



Economic Presentation*

February 17, 2016

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Tatiana before sharing
Director, Southern Colorado
Economic Forum

First, a little humor...



More humor...

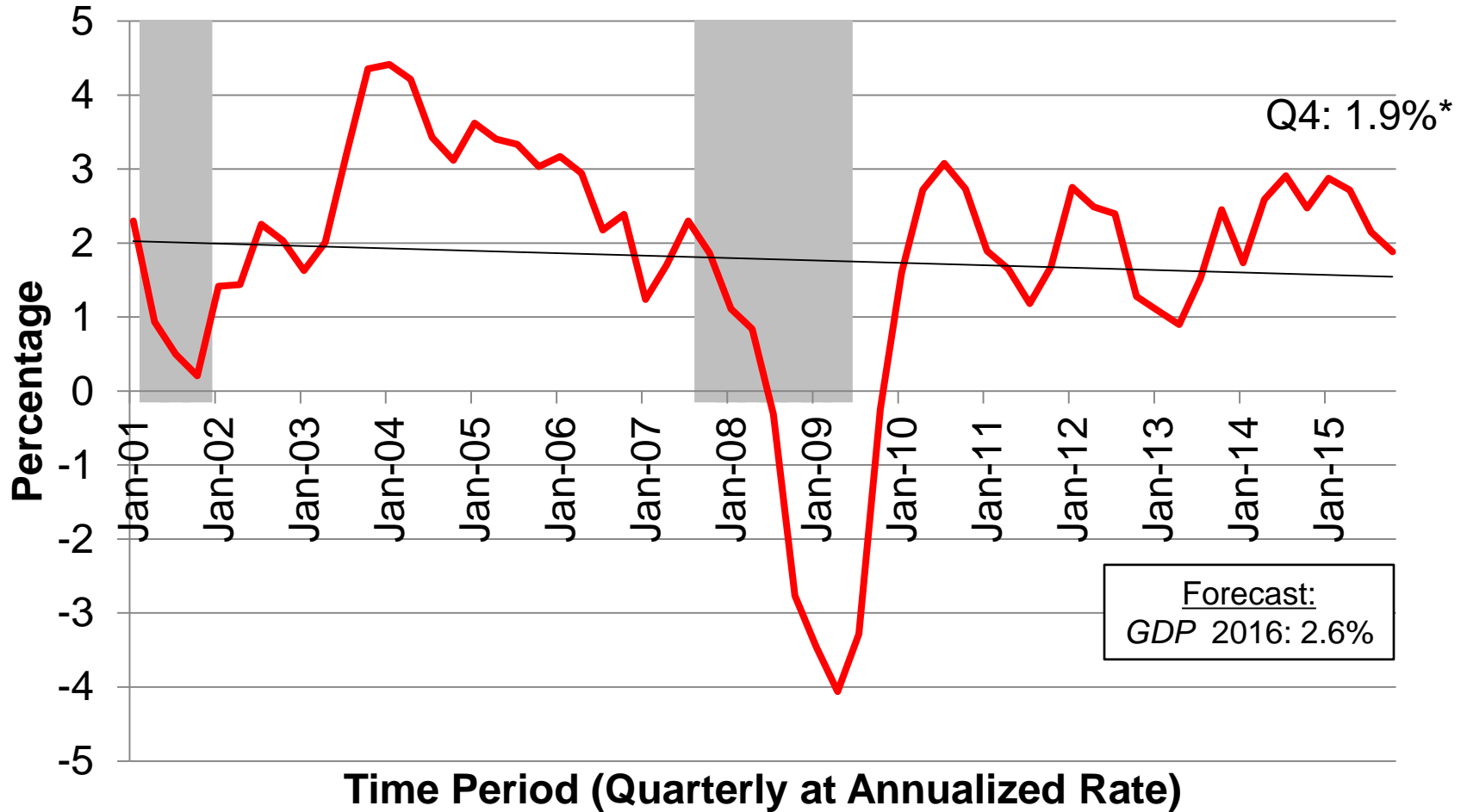




Overview

- **National Indicators – The Big Picture**
- **Labor Force, Employment & Unemployment**
- **Real Estate Market**
- **Commodities Update**

Real Growth in GDP vs. Year Ago



Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Economic Analysis; Forecasts by CO Office of State Planning & Budgeting

*Preliminary Real GDP Percent Change from Q4 Year Ago, SA

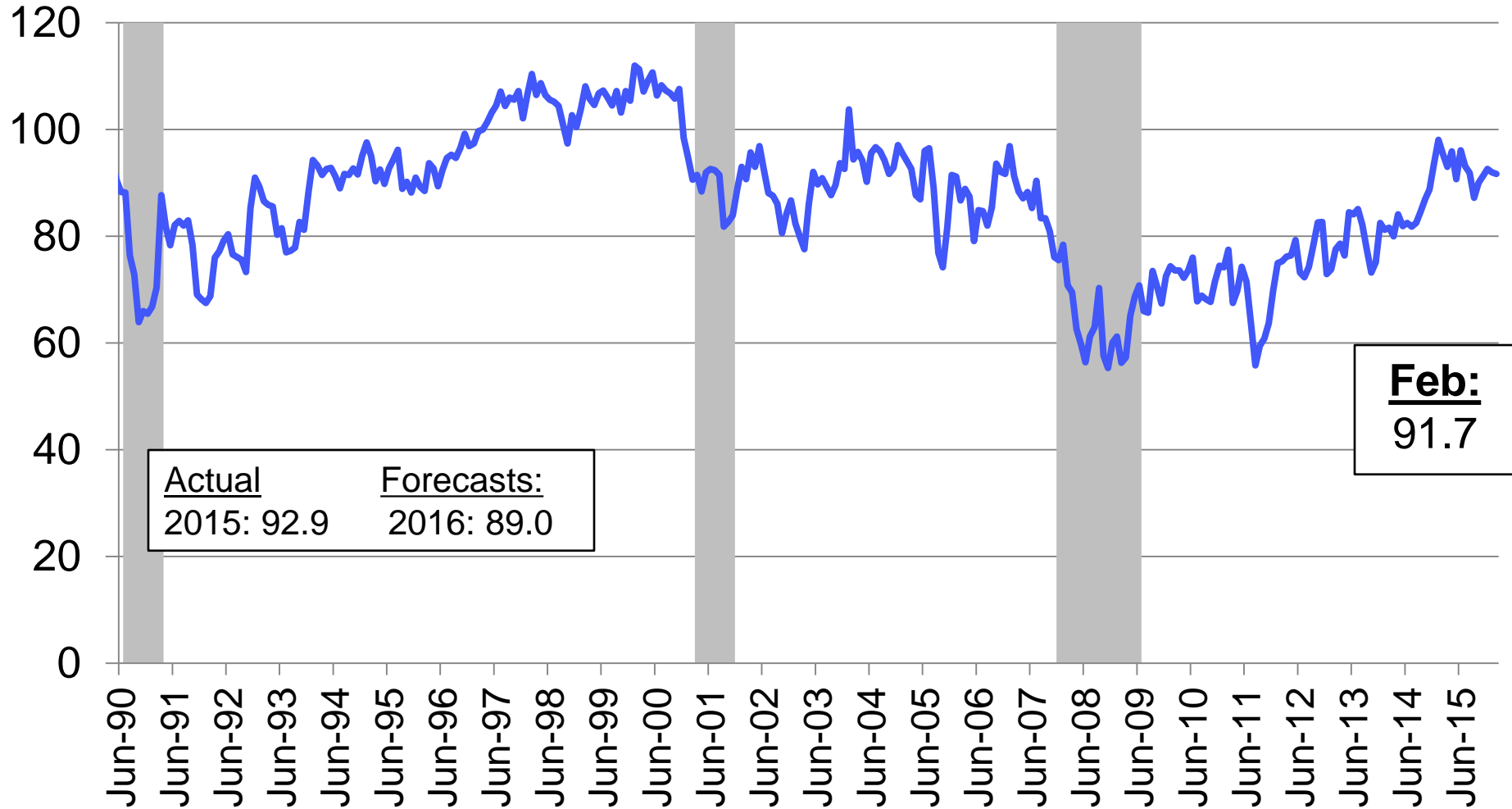


Real GDP Growth 2015 versus 2014

- Real GDP increased 2.4% in 2015, the same as in 2014.
- Increase in real GDP in 2015 due to:
 - ↑ personal consumption expenditures (PCE higher in 2015),
 - ↔ nonresidential fixed investment (although slower than 2014),
 - ↑ residential fixed investment (higher in 2015),
 - ↑ private inventory investment (higher in 2015),
 - ↑ state and local government spending (higher in 2015), &
 - ↓ exports (less than 2014), and imports (even higher in 2015)



University of Michigan Consumer Sentiment



Source: University of Michigan; Forecasts by UCCS Southern Colorado Economic Forum



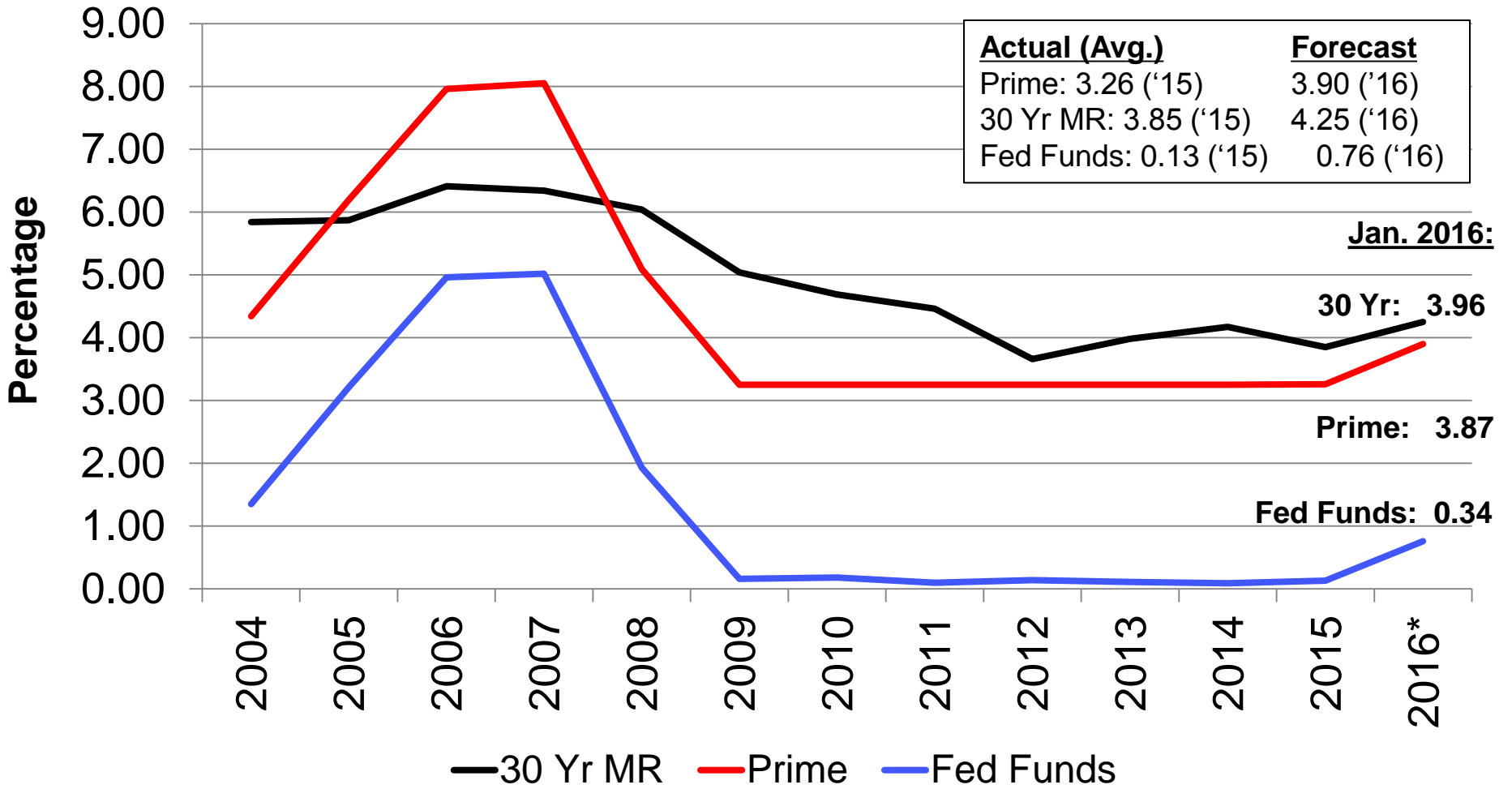
University of Colorado
Colorado Springs



University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus



Interest Rates

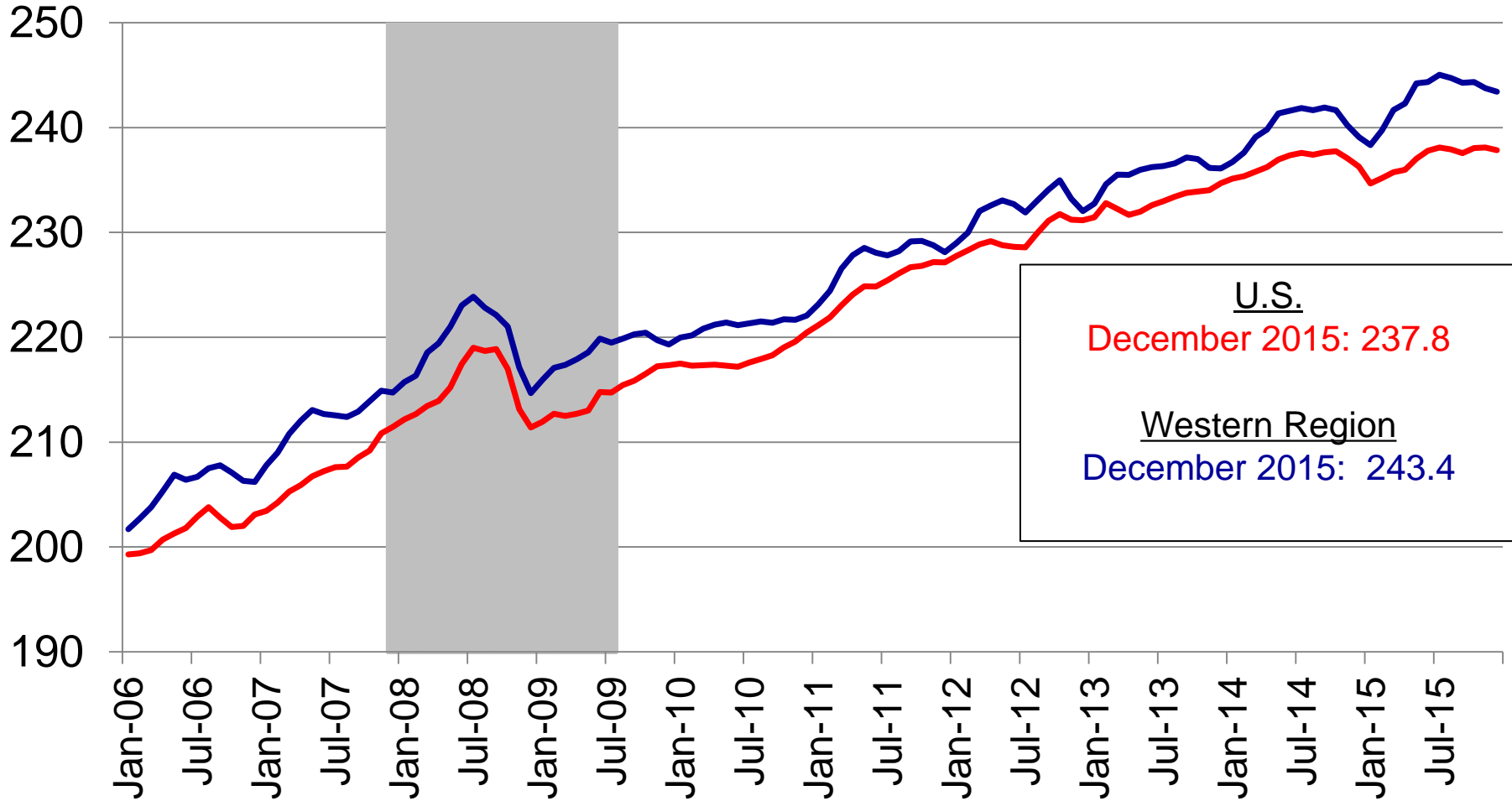


Sources: Board of Governors of the Federal Reserve System (US)
 *Forecasts by Wells Fargo



Consumer Price Index

(1982-1984 = 100)



Source: U.S. Department of Labor, Bureau of Labor Statistics



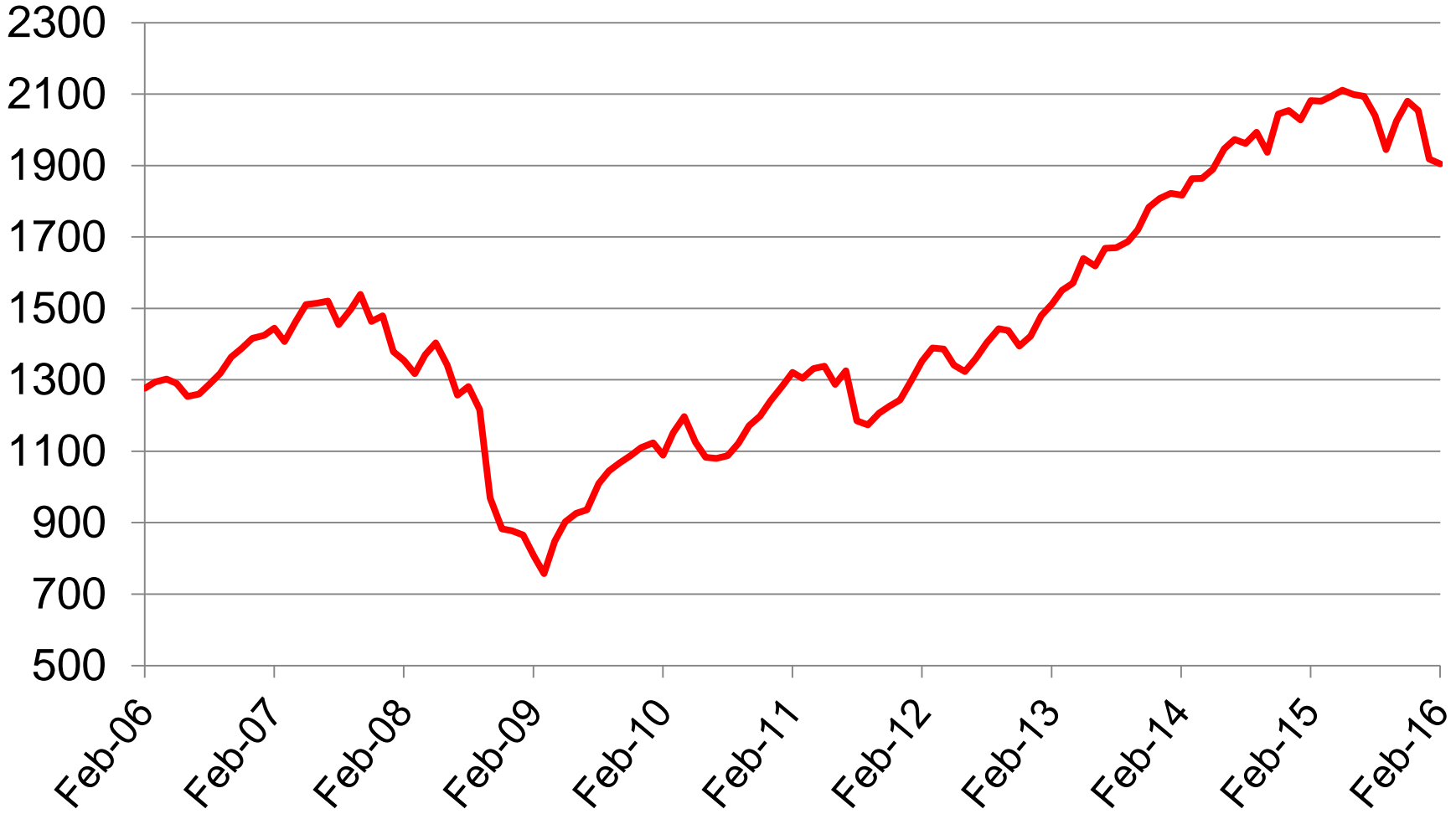
University of Colorado
Colorado Springs



University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus



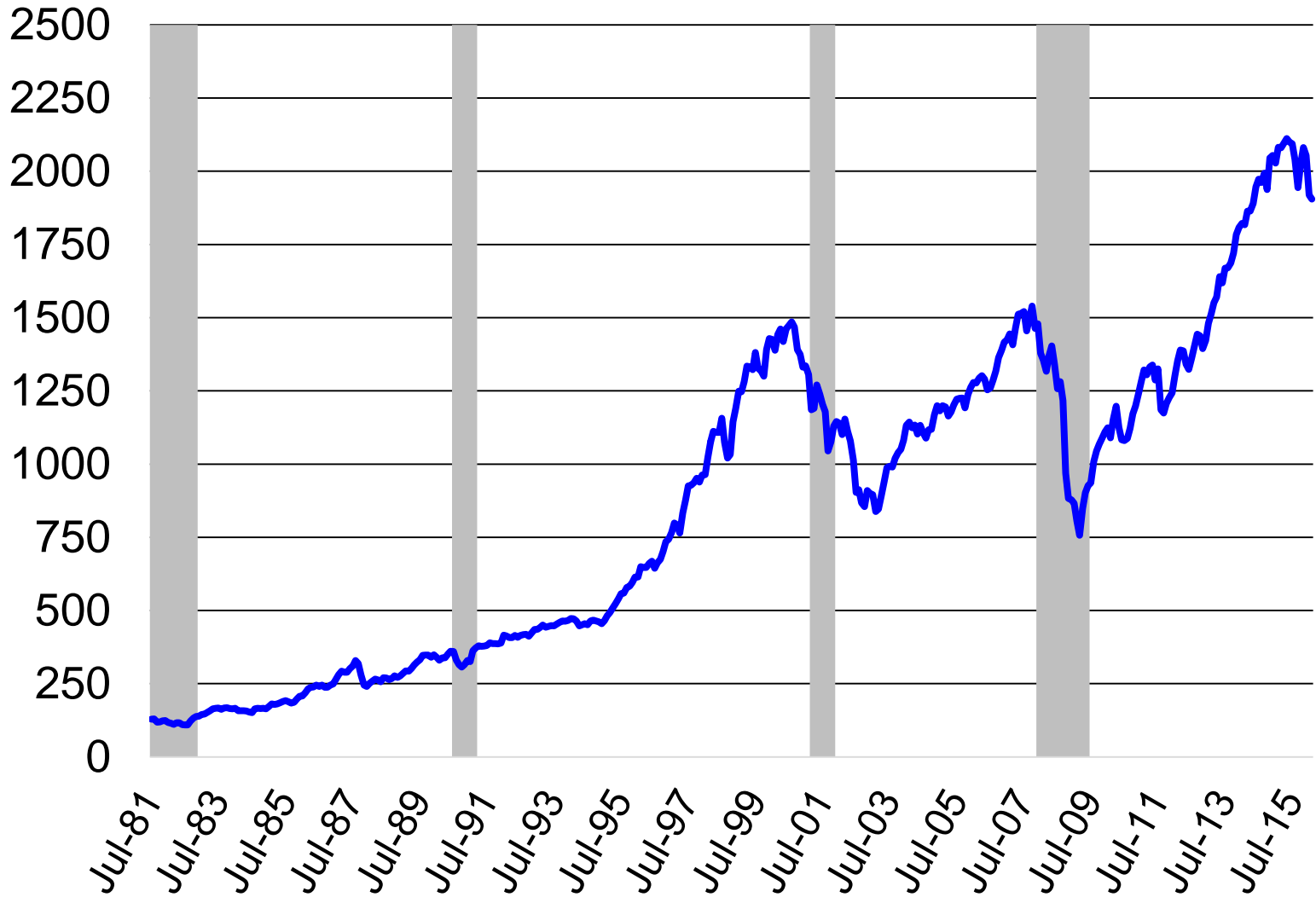
S&P 500 - NSA



Source: S&P Dow Jones Indices LLC; not seasonally adjusted; average monthly data points



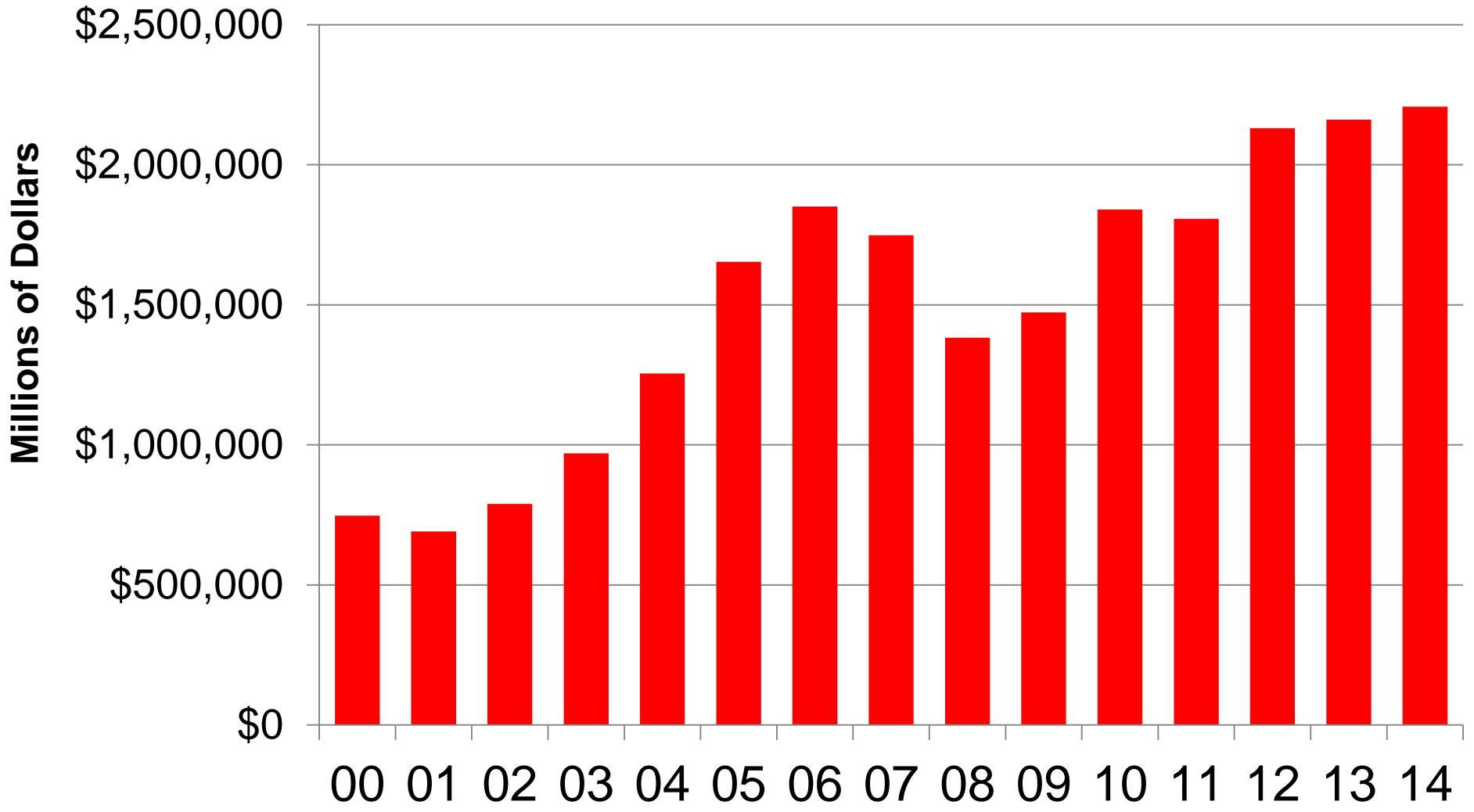
Historic S&P 500 - NSA



Source: Yahoo! Finance, S&P Dow Jones Indices LLC



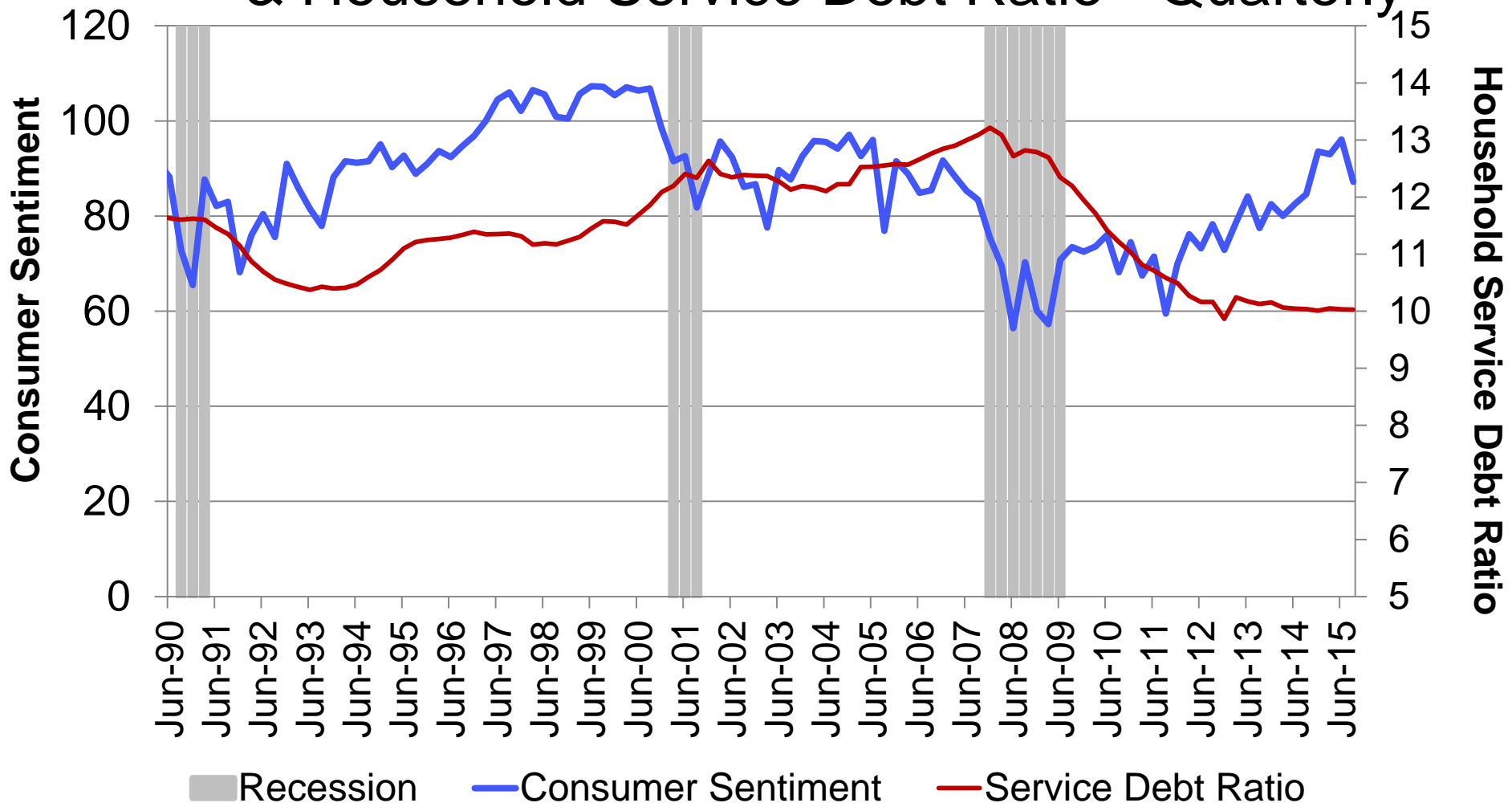
U.S. Corporate Profits Before Tax



Source: U.S. Bureau of Economic Analysis



University of Michigan Consumer Sentiment & Household Service Debt Ratio - Quarterly



Source: University of Michigan; Board of Governors of the Federal Reserve System (U.S.)



S&P 500 – Recent Recessions & Recovery Periods

Dates	# of months	Average S&P 500
Jul 1990 - Mar 1991*	9	335.26
Apr 1991 - Mar 1996	60	463.24
Apr 1996 - Feb 2001	59	1106.75
Mar 2001 - Nov 2001*	9	1168.74
Dec 2001 - Nov 2004	36	1028.48
Dec 2004 - Nov 2007	36	1323.68
Dec 2007 - Jun 2009*	19	1117.61
Jul 2009 - Jun 2013	48	1272.54
Jul 2013 - Dec 2015	28	1941.32
Avg during last 2 Recessions: 1134.04		
Avg during Phase 1 after last 2 Recessions: 1167.95		
Avg Phase 2 after last 2 Recessions: 1604.43		

*Recession

Source: Yahoo! Finance, S&P Dow Jones Indices LLC; UCCS Southern Colorado Economic Forum



Recent **Recession*** Timelines

Dates	# of months
Jul 1981 - Nov 1982*	17
Dec 1982-Sept 1986	46
Oct 1986-Jun 1990	45
Jul 1990-Mar 1991*	9
Apr 1991 - Mar 1996	60
Apr 1996 - Feb 2001	59
Mar 2001 - Nov 2001*	9
Dec 2001 - Nov 2004	36
Dec 2004 - Nov 2007	36
Dec 2007 - Jun 2009*	19
Jul 2009 - Jun 2013	48
Jul 2013 - Dec 2015	28

Avg # months of 3 Recessions before the last one: 11.7
 Avg # months for Phase 1 after those 3 recessions: 47.3
 Avg # months for Phase 2 after those 3 Recessions: 46.7
These past trends indicate we may have a downturn in ~18 mo.

Source: UCCS Southern Colorado Economic Forum



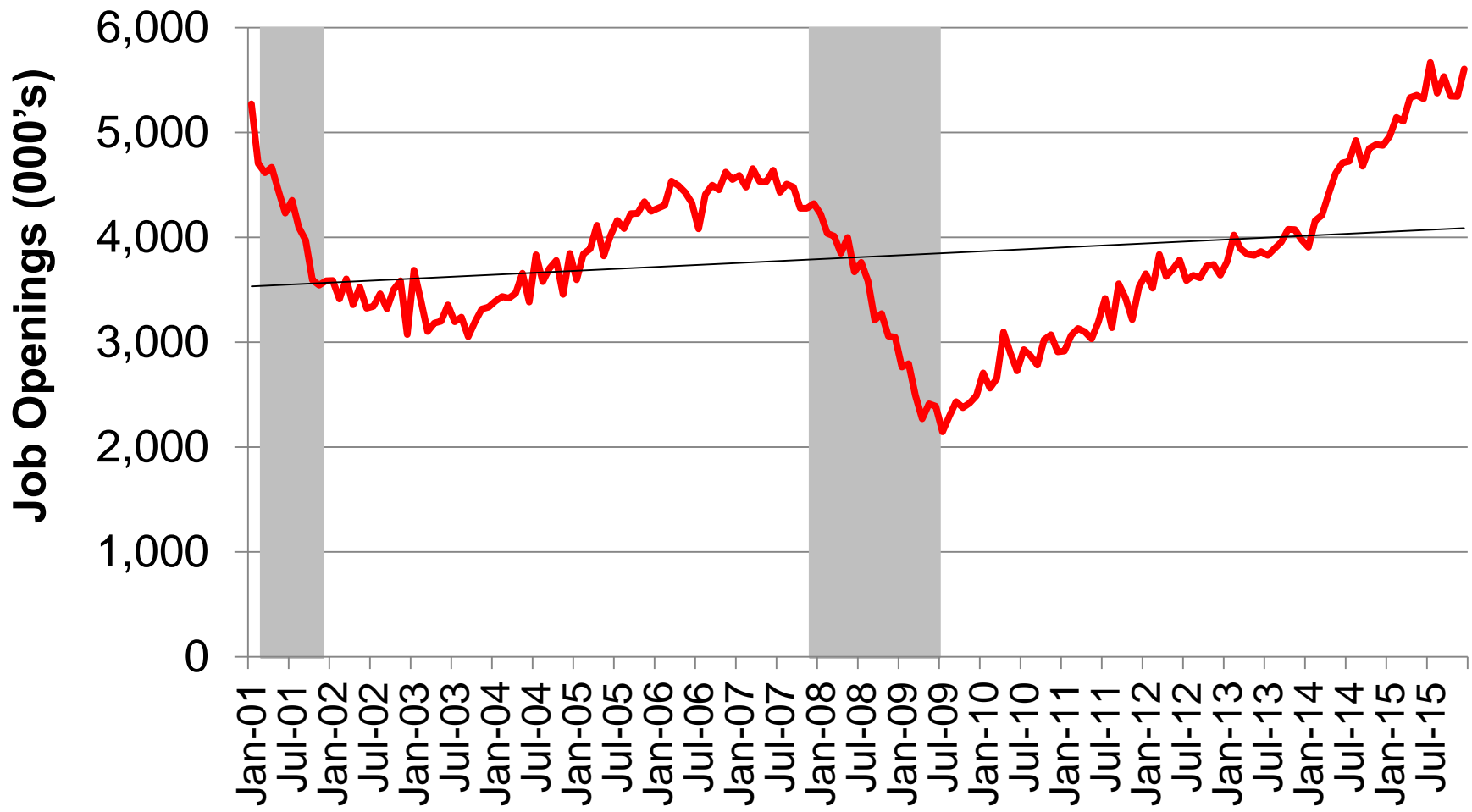
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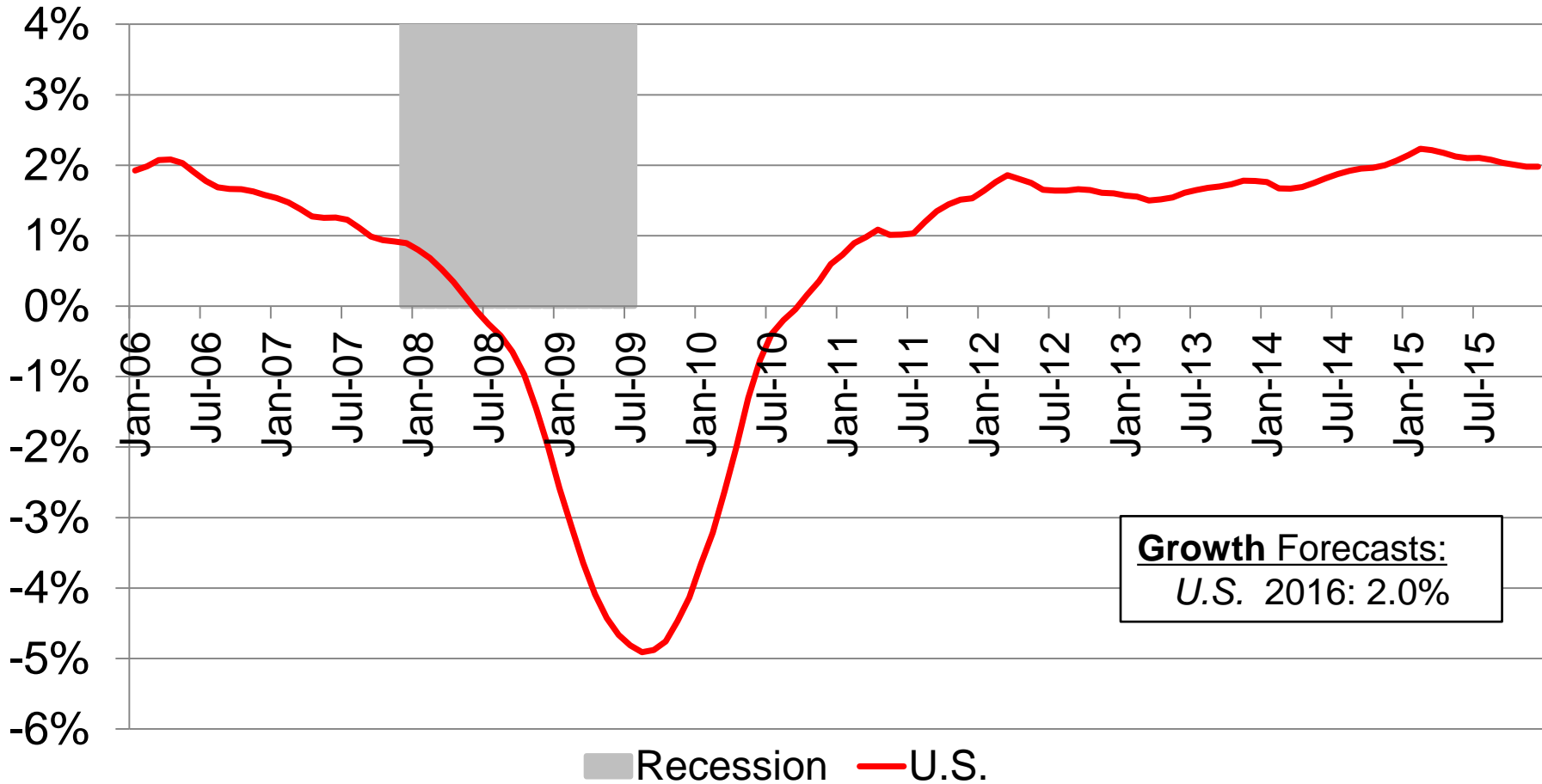
Survey Employer Data through December 2015

Total U.S. Monthly Non-Farm Job Openings SA (000's)



Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Labor Statistics; Forecasts by CO Office of State Planning & Budgeting and UCCS Southern Colorado Economic Forum

Changes in Employment Levels (3-month moving average)



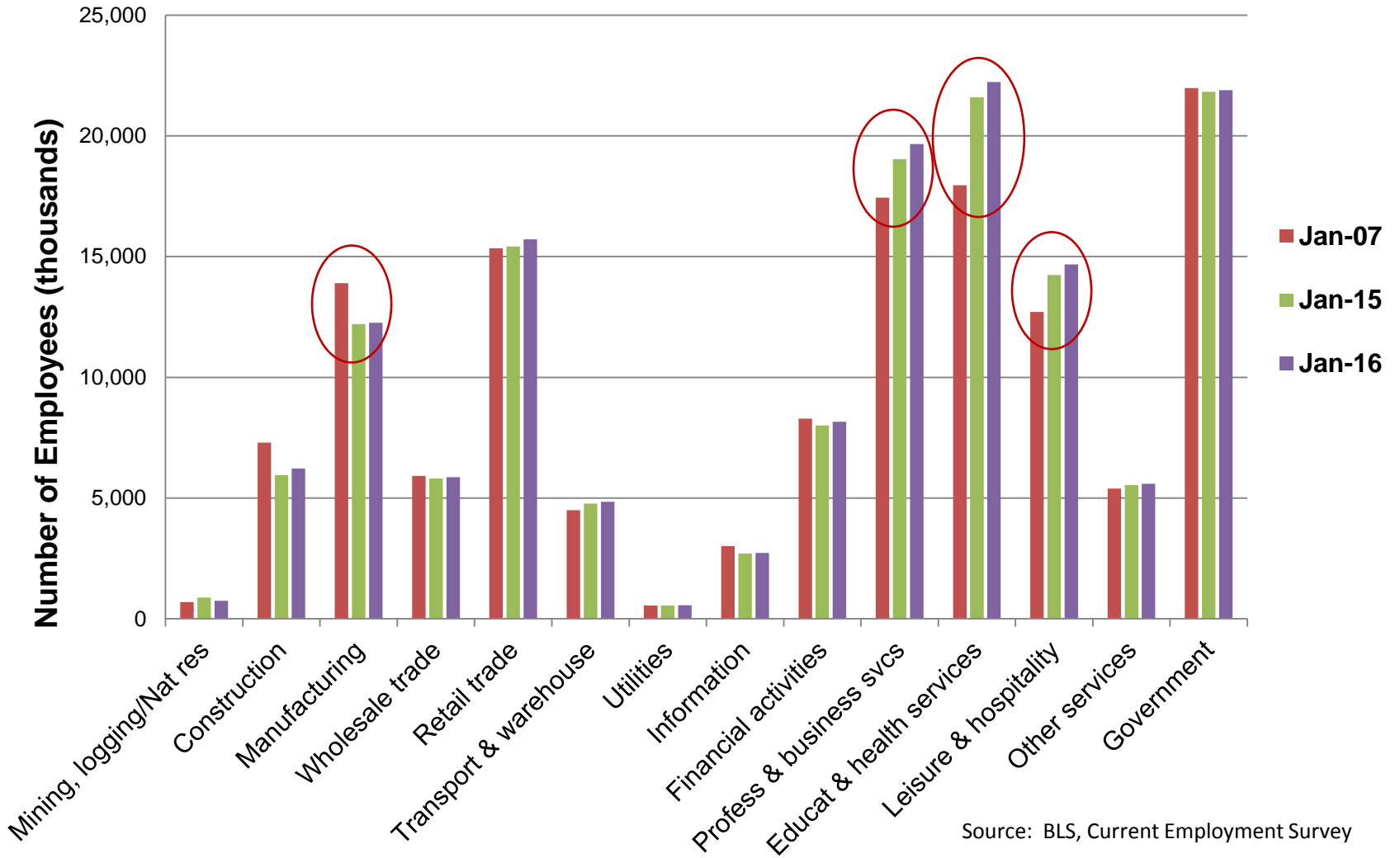
Source: U.S. Bureau of Labor Statistics and UCCS Southern Colorado Forum; Forecasts by CO Office of State Planning & Budgeting and UCCS Southern Colorado Economic Forum



January 2016 BLS Data...

- Total nonfarm payroll employment rose by 151,000 in January (avg. 231,000/mo for last 3 months).
- Last 12 months, average hourly earnings up 2.5%.
- Most gains in retail trade, food & drinking places, health care, manufacturing, and financial activities; declines in private educational services, transportation & warehousing, and mining jobs.
- Civilian participation rate increased slightly in January to 62.7% (from 62.6% in December).

U.S. Employment by Industry, NSA





Manufacturing

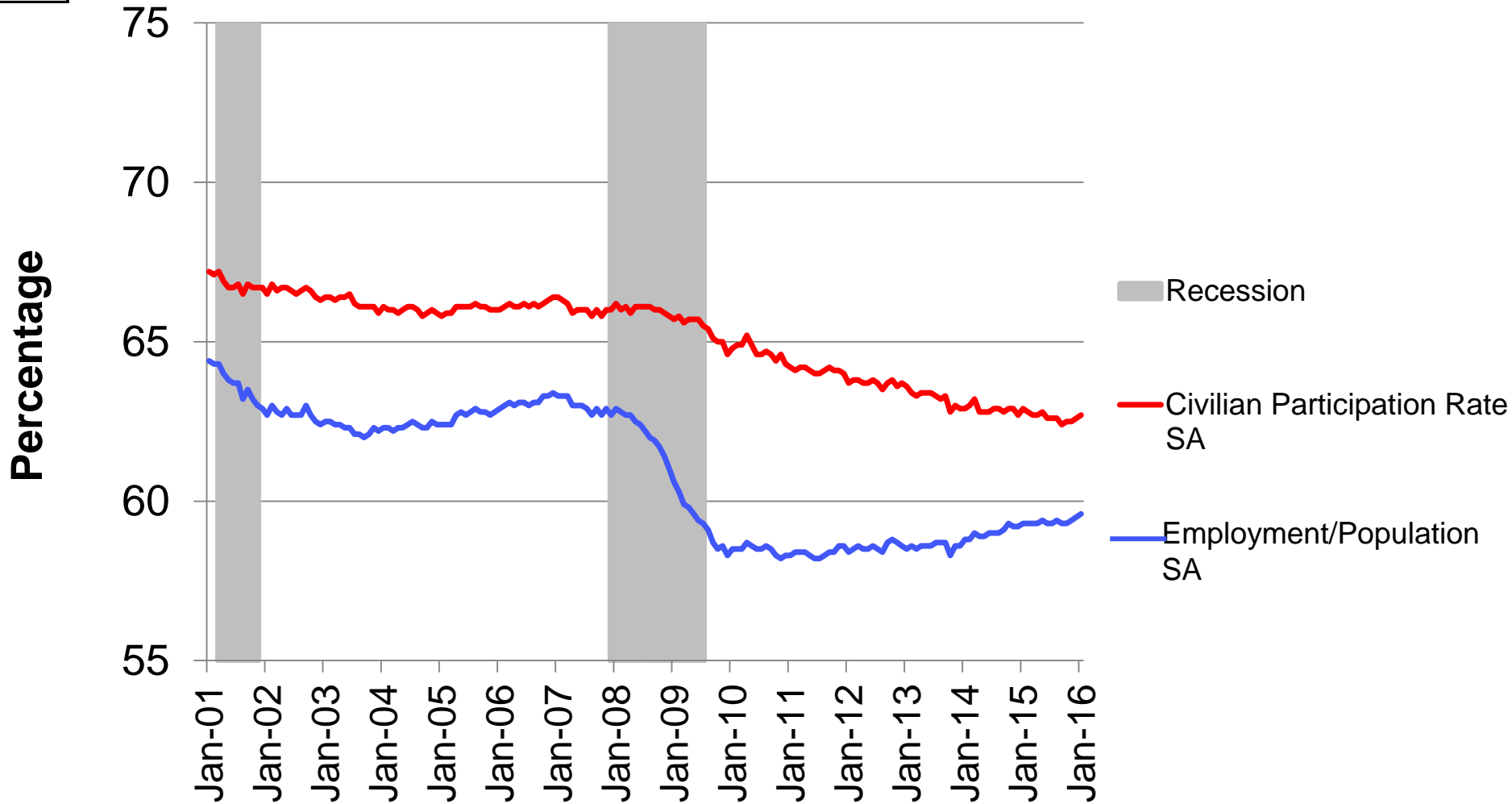
- Manufacturing Index has been below 50, which represents a contraction, for five straight months.
- Meanwhile, overall economy has grown for 81 consecutive months.
- February PMI (purchasing manager's index): 49.5 percent, an increase of 1.3 percentage points from the January reading of 48.2 percent.

*The **PMI index** is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment.*

Source: Institute for Supply Management, March 1, 2016 Report



U.S. Employment/Population, Labor Force Participation Rate SA

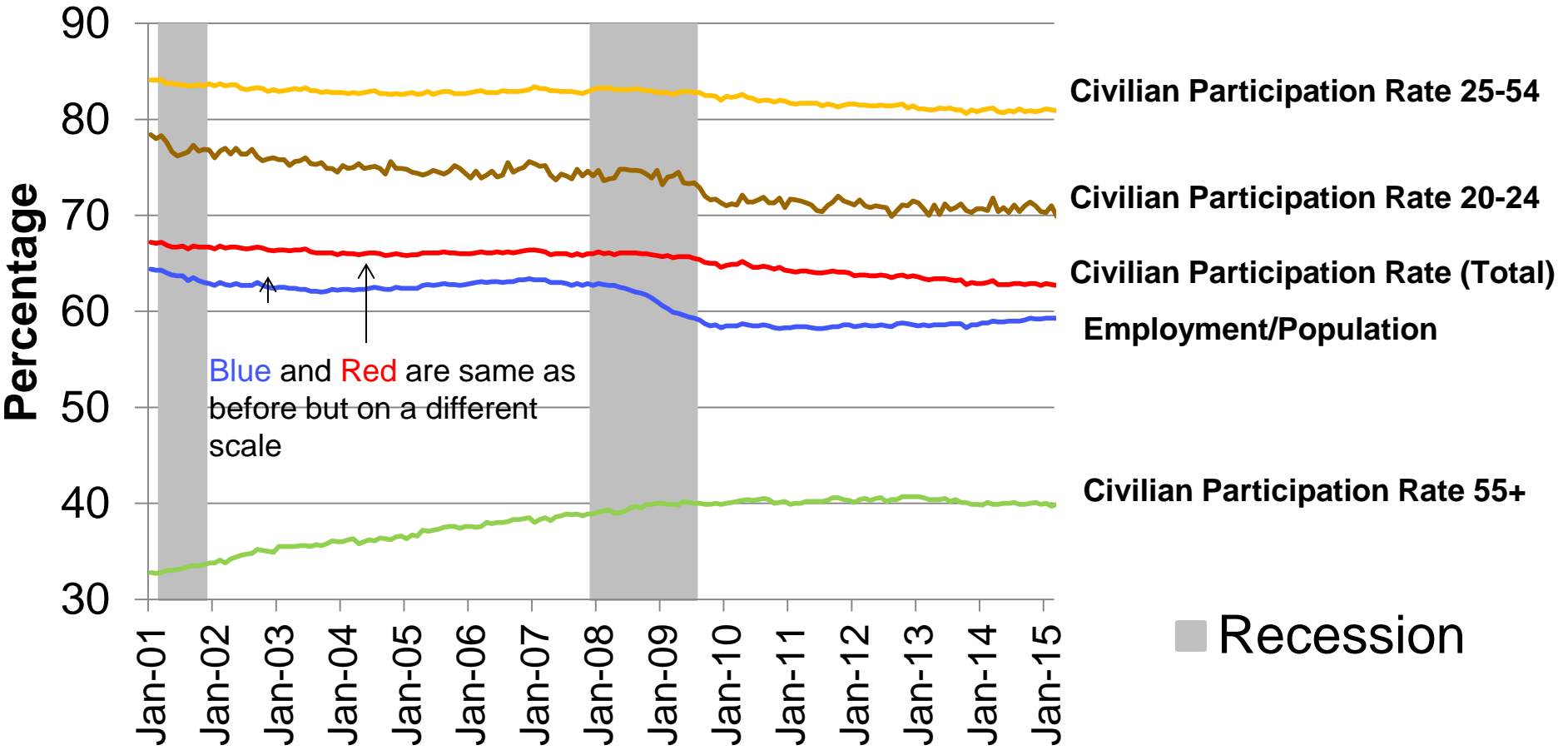


Data through January 2016

Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Labor Statistics



Household Data: U.S. Civilian Participation Rates SA Employment/Population SA



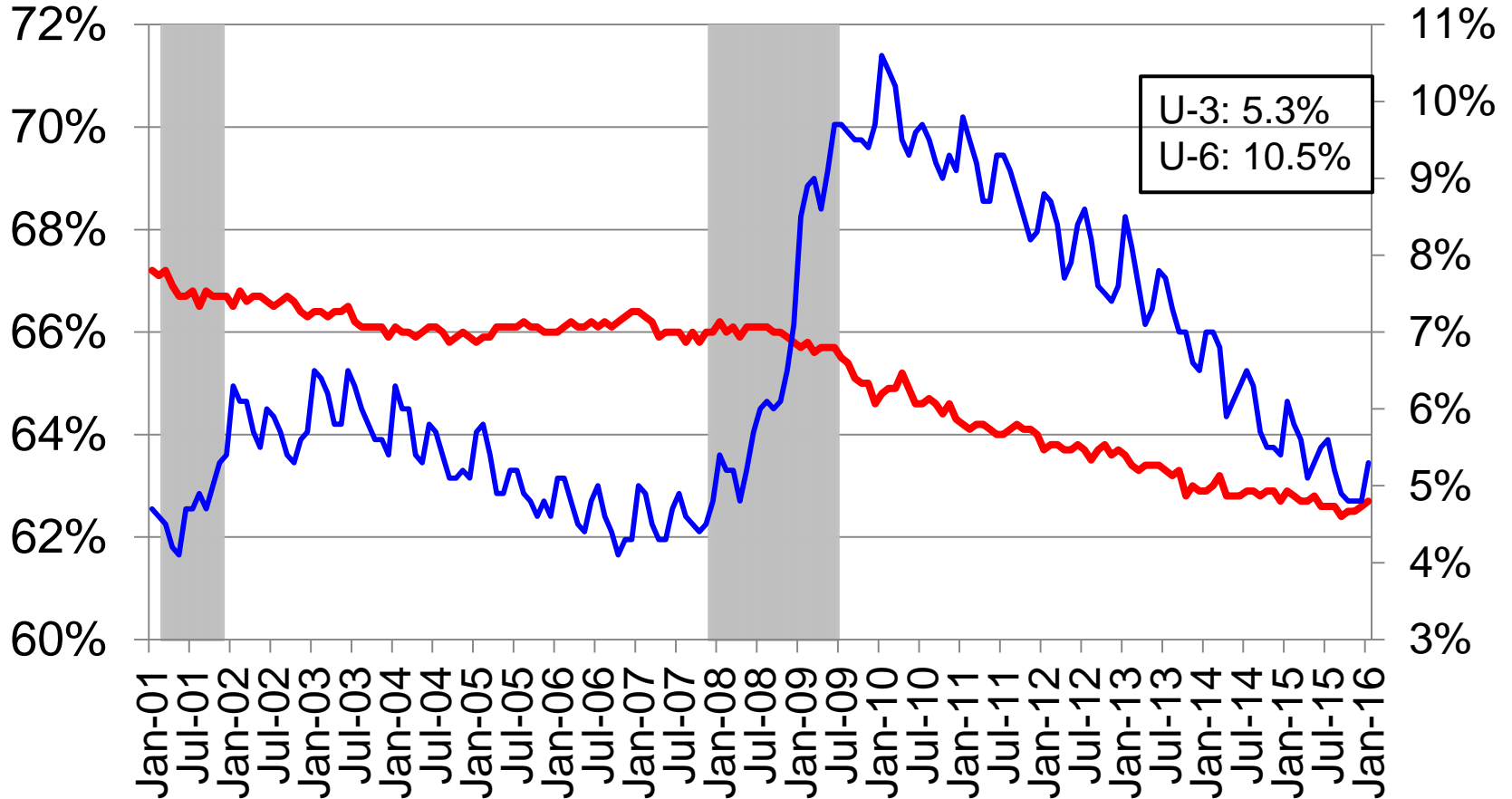
Data through January 2016

Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Labor Statistics



U.S. Civilian Participation and Unemployment Rates, NSA

Civilian Participation Rate



Unemployment Rate

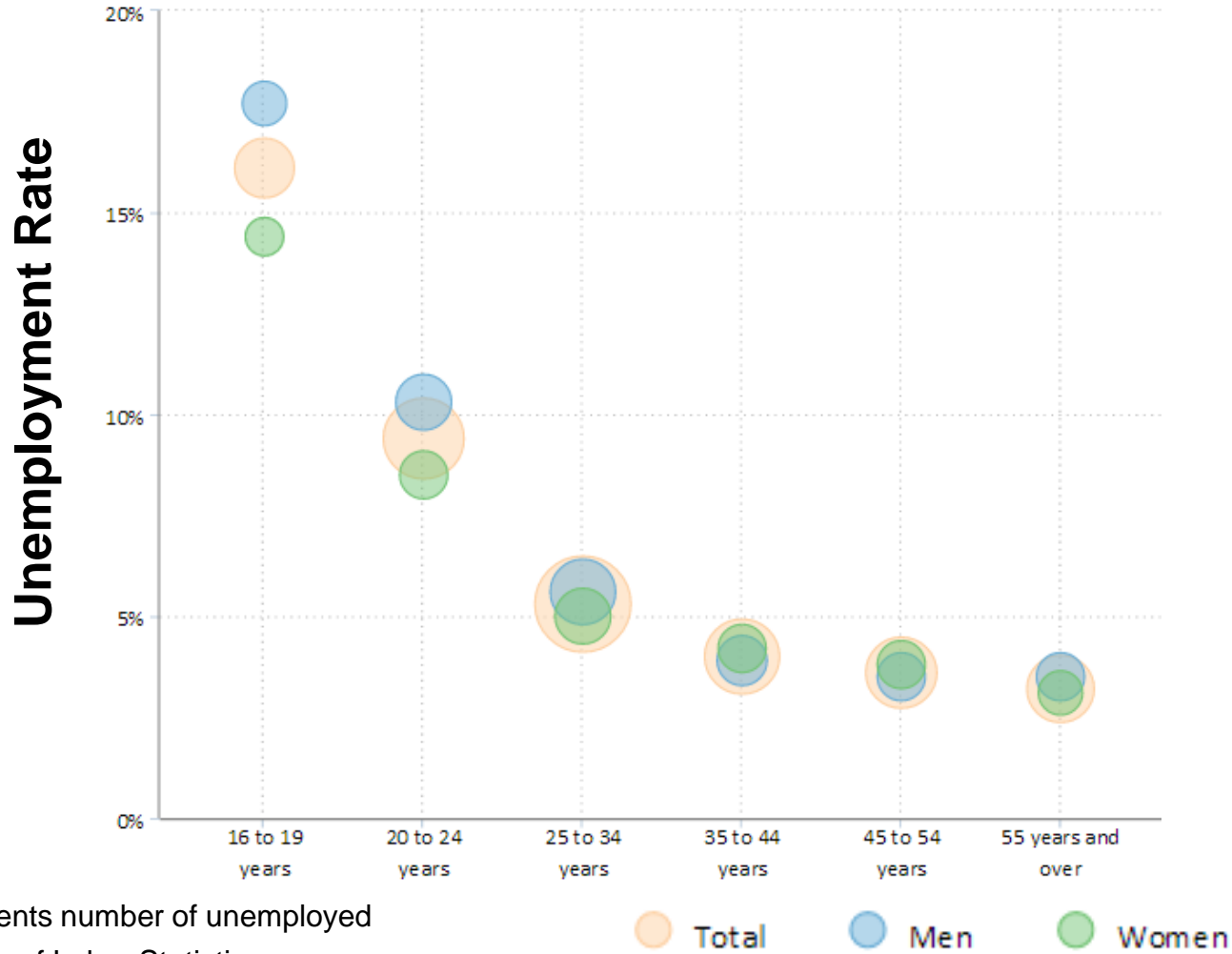
Recession Civilian Participation Rate Unemployment Rate

Data through January 2016

Source: Federal Reserve Bank of St. Louis, U.S. Bureau of Labor Statistics



Unemployment Rate & Number Unemployed by Age and Gender, December 2015*



*Bubble size represents number of unemployed

Source: U.S. Bureau of Labor Statistics



Colorado Springs MSA Job Openings

Top job titles January 2016:

- | | |
|--|--------------------------------------|
| 1) Software Engineer (751 jobs) | 6) Teller (458 jobs) |
| 2) Customer Service Rep (676 jobs) | 7) Systems Engineer (439 jobs) |
| 3) Registered Nurse (637 jobs) | 8) Physical Therapist (432 jobs) |
| 4) Administrative Assistant (543 jobs) | 9) Project Manager (425 jobs) |
| 5) Sales Rep (499 jobs) | 10) Systems Administrator (390 jobs) |

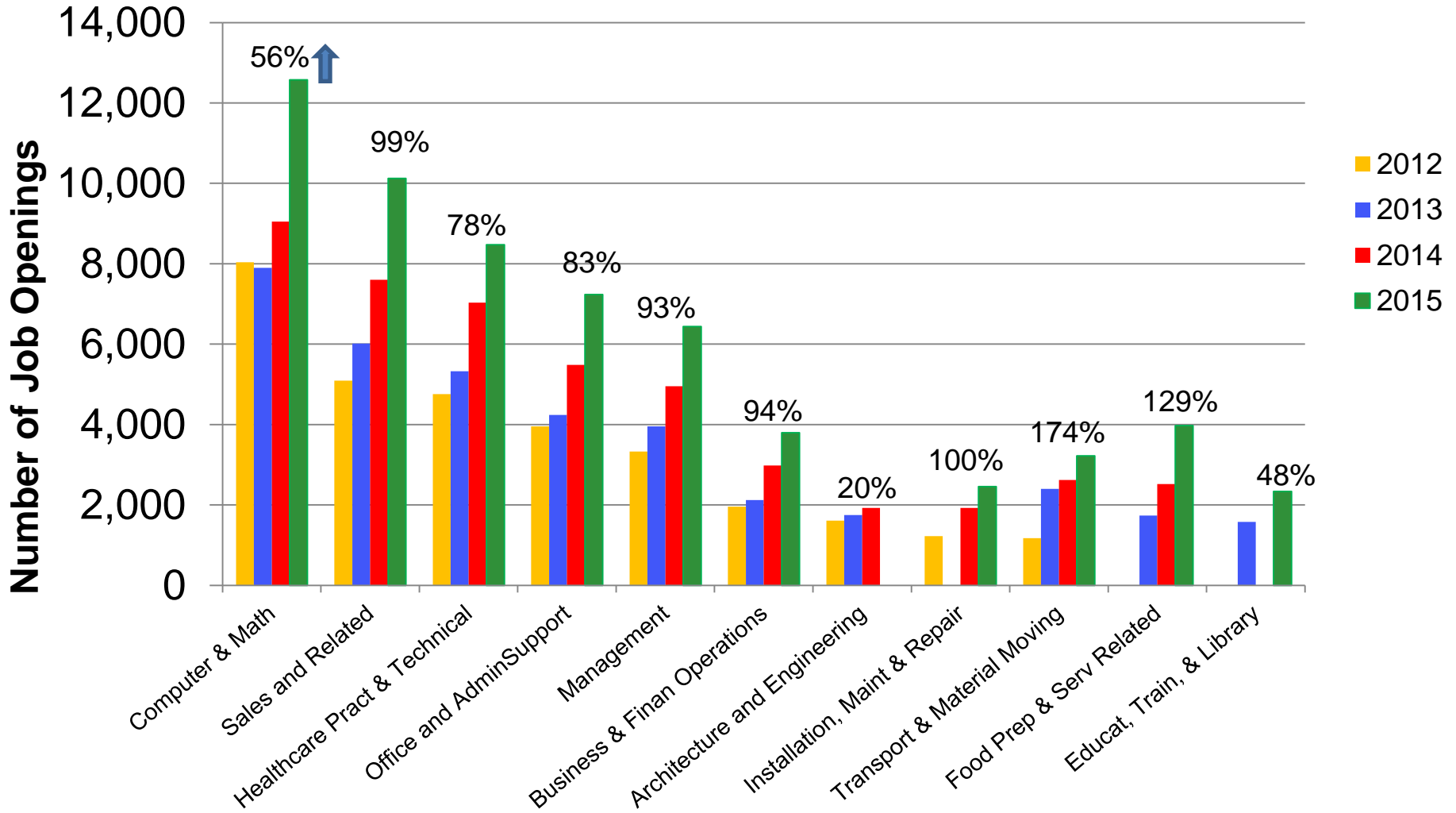
December 2015	
Demand for Labor	Supply of Labor
13,944	12,424

Sources: WANTED Analytics™; Pikes Peak Workforce Center



Jobs Demanded 2012 to 2015

Top Categories in Colorado Springs MSA



Source: WANTED ANALYTICS via Pikes Peak Workforce Center



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National Picture - Housing

- U.S. home prices increased 6.9% comparing Q4 of 2015 to Q4 of 2014. 81% of measured MSAs had increases (145 out of 179 MSAs) in Q4.
- 89% of all MSA for the entire year (2015) saw increases – very strong market
- The national median existing single-family home price in Q4 was \$222,700 (\$213,800 in January). This is up 6.9% from Q4, 2014.

Source: National Association of Realtors



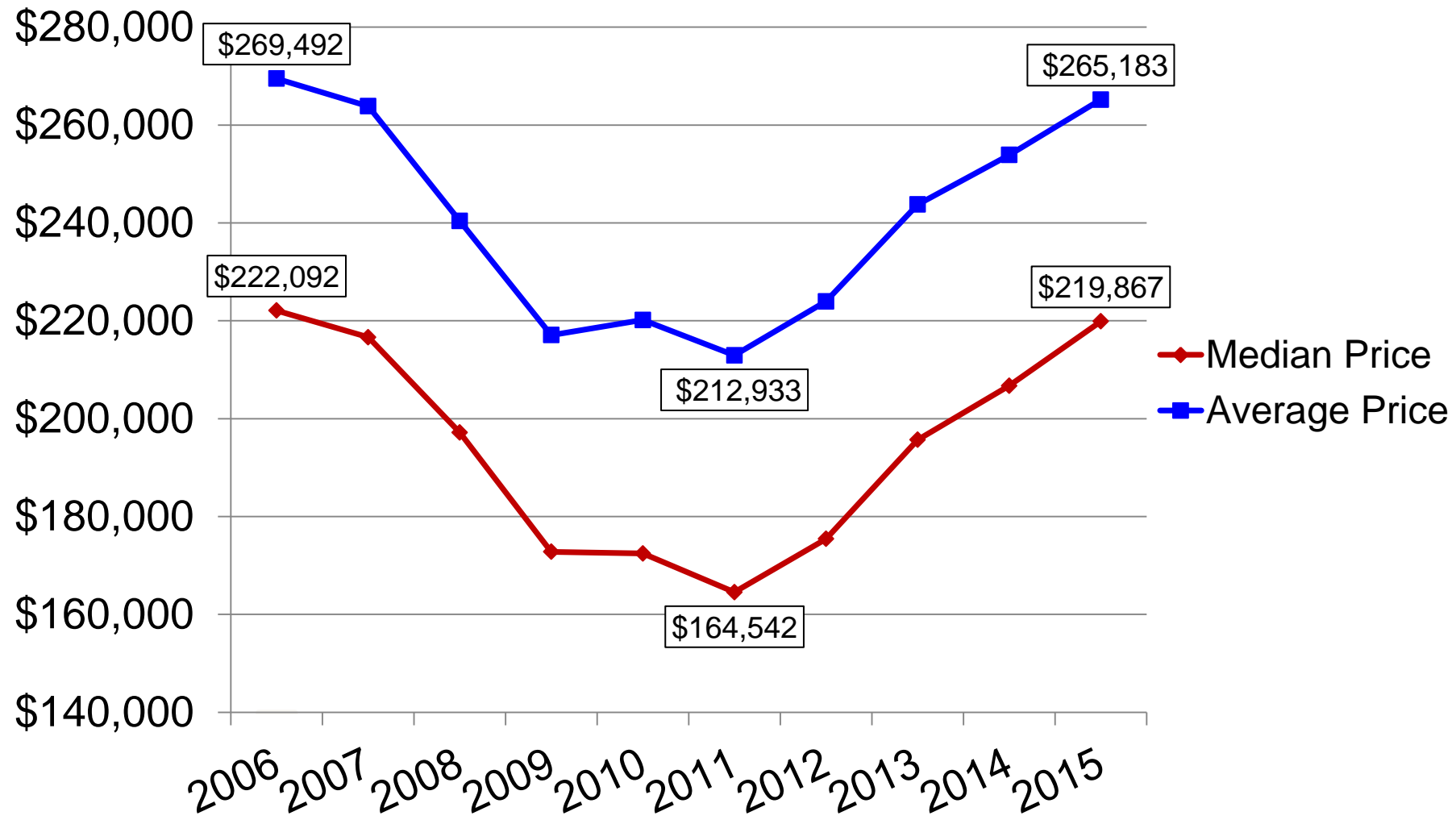
National Picture - Housing

- Condo prices were up 3.6% in Q4 of 2015 compared to Q4 of 2014. The average condo price in the U.S. was \$209,200.
- 72% of MSAs showed gained in median condo prices.
- Some concern about affordability as prices continue to increase due to low supply and lag time for construction.

Source: National Association of Realtors



U.S. Annual Average & Median Existing Single-Family Home Prices



Source: National Association of Realtors



U.S. Annual Percentage Changes in Existing Single-Family Homes

- Increases in **average home price**:
 - 2014: 4.1%
 - 2015: 4.5%
- Increases in **median home price**:
 - 2014: 5.6%
 - 2015: 6.4%
- Changes in **home sales**:
 - 2014: down 3.1%
 - 2015: up 7.0%

Source: National Association of Realtors



Top 10 hottest housing markets for 2016 based on job growth, vacancies, affordability and demographics:

1. Grand Rapids, MI
2. Charleston, SC
3. Austin, TX
4. Baton Rouge, LA
5. San Antonio, TX
6. Colorado Springs, CO
7. Columbia, SC
8. Riverside, CA
9. Las Vegas, NV
10. Tacoma, WA

Source: Harry Salzman from *Bloomberg News*, Dec. 18, 2015 (Ralph McLaughlin, Trulia)



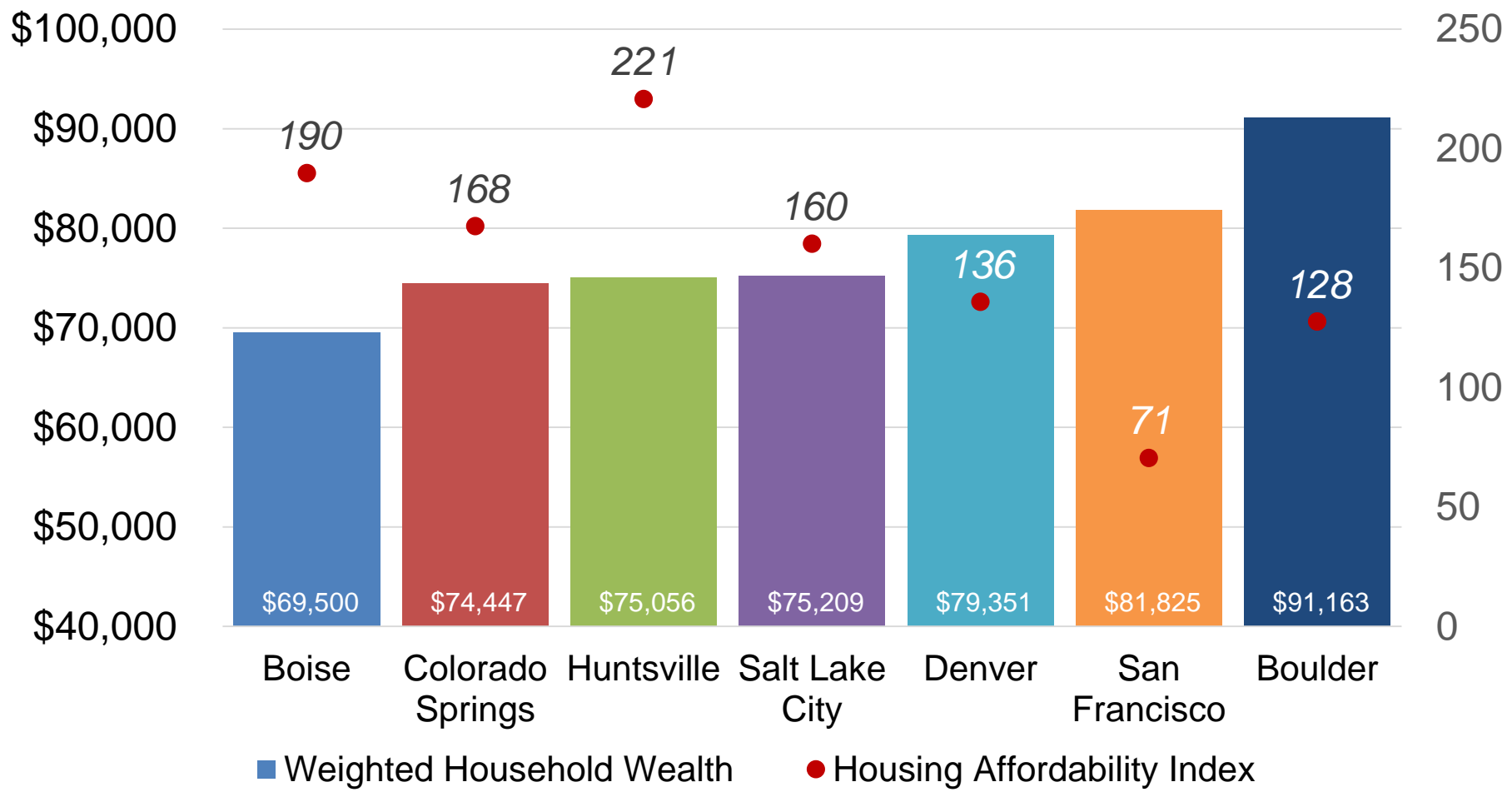
National Picture - Housing

- New home construction is not happening quickly enough in most major U.S. markets to abate the housing shortage and unhealthy price growth.
- Housing Affordability Index (HAI) fell in Q4.
- Job gains, low interest rates, high consumer confidence, increasing rents will likely keep the housing market strong.

Source: National Association of Realtors



2014 Median Wealth & Housing Affordability



Higher Housing Affordability Indices mean greater affordability; U.S. median wealth was \$44,900; U.S. average affordability composite index was 166.
 Sources: Synergos Technologies and U.S. Census Bureau; Credit Suisse and National Association of Realtors



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Current Scenario

- Crude-oil prices have fallen more than 70% since June 2014
- Possible production “freeze” by Saudi Arabia and Russia not likely to have much impact since current levels represent over supply.
- Russia not likely to adhere to agreement anyway

Source: “Oil Ministers to Talk Cuts.” WSJ, Feb. 16, 2016



What's Harmful about Low Oil Prices?

- Expensive drilling financed with low interest rates; loan payments are now difficult
- This makes big banks uneasy (defaults on loans)
- 130,000 energy jobs lost in 2015 (direct employ)
- Low oil prices destabilize retirement accounts (via S&P)



What's Harmful about Low Oil Prices?

- Cheap oil signaling global economic slowdown?
- Emerging markets getting crushed (Braz, Venez, Col, Russ)
- More instability in Middle East
- Home foreclosures rising in oil states
- U.S. energy independence not so certain

Source: "Why People are Freaking Out about Cheap Oil." CNN Money, Feb. 17, 2016



Rationale for Falling Oil Prices

Economic - further increase market share

- Saudi's know they can squeeze out smaller drilling operations.
 - Operating costs: \$25/bbl
 - Investment costs: greater than \$70/bbl

- It's happening (even Halliburton cut another 5,000 jobs in Feb)

Sources: "Oil Crash: Halliburton slashes another 5,000 jobs." CNN Money, Feb. 25, 2016 & University of Colorado Business Economic Outlook Forum (BEOF), Dec., 2015



Rationale for Falling Oil Prices

Political

- Leverage against Iran; should know in 2016 the impact of Iran's supply
- Re-stimulate Chinese demand (both economic and political)
- Saudi's losing out (breaking even)
 - Sense of urgency?
 - Alternative energy sources making headway (both economic and political)

Source: BEOF, Dec., 2015



Oil Companies

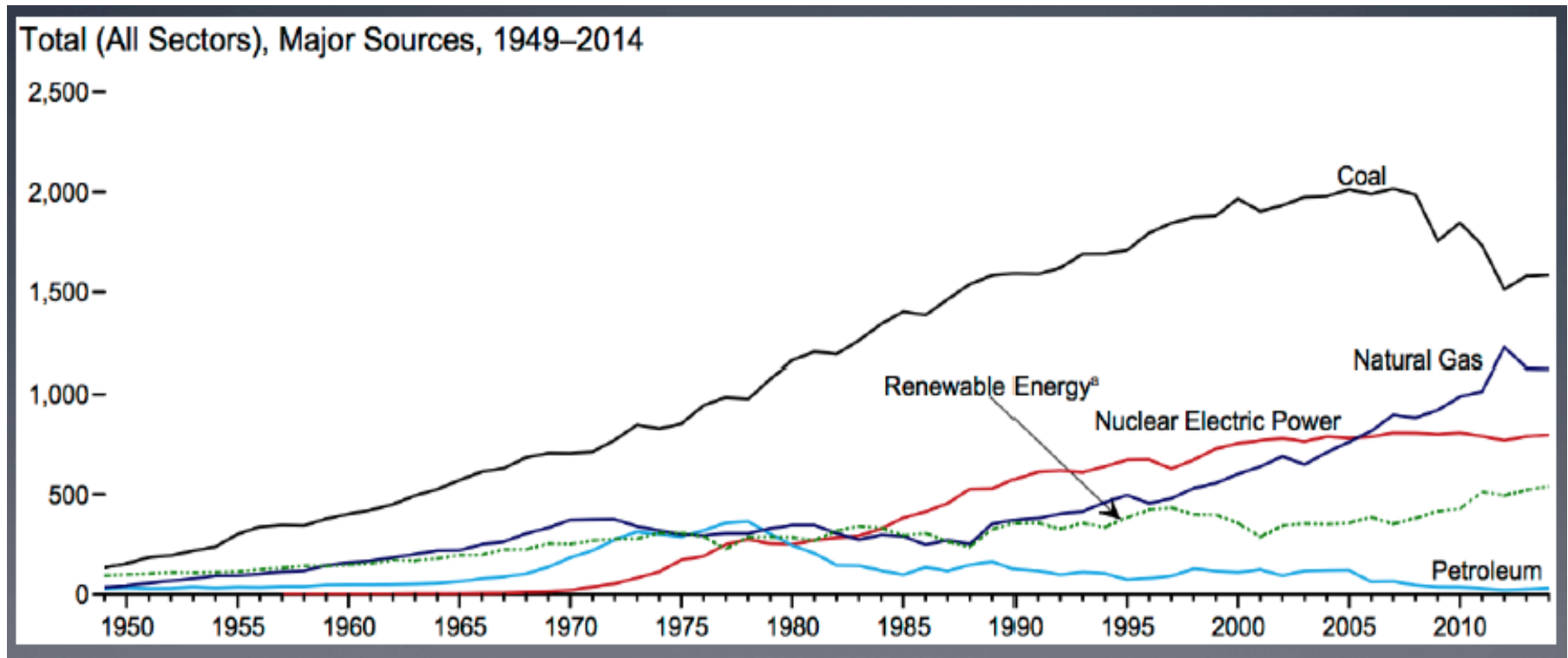
- Just since the beginning of 2015, North American oil and gas producers have sold more than \$5 billion of new shares
- Have oil prices bottomed out?
- Or are oil companies issuing new shares to just offset their losses?
- Current holders of shares unhappy – dilution.

Source: "Beleaguered Energy Firms Still Popular." WSJ, Feb. 19, 2016.



Historic Production by Energy Source

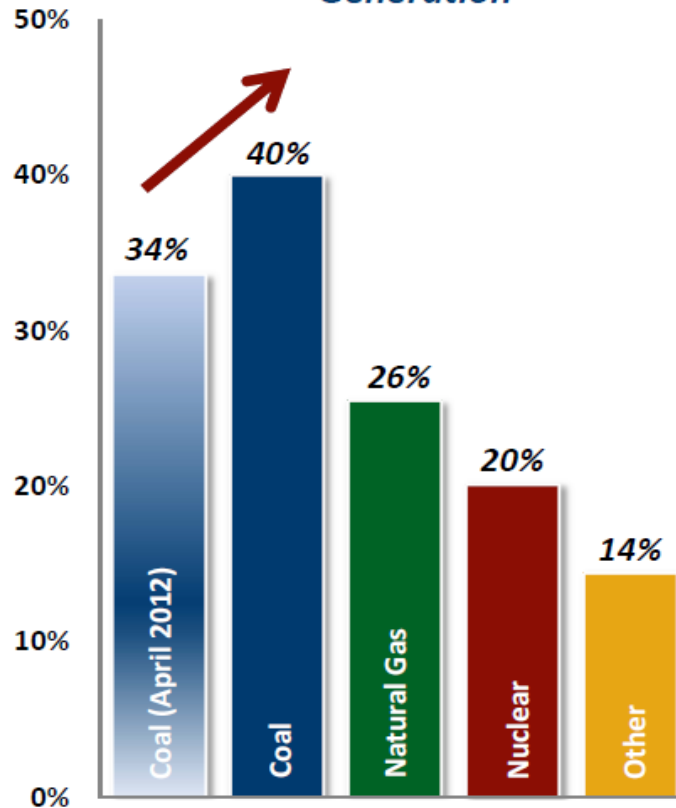
US Electricity Net Generation (billions of kilowatt hours)



Source: Economic Advisors Inc., Denver. US EIA, Monthly Energy Review, Nov., 2015, figure 7.2

U.S. Coal Fuels 40% of Electricity Generation in the U.S.

Share of U.S. Electric Power Sector Generation

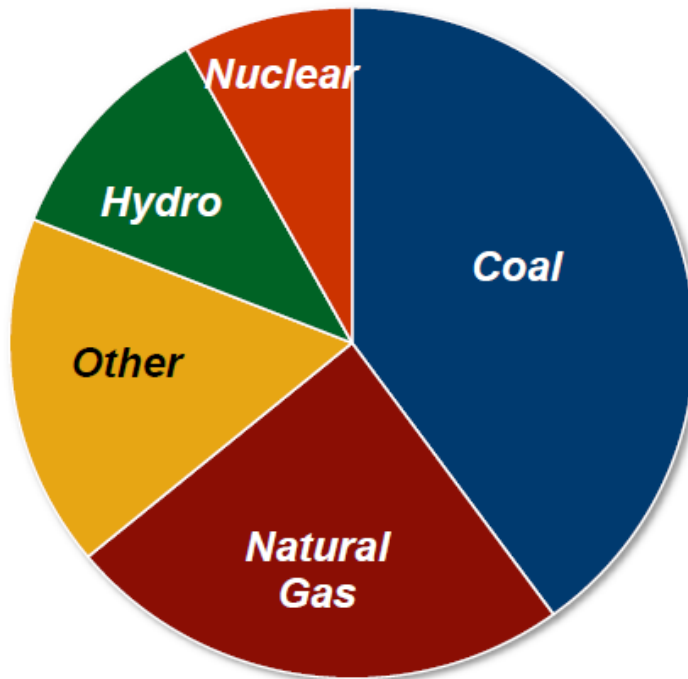


- Coal remains lowest-cost major fuel for electricity generation.

Source: Peabody Global Analytics and EIA. 2014 compared to April 2012.

Coal: The World's Fastest Growing Major Fuel

*Expected Electricity Growth (2011
– 2035)*



- Coal projected to fuel largest percentage of global electricity generation growth
- Coal grew dramatically faster than all other major fuels in past decade
- IEA and other observers project that coal will overtake oil as world's largest energy source in coming years

17

Source: Peabody Energy Analytics, BP Statistical Review of World Energy 2013; Wood Mackenzie; International Energy Agency (IEA), World Energy Outlook Current Policies Scenario.

Renewables

- In 2014, Denmark generated **62%** of its electricity from wind (in 2013, 34%)
- Spain, Portugal & Ireland ~ 20% of electricity from wind (on some days up to 50%)
- Southern Australia – wind farms supply more electricity than coal plants (wind & sun in August 2014 created oversupply of electricity)
- In China, electricity from wind has surpassed power from nuclear plants



Renewables

- In Iowa and SD: 26% of electricity from wind
- Danish study in 2014 showed that new wind farms coming online in 2016 will supply electricity at half the cost of new coal and natural gas plants.
- In Australia (solar boom), cost of electricity powered by the sun is well below coal costs. Operating costs lower for solar even if coal itself were free.
- In U.S., hundreds of solar power plants are being constructed.



Other Commodities

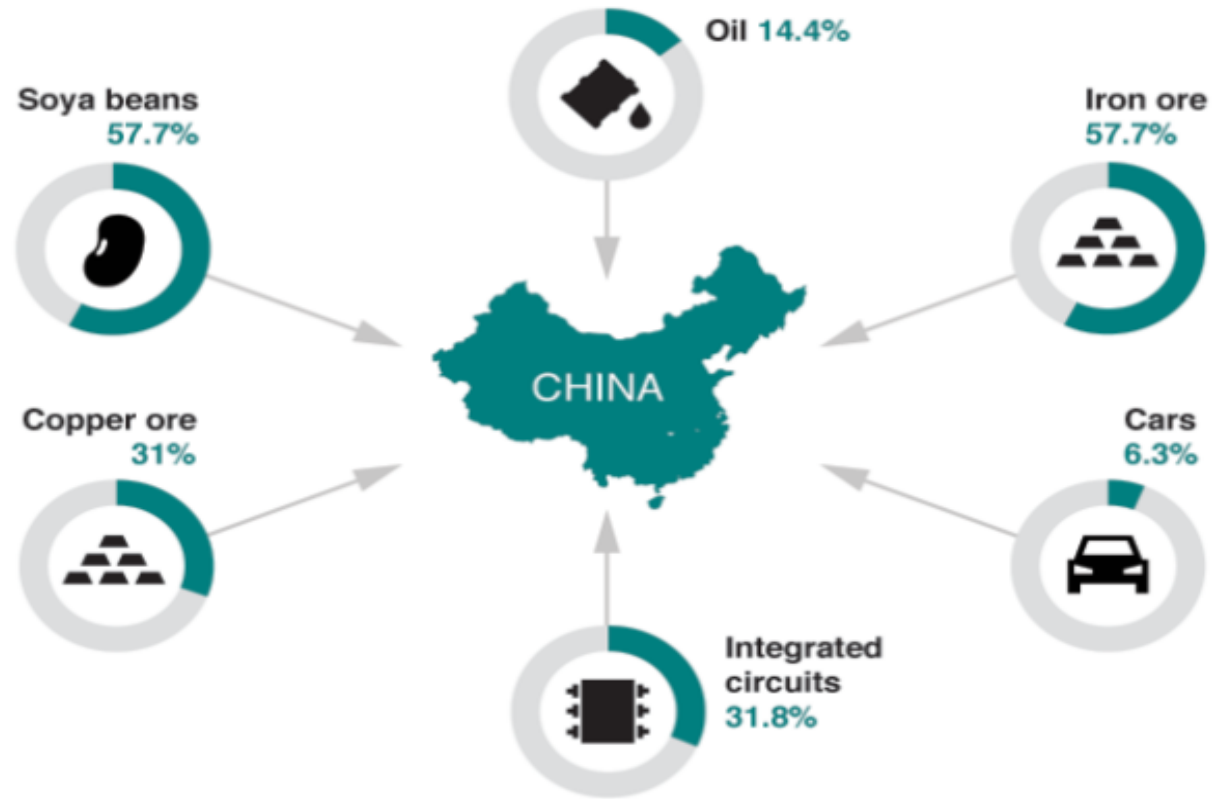
- Soft demand (China*, Brazil!) and overflowing supply: *very low prices*
- Low borrowing costs & assumption of growth in China led producers to expand too much
- Not just oil: aluminum, steel, copper, platinum, and palladium...
- Bloomberg Commodity Index at weakest level since June 1999
- De Beers suspending dividends and selling off 60% of assets: up to 85,000 jobs cut

*In 2014, China overtook US as biggest trading nation; double-digit falls in exports and imports in Jan.

Source: "Copper, Aluminum and Steel Collapse to Crisis Levels." CNN Money, Dec. 9, 2015.

China's central role in world trade

■ China's imports as a percentage of world total



Main exporting countries

-  Oil: Saudi Arabia, Russia
-  Cars: Germany, Japan
-  Iron: Chile, Peru

-  Copper: Australia, Brazil
-  Circuits: Taiwan, Hong Kong
-  Soya beans: US, Brazil

Source: OEC

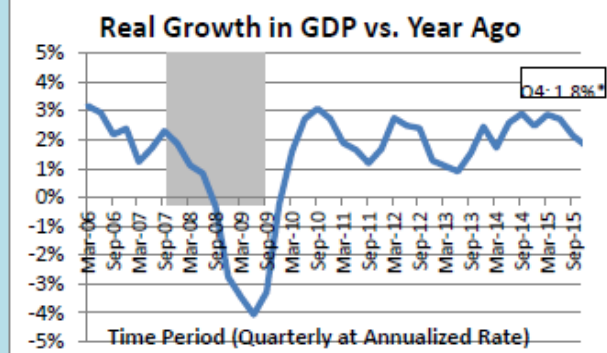
BBC

China: almost **20%** of world population (1.4 billion people)

U.S. less than **5%** of world population (320 million people)

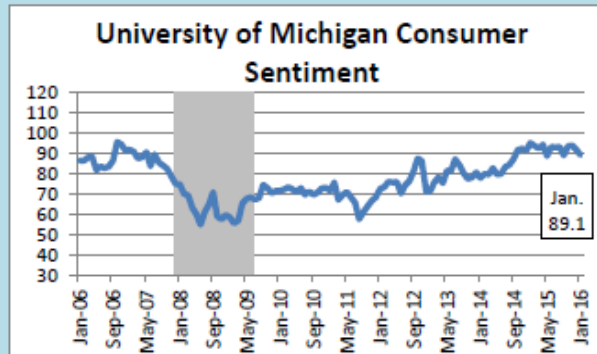
The Big Picture

U.S. Quarterly GDP



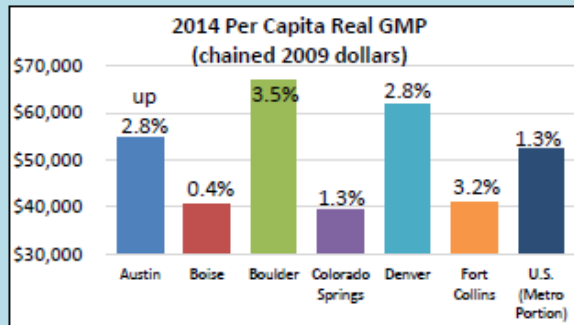
Source: U.S. Bureau of Economic Analysis
*Real GDP Percent Change from Q4 Year Ago, SA

U.S. Consumer Sentiment



Source: University of Michigan

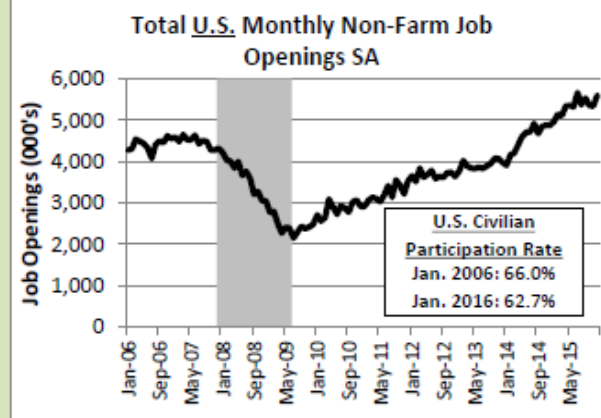
MSA GMP Per Capita



Note: Military data is included in both GMP and population.
Percentage change compares 2014 to 2013 Per Capita Real GMP.
Sources: U.S. Bureau of Economic Analysis

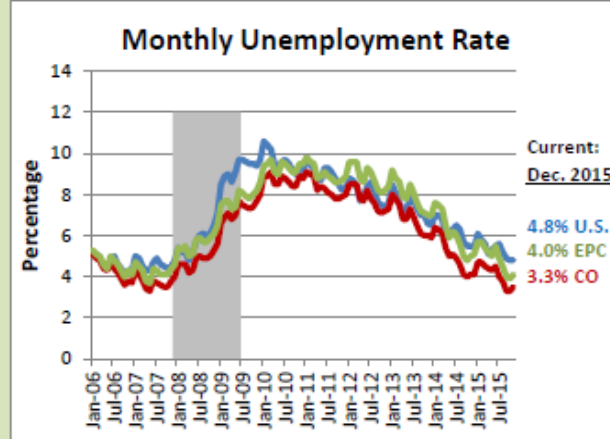
Labor Force/Employment

U.S. Non-Farm Job Openings



Source: U.S. Bureau of Labor Statistics; Jobs data is for Dec. 2015.

Unemployment Rate



Source: BLS-LAUS
Data not seasonally adjusted

Colorado Springs MSA Job Openings

December 2015

Total job openings: 13,944
Average posting duration: 44 days
Median salary of posted jobs: \$64,700
Colorado median salary: \$59,550

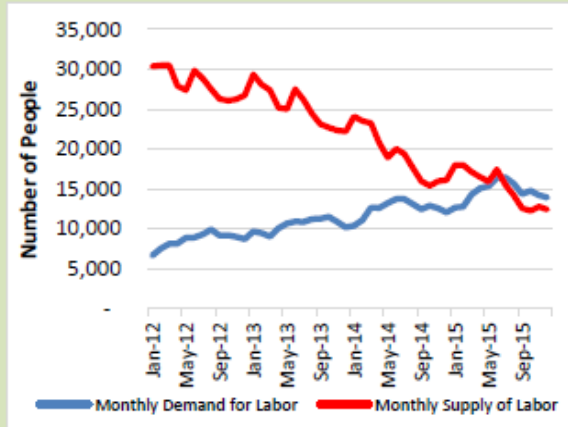
Top Job Titles

- Software Engineer (748 jobs)
- Customer Service Rep (665 jobs)
- Registered Nurse (622 jobs)
- Administrative Assistant (534 jobs)
- Sales Rep (491 jobs)
- Teller (440 jobs)
- Physical Therapist (431 jobs)
- Systems Engineer (427 jobs)
- Project Manager (418 jobs)
- Systems Administrator (385 jobs)

December 2015	
Demand for Labor	Supply of Labor
13,944	12,424

Sources: Pikes Peak Workforce Center – WANTED Analytics™, U.S. Bureau of Labor Statistics; UCCS Southern Colorado Economic Forum

Colorado Springs MSA Labor Force



Sources: Pikes Peak Workforce Center – WANTED Analytics™, U.S. Bureau of Labor Statistics; UCCS Southern Colorado Economic Forum



College of Business

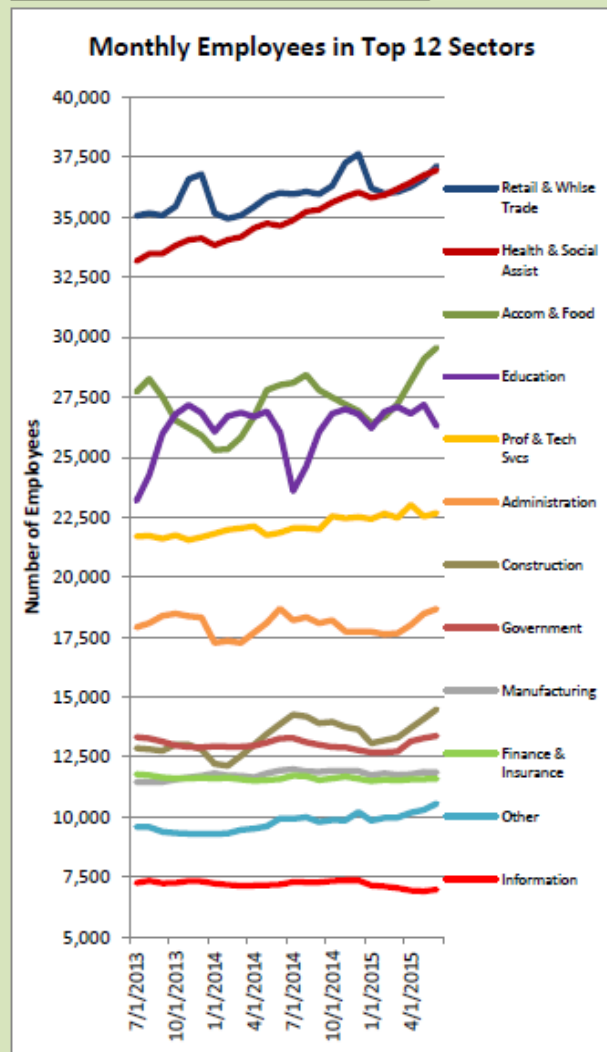
UNIVERSITY OF COLORADO COLORADO SPRINGS

(updated 02/22/2016)

Employment/Wages

El Paso County

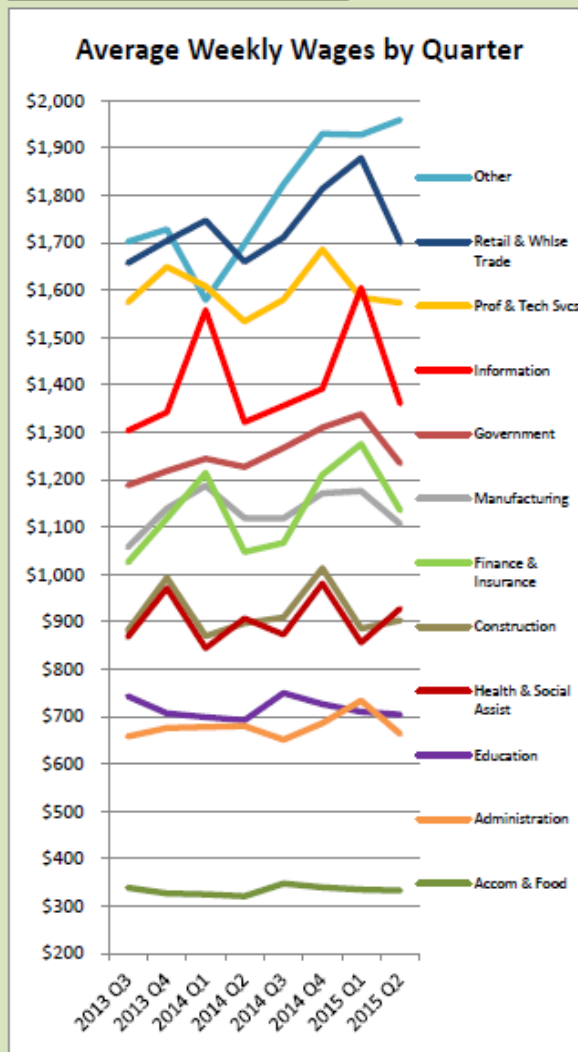
Employment in Selected Sectors



Source: Colorado Department of Labor QCEW
QCEW data lags by two quarters.

El Paso County

Wages in Selected Sectors

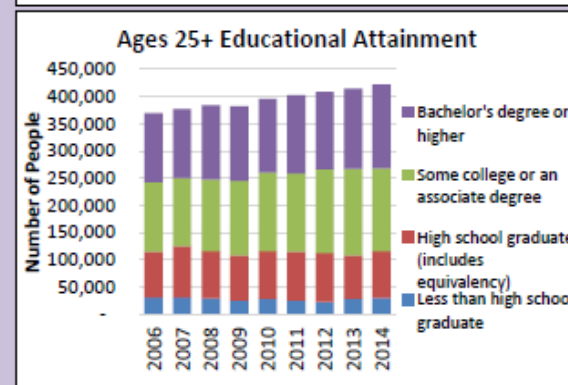
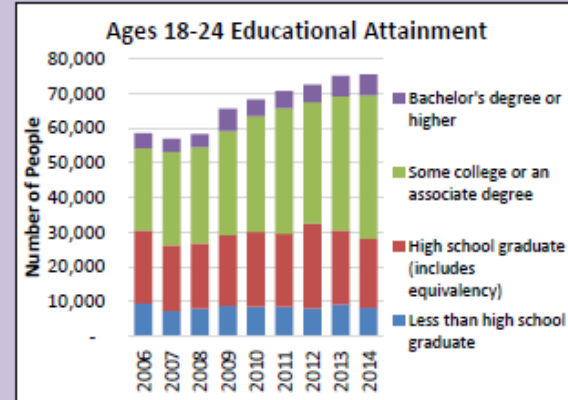


2015 Q2 for All Industries		
Colorado Average Weekly Wage	El Paso County Average Weekly Wage	El Paso County Total Employment
\$989	\$864	256,854

Source: Colorado Department of Labor QCEW

Education

El Paso County



Population with Bachelor's Degree or Higher 2014

	Colorado Springs (city)	Colorado	United States
Ages 18-24	9.5%	11.0%	10.1%
Ages 25+	37.2%	37.5%	30.1%

Population with Some College or an Associate Degree

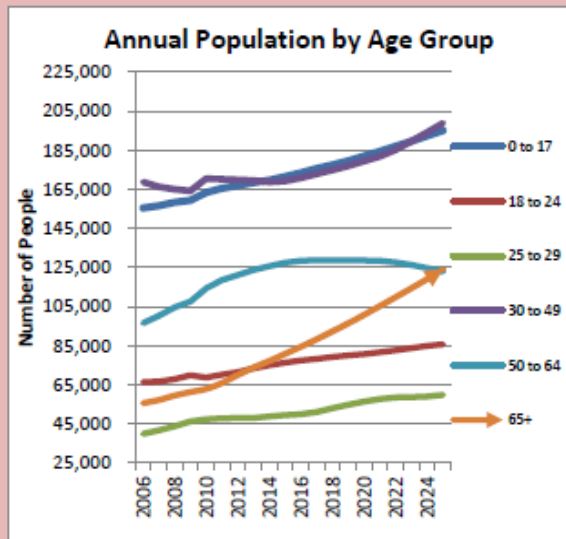
	Colorado Springs (city)	Colorado	United States
Ages 18-24	53.5%	46.6%	45.8%
Ages 25+	35.1%	30.9%	29.2%

Source: U.S. Census Bureau, American Community Survey

Demographics

El Paso County

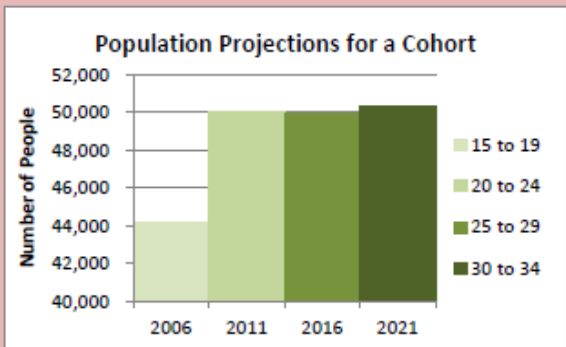
Annual Population Projections



Source: Colorado Department of Local Affairs

El Paso County

Projections for a Cohort



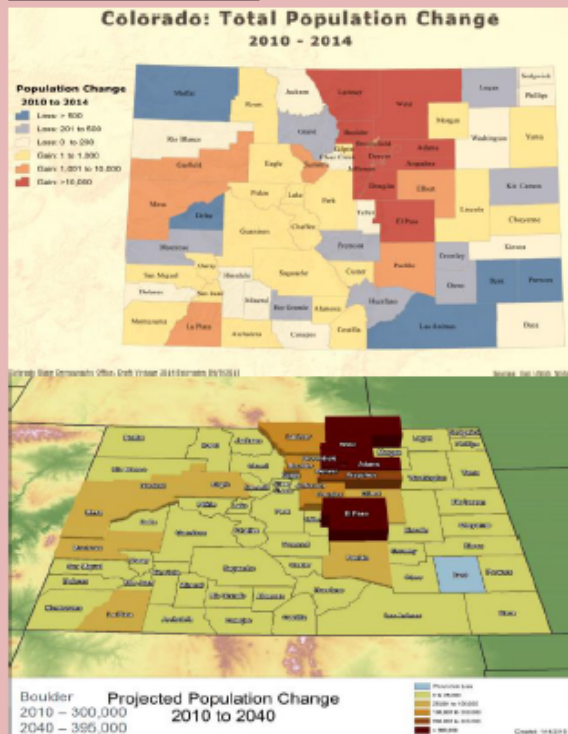
Source: Colorado Department of Local Affairs

2014 Population

Colorado Springs (city)	El Paso County	Colorado Springs MSA (El Paso & Teller Counties)
445,830	663,519	686,869

Source: U.S. Census Bureau, American Community Survey

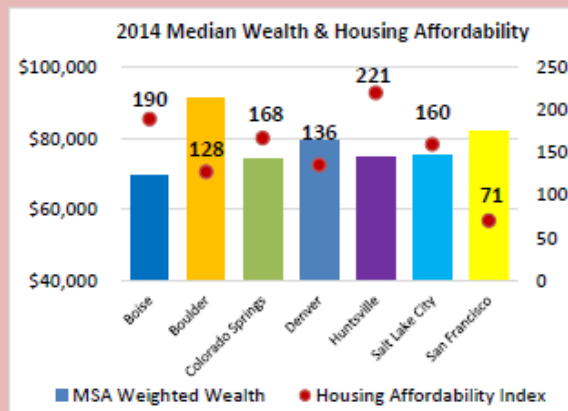
Population Growth



El Paso is one of four counties with projected growth of 300,000+.

Source: Colorado Department of Local Affairs

Cost of Living

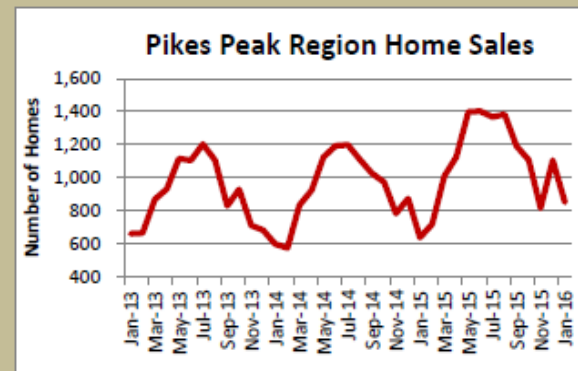


Higher Housing Affordability Indices mean greater affordability. In 2014, U.S. median wealth was \$44,900 and the U.S. average affordability composite index was 166.

Sources: Synergos Technologies and U.S. Census Bureau; Credit Suisse and the National Association of Realtors

Real Estate

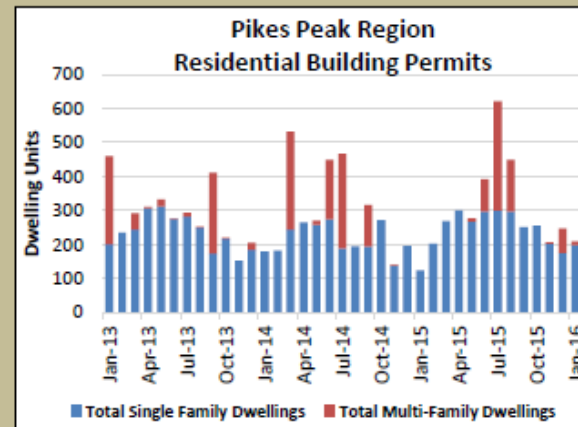
Monthly Home Sales



Median Home Price 2015 Q4				
Location	Colorado Springs	Denver	Boise	United States
Price	\$237,600	\$353,500	\$189,700	\$222,700
1-year % Change	5.6% increase	12.3% increase	8.4% increase	6.9% increase
MSA Rank	36	18	76	n/a

Sources: Pikes Peak Assoc. of Realtors; Nat'l Assoc of Realtors

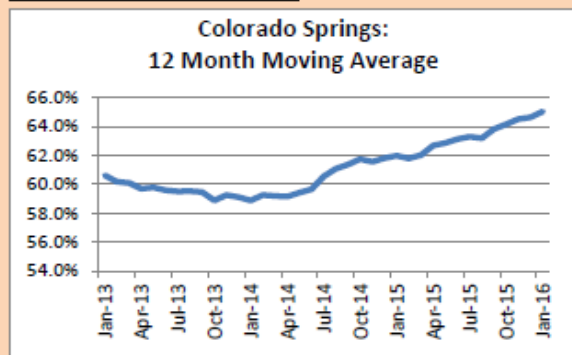
Monthly Building Permits



Source: Pikes Peak Regional Building Department

Tourism

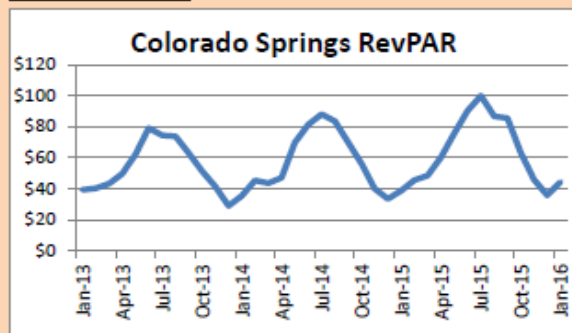
Hotel Occupancy Rate



Hotel Occupancy Rate January 2016		
Colorado Springs	Denver	Colorado
50.0%	62.7%	58.9%

Source: Colorado Hotel and Lodging Association, Rocky Mountain Lodging Report

Hotel RevPAR

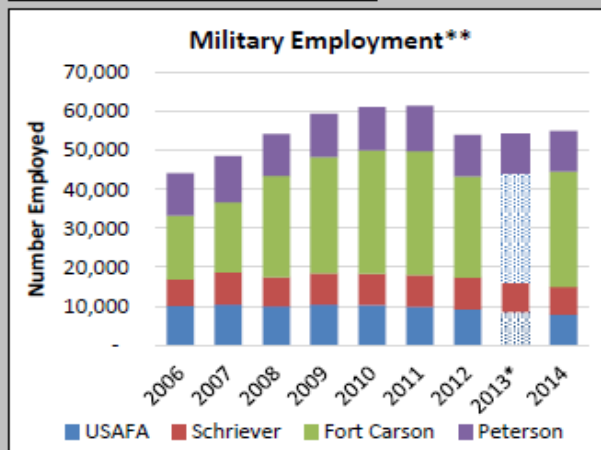


Hotel RevPAR January 2016		
Colorado Springs	Denver	Colorado
\$44.22	\$77.63	\$92.88

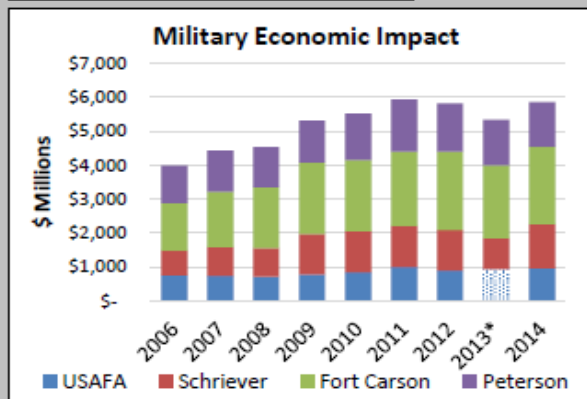
Source: Colorado Hotel and Lodging Association, Rocky Mountain Lodging Report

Military

El Paso County Employment



Expenditures in El Paso County



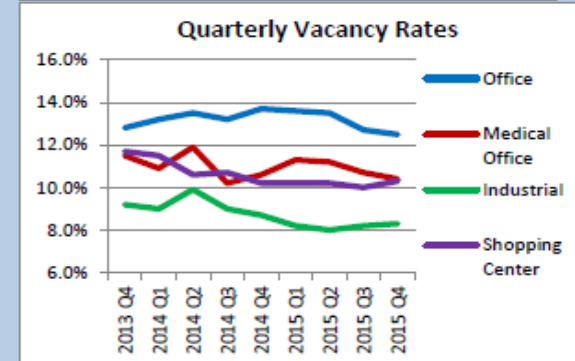
*2013 data was not available for all locations. Textured bars are an estimate made by the UCCS Southern Colorado Economic Forum.

**The employment numbers for Schriever and Peterson include significant numbers of civilian contractors. The employment numbers for USAFA include cadets and several kinds of contract workers.

Sources: Department of Military and Veteran Affairs; Colorado Springs Regional Business Alliance; respective military installations

Additional Metrics

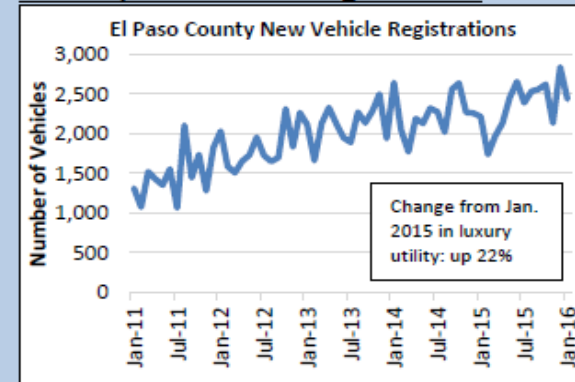
Colorado Springs Commercial Real Estate



Rent per Square Foot 2015 Q4			
Office	Medical Office	Industrial	Shopping Center
\$10.58	\$12.23	\$7.16	\$13.39

Source: Turner Report

Monthly New Vehicle Registrations



Source: El Paso County Clerk and Recorder
Luxury utility categories (all terrain, camper trainer, trailer coach and trailer utility) are not included in graph line above, but % change in this category is noted in text box.

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How Much Do Start-ups and Small Businesses Really Matter?

- In 2012, there were 5.7 million employer firms in the U.S.
- Firms with fewer than 500 workers accounted for 99.7% of those businesses
- Businesses with less than 20 workers made up 89.6%.
- In 2012, there were 126,478 employer firms in Colorado
- Firms with fewer than 500 workers accounted for 97.6% of those businesses
- Businesses with less than 20 workers made up 88.1%.

Source: U.S. Census Bureau



How Much Do Start-ups and Small Businesses really matter?

- “Small firms accounted for 63% of the net new jobs created between 1993 and mid-2013.
- Since the end of the recession (from mid-2009 to mid-2013), small firms accounted for 60% of the net new jobs.
- Small firms in the 20-499 employee category led job creation.”

Source: SBA's Office of Advocacy



Interest Rates

- Negative interest rates have not lowered currency values (exchange rates)
- Bank of Japan cut to negative rates in January, but the yen only had one weak day before actually appreciating 4%
- Same in Sweden
- European Central Bank hinted they will further cut (negative) rates in March.

Source: "Central Bankers Have Lots of Ammo." WSJ, Feb. 16, 2015.