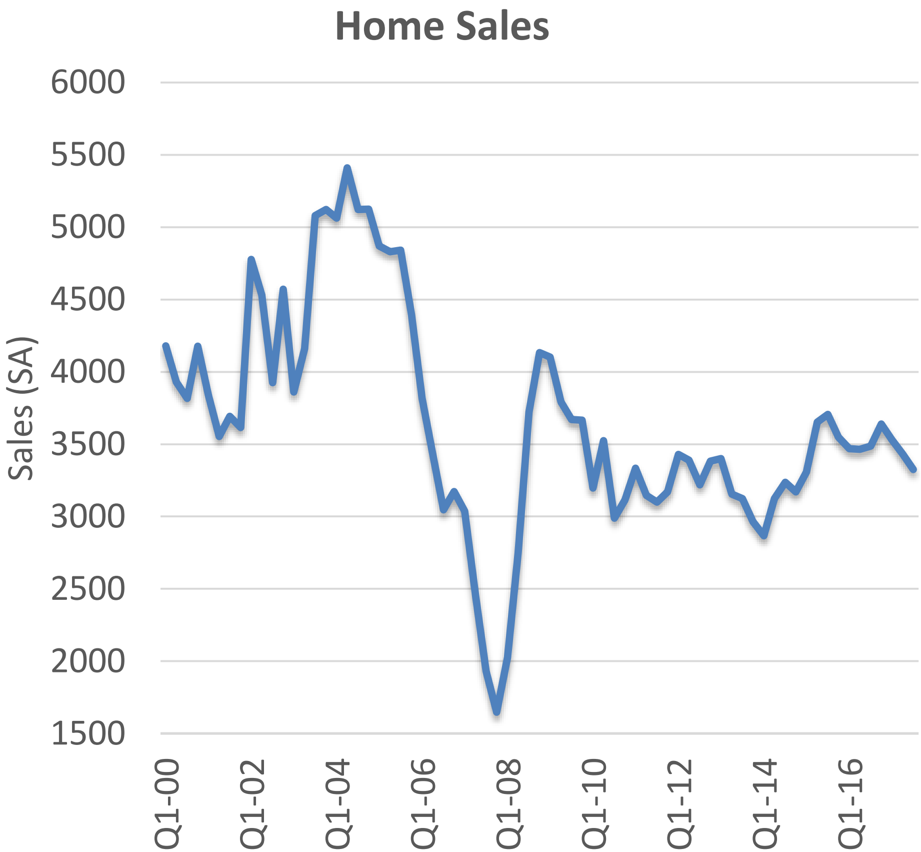


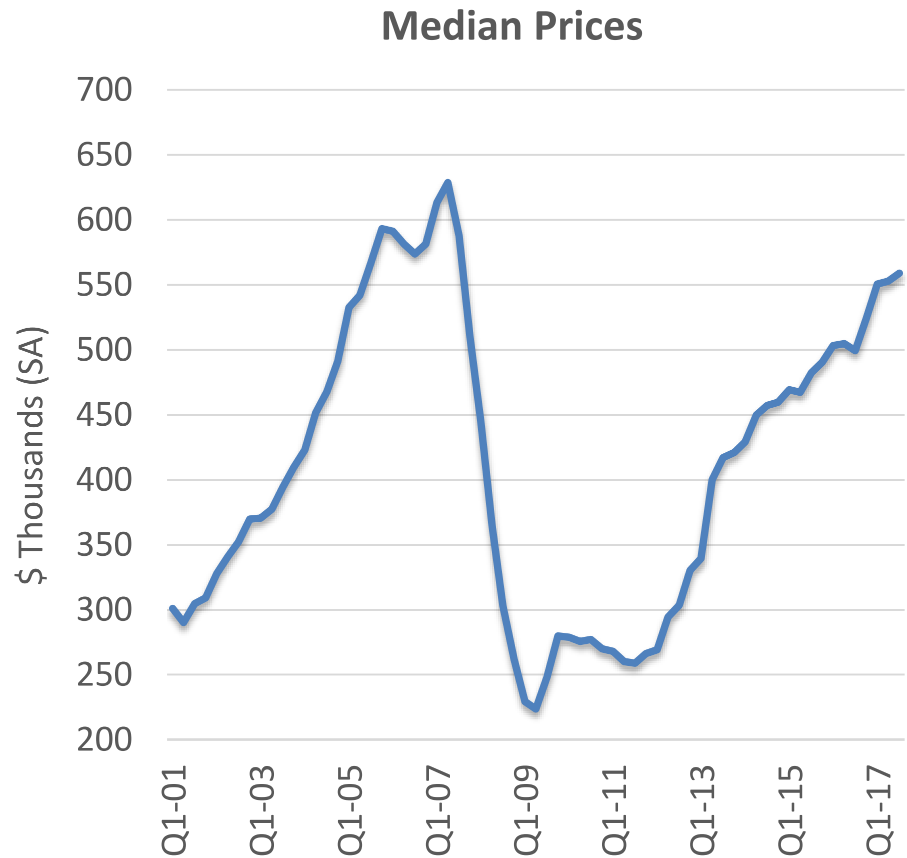
Residential Real Estate



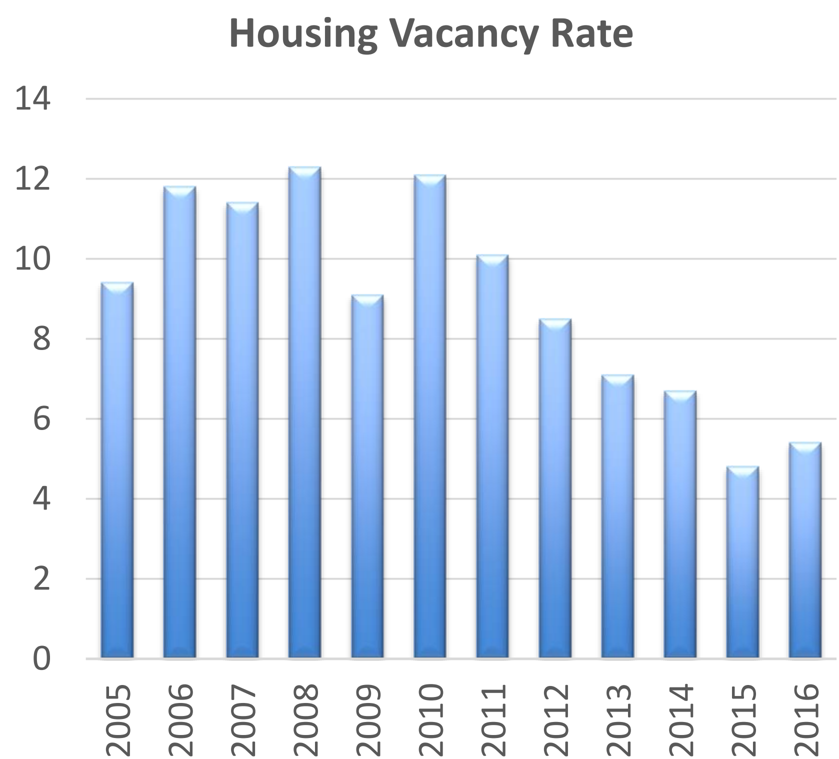


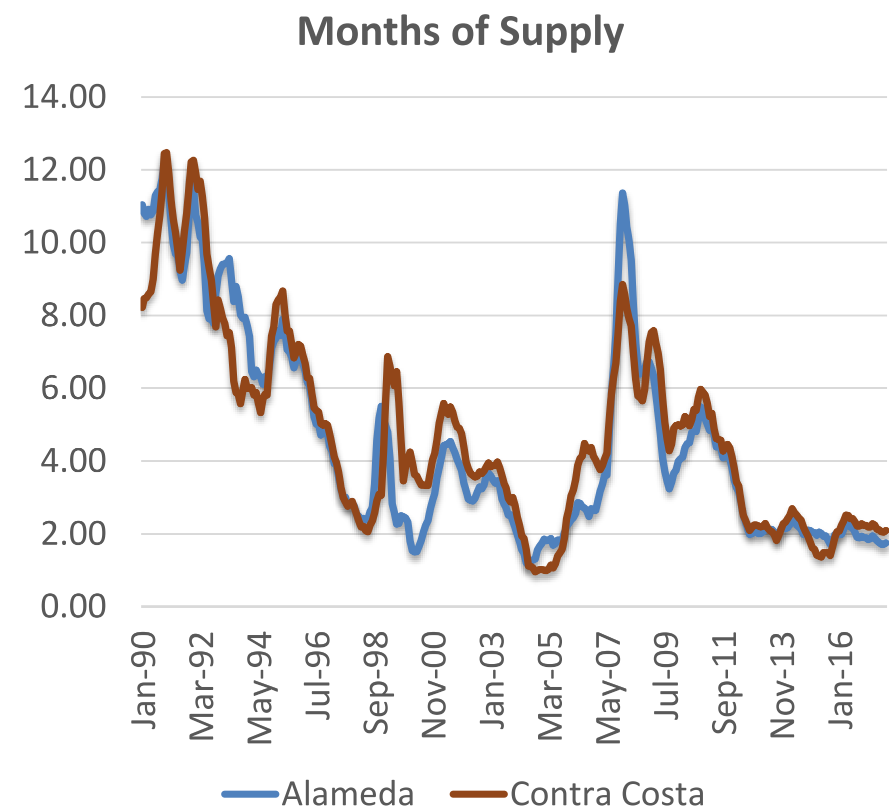
Residential Housing



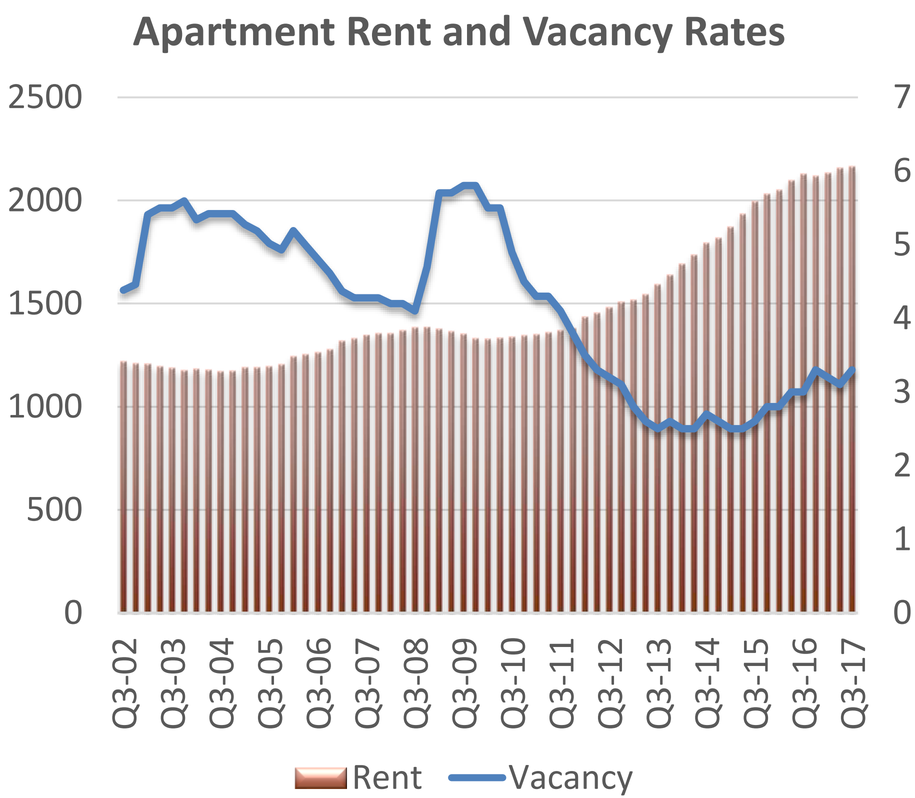


Supply is Limited



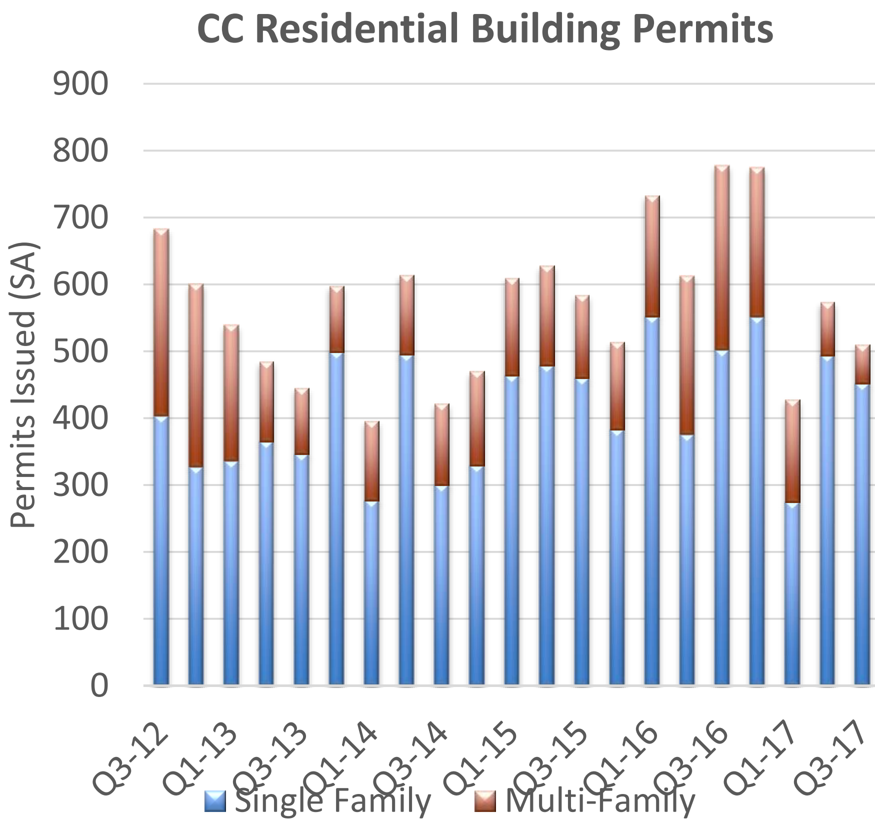


Rental Markets



	Q3 - 2017		Annual Change	
Submarket	Rent	Vacancy Rate	Rent (%)	Vacancy (p.p)
Concord/Martinez	1,814	1.9	1.3%	-0.2
East Alameda	2,394	4.9	1.1%	2.0
East Contra Costa	1,777	3.6	7.6%	1.2
Fremont/Newark/ Union City	2,216	2.5	0.0%	0.0
North Alameda	2,486	5.2	0.3%	-0.5
San Leandro/Hayward	2,030	2.3	4.3%	0.8
San Ramon/Walnut Creek	2,386	2.6	2.5%	0.1
West Contra Costa	1,978	3.4	2.1%	0.0

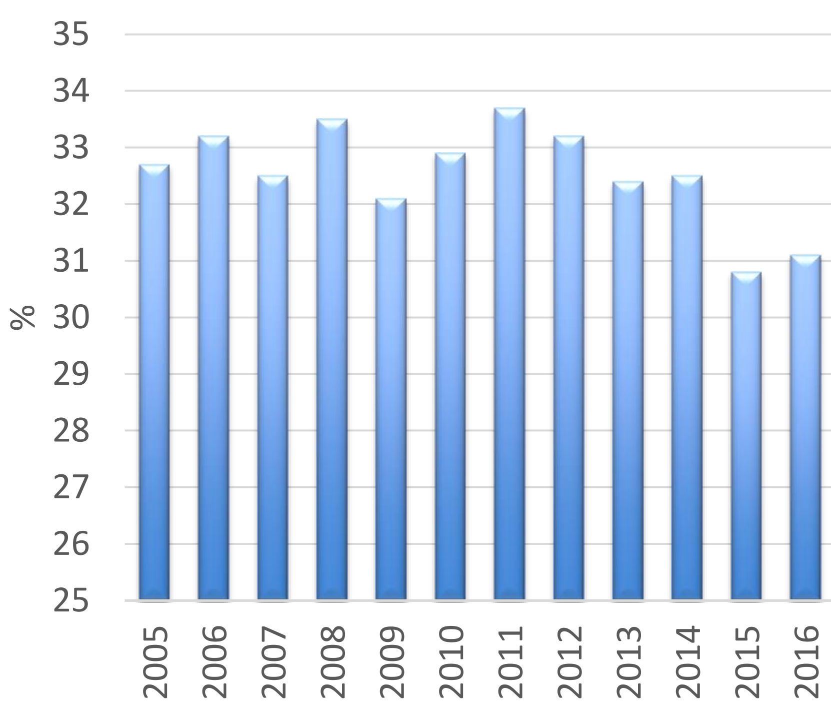
Permits / Housing



Alameda	599,780	40,076	7.2%
Oakland city	167,027	2,984	1.8%
Contra Costa	410,814	21,680	5.6%
San Francisco	392,823	36,337	10.2%
San Mateo	275,947	9,555	3.6%
Santa Clara	665,098	55,311	9.1%
San Jose city	333,355	31,777	10.5%
5 County	2,344,462	162,959	7.5%
New Jobs		473529	
Ratio		2.91	

Rent Burden and Housing Stock

Median Rent as % of Income



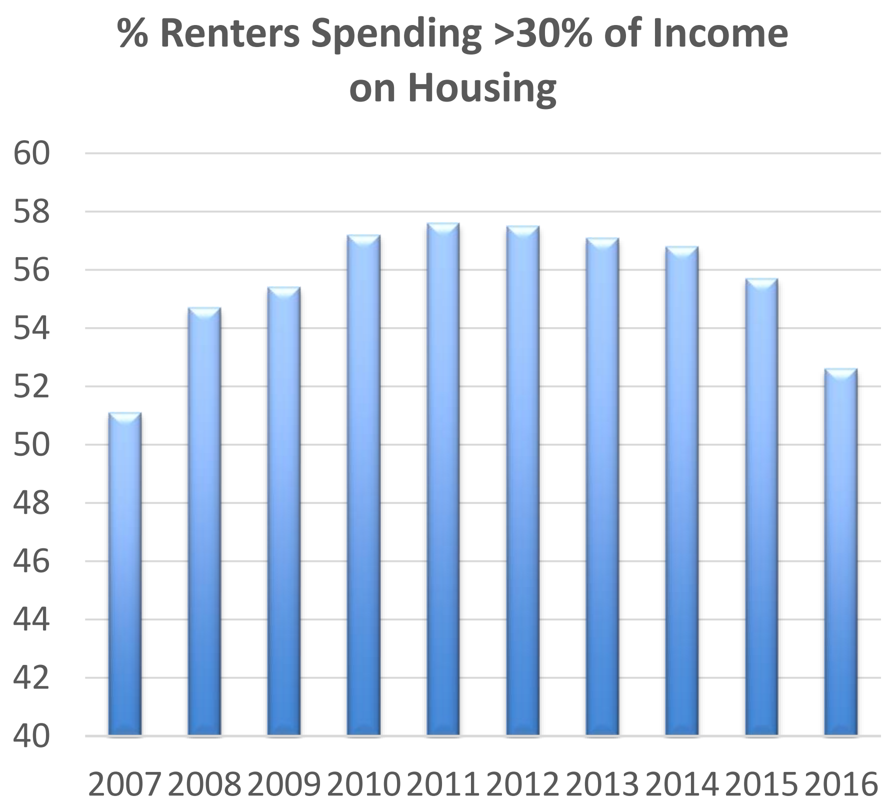
Single Family

Location	2016	1 Year Change		5 Year Change	
		Abs.	%	Abs.	%
Contra Costa	305,280	5,756	1.9%	14,234	4.9%
Concord	30,968	-243	-0.8%	484	1.6%
Antioch	29,850	-273	-0.9%	1,503	5.3%
Richmond	26,025	209	0.8%	742	2.9%

Multi-Family

Location	2016	1 Year Change		5 Year Change	
		Abs.	%	Abs.	%
Contra Costa	97,621	2,785	2.9%	5,887	6.4%
Concord	15,065	-314	-2.0%	264	1.8%
Antioch	6,219	1,053	20.4%	257	4.3%
Richmond	11,319	-3,596	-24.1%	-3,018	-21.1%

Don't Just Focus on Affordable Rentals



CA	2014	2016	Change
Less than $20k	92.7%	92.5%	-0.2%
$20k to $35k	89.0%	89.2%	0.2%
$35k to $50k	67.3%	71.9%	4.6%
$50k to $75k	41.1%	46.1%	5.0%
$75k+	10.5%	11.8%	1.3%
All	56.8%	55.4%	-1.4%

Filtering Blockage

Renters by Income: Struture Built Before 1970			
Metro	Household Income Less than $35,000	Household Income $35,000 to $74,999	Household Income $75,000 or More
San Francisco	26.5%	22.2%	51.2%
East Bay	31.4%	32.6%	36.0%
San Diego	35.0%	33.5%	31.5%
Orange	32.4%	36.3%	31.3%
Los Angeles	40.2%	31.7%	28.0%
Houston	45.4%	31.4%	23.2%
Inland Empire	47.5%	30.7%	21.8%
Phoenix	50.3%	28.2%	21.5%
Dallas	46.6%	33.0%	20.4%

The Big Picture

- Positives: It will be a good year
  - GDP Growth Outlook for 2018: 3%
  - State revenues will look positive
  - Labor markets to remain tight, constraining growth
  - Rising wages to put pressure on profits
  - Exports, business investment continue to pick up
  - California housing shortages will constrain growth locally

- Negatives
  - Fed will continue to tighten, yield curve flattening
  - Markets looking frothy—watch debt levels
  - Consumer savings: entering dangerous waters
  - Federal deficit will widen sharply
  - Political uncertainty to dominate headlines

The Great Disconnect

What we *are* worried about	What we *should be* worried about
The Number of Jobs	The Number of Workers
Who pays for Healthcare	What are we paying for?
Tax Levels	Tax Structure
Income Inequality	Wealth Inequality
Funded Govt. Liabilities	Unfunded Govt. Liabilities
Business Investment	A Lack of Public Investment
Inflation	Slowing Lending
The Cost of CA Housing	The Supply of CA Housing

- To view or download this presentation or for further information, visit: www.BeaconEcon.com
- Contact Christopher Thornberg
  Chris@BeaconEcon.com
  310-571-3399

Our Services

- Economic & Revenue Forecasting
- Regional Intelligence Reports
- Business & Market Analysis
- Real Estate Market Analysis
- Ports & Infrastructure Analysis
- Economic Impact Analysis
- Public Policy Analysis