



cber.co Colorado Economic Review Through May 2016

Colorado-based Business and Economic Research
Prepared
June 21, 2016

Overview of Economic Review

This chartbook provides a series of graphs, tables, and discussions that review changes in the global, U.S. and Colorado economies. The global economy continues to be fragile, while the U.S. and Colorado economies are on more solid footing. Based on data through the first five months, the state is on track to add 67,900 jobs in 2016. This review is divided into the sections listed below.

Global and U.S. Economy

- Global and U.S. GDP
- U.S. Economy
 - Labor
 - Inflation, Financial Markets and Price of Oil
 - Services, Manufacturing, Retail, and Savings
 - Construction and Housing
 - Summary of U.S. Economy

The Colorado Economy

- Employment, Wages, and Unemployment
- DIA, Auto Sales, Manufacturing
- Construction and Housing
- Real GDP
- Number of Private Establishments/State and County
- Summary



The Global and U.S. Economy

Global and U.S. Economy Over the Past Month...

From an economic perspective, very little has changed over the past month.

Internationally, the major story is Brexit, the referendum where the U.K. will vote whether to remain in the European Union. There are mixed opinions about the impact the U.K.'s would have on the country and the EU.

The issue has been thrown into limbo with the murder of U.K. lawmaker Jo Cox. The vote is scheduled for June 23rd.

Closer to home the Bureau of Labor Statistics released its latest report showing the U.S. added only 38,000 jobs in May. The report was well below expectations and less than the most recent ADP report showing the U.S. had added 173,000 private jobs last month.

As a result, volatility in the equities markets has increased.

Janet Yellen announced that the Federal Reserve would push back interest rate increases because of uncertainty caused by Brexit and the recent jobs report.

At the moment, these are the most pressing short-term risks facing the country.

38,000 U.S. Jobs in May – Really?

In early June, BLS reported the U.S. added only 38,000 jobs in May. The low job numbers do not align with other economic data.

This presentation provides the following data that illustrates the BLS report is most likely an anomaly, rather than a trend that the economy has slipped a notch or two.

- The number of people quitting their jobs continues to increase. This is an indication they have options. In addition, the number of openings is also increasing.
- Overall, the housing market is strong.
- Construction is solid.
- Wages are rising.
- The rate of inflation has risen slightly; this is important to the Fed.
- Consumers are spending and retail sales are solid.
- Consumers are also saving.
- Oil prices have risen to about \$50 per barrel and are likely to reach \$60 in 2017.
- The U.S. is approaching full employment, which means the U.S. is more likely to see slower levels of job growth in the future.

The following information comes from various sources. It supports the position that the U.S. economy should continue to show solid growth in the months ahead.

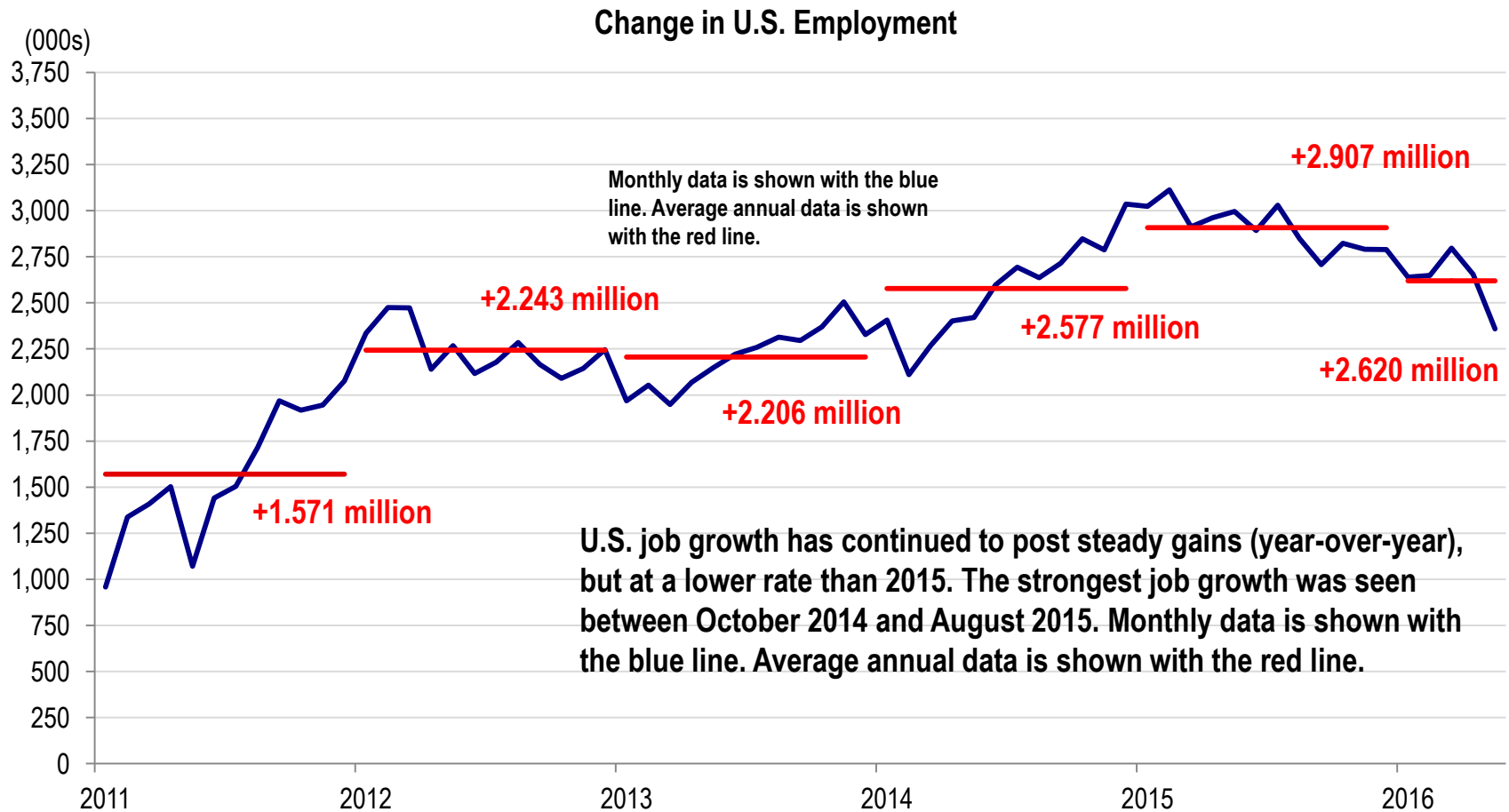
- Three days prior to the BLS report ADP reported the U.S. private sector had added 173,000 jobs in May.
- Initial unemployment claims are low.
- U.S. job growth is geographically solid, with strength in the western half of the country and weakness in states that are have strong ties to energy and agriculture.
- Wages are rising for people in all industries, company size, age groups, and job tenure. The rate of these increases has exceeded the rate of inflation.
- The increase in the number of U.S. jobs is broad-based.
- Agriculture prices may be nearing the bottom, i.e. the future may be brighter for agriculture.



The United States Economy

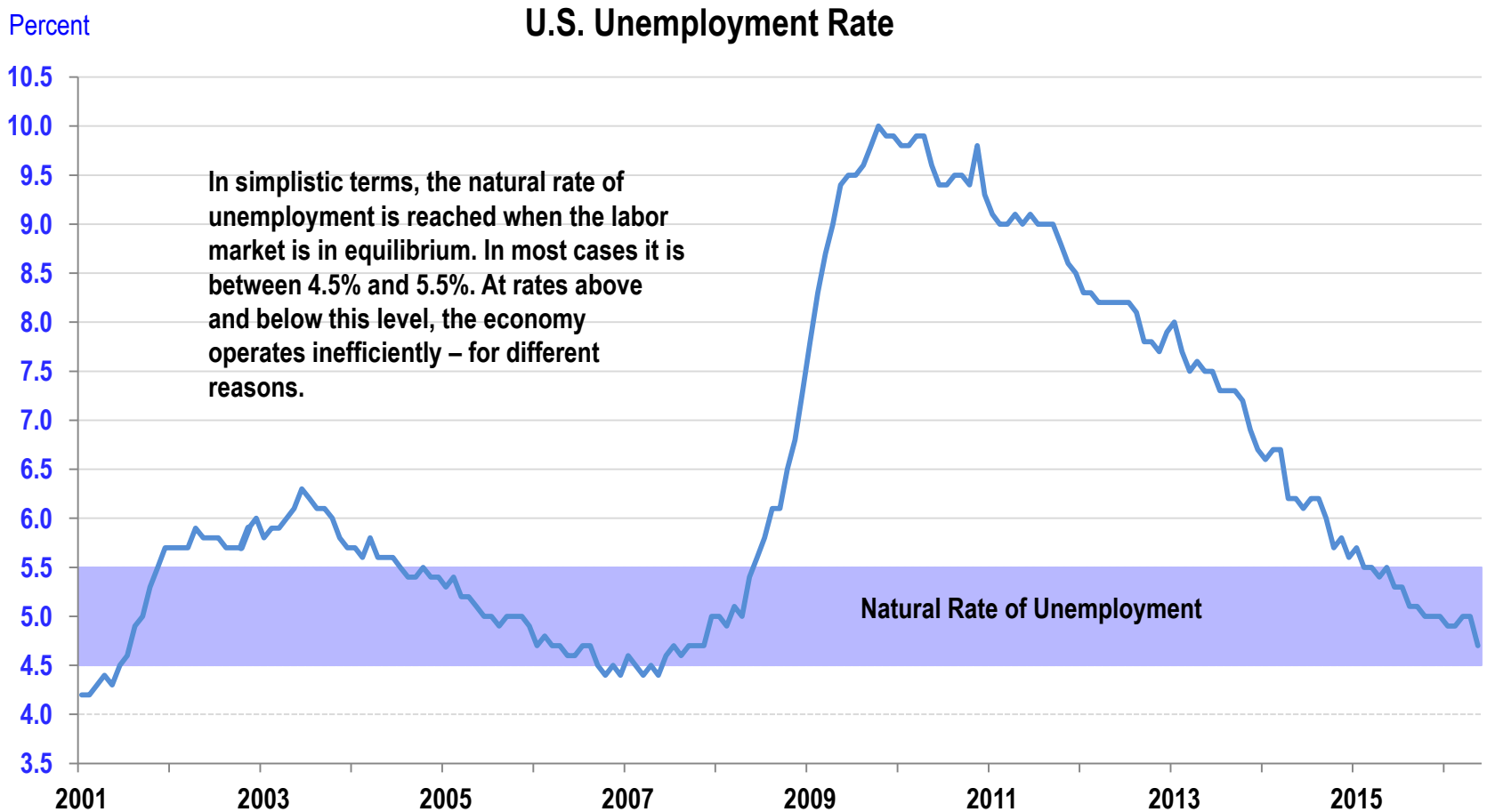
Labor

Change in U.S. Employment Year-Over-Year



Source: Bureau of Labor Statistics, NSA; cber.co.

U.S. Unemployment Rate



Source: Bureau of Labor Statistics, SA, cber.co.

Colorado-based Business and Economic Research <http://cber.co>

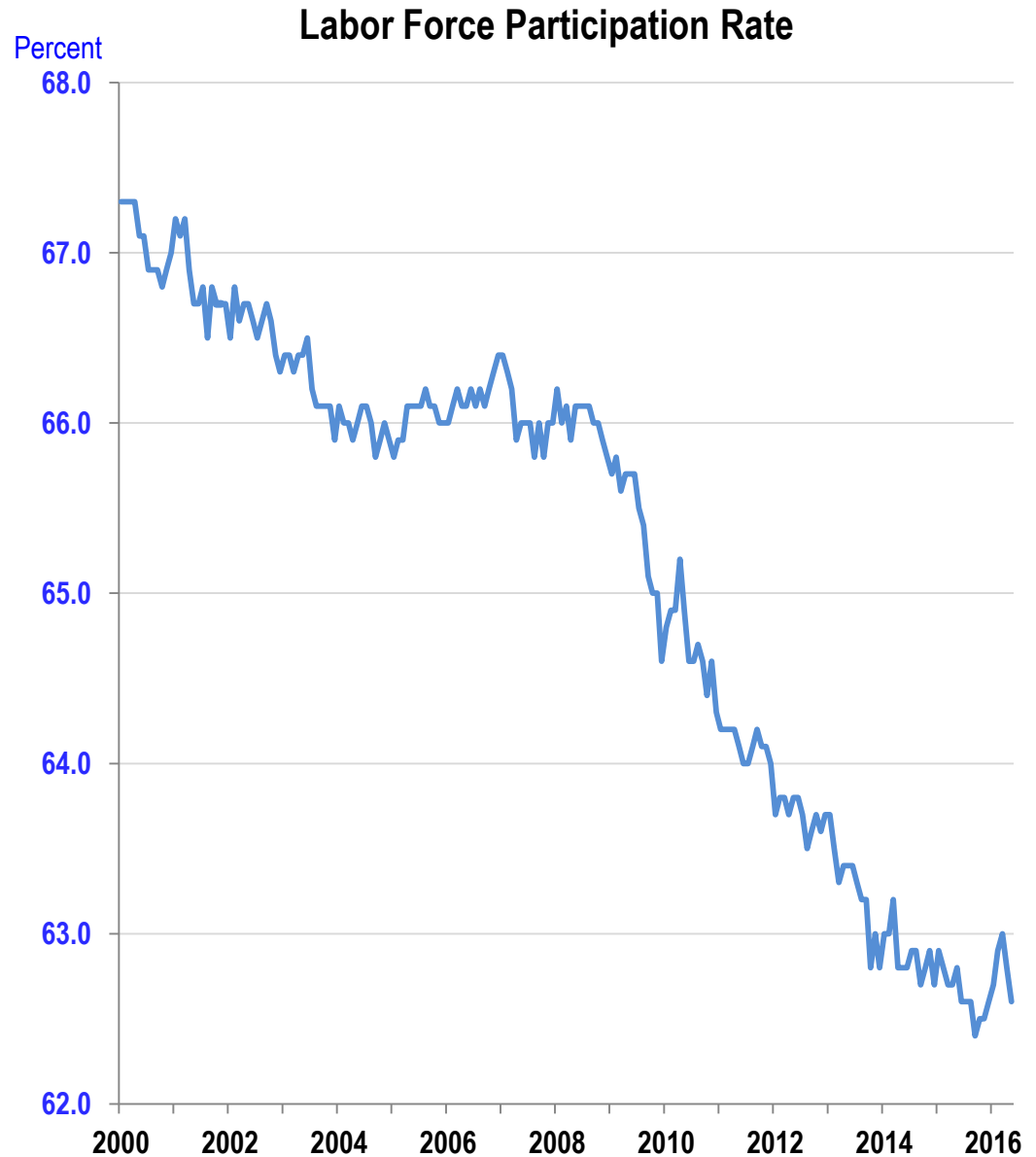
● Labor Force Participation Rate



After peaking in 2000, the labor force participation rate declined until late-2013. During this decline the rate fell from 67.3% to 62.8%. It has since stabilized around that value.

The decline in the labor force participation rate is the result of a structural change in the labor market, i.e. it is a change in demographics.

The Labor Force Participation Rate is the percentage of people eligible to participate in the labor force (either employed or actively looking for work) as a percentage of the labor force.



Source: Bureau of Labor Statistics, SA.

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● The Effect of Low Unemployment Rates and Reduced ● Participation Rates on Employment Growth

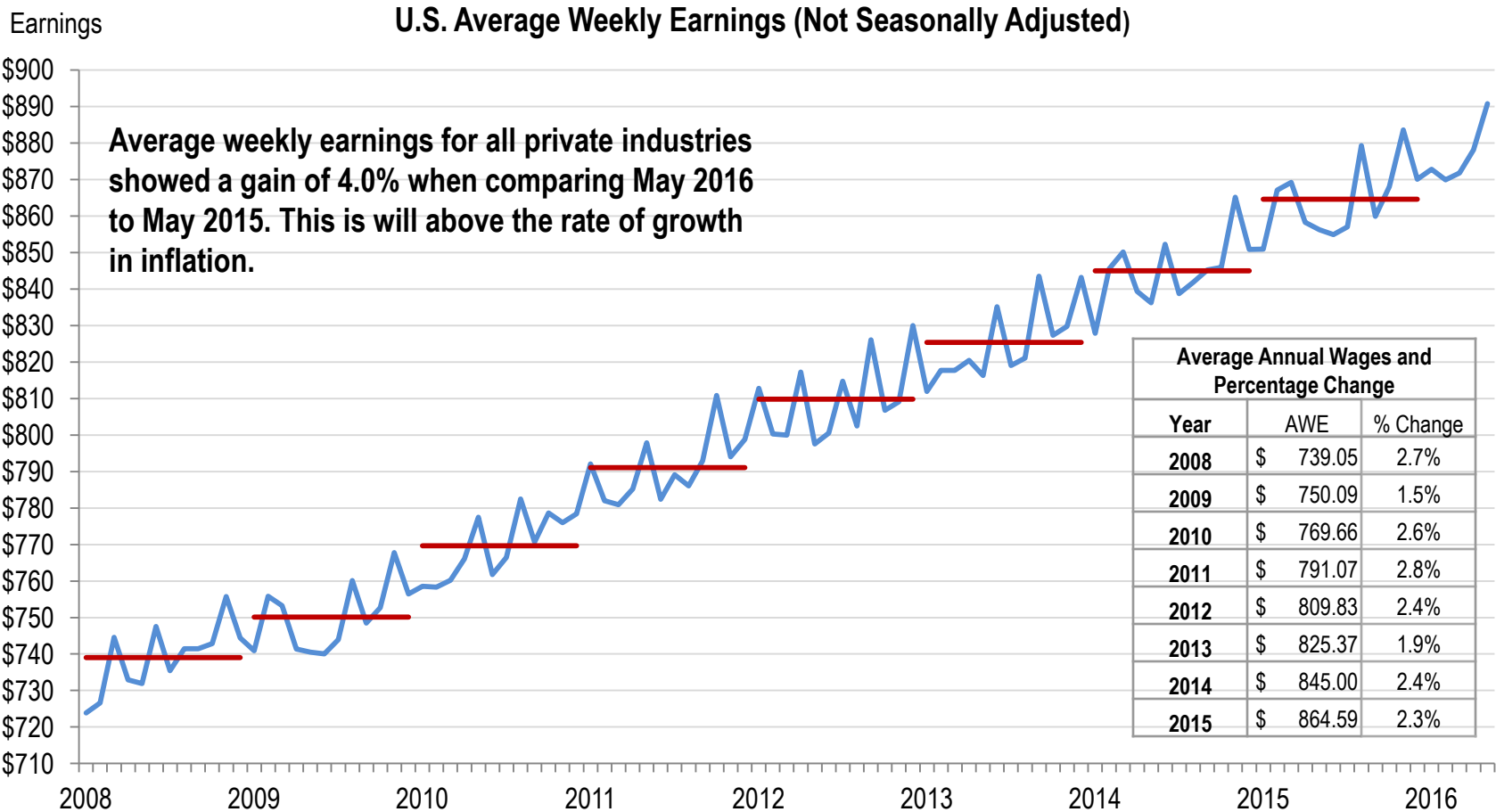
In the previous charts we have seen that:

- When unemployment rates are low, there are fewer available people to work.
- When participation rates are low, there are fewer people willing to work.

In turn, total employment and sales may be suppressed by companies if they cannot find quality workers. To meet demand, companies may be forced to:

- Invest in processes or capital expenditures to meet demand for their goods and services.
- Outsource or offshore work.
- Allow employees to work overtime.
- Leave money on the table by not meeting the demand for goods and services.

U.S. Average Weekly Earnings of All Employees (Private Sector)

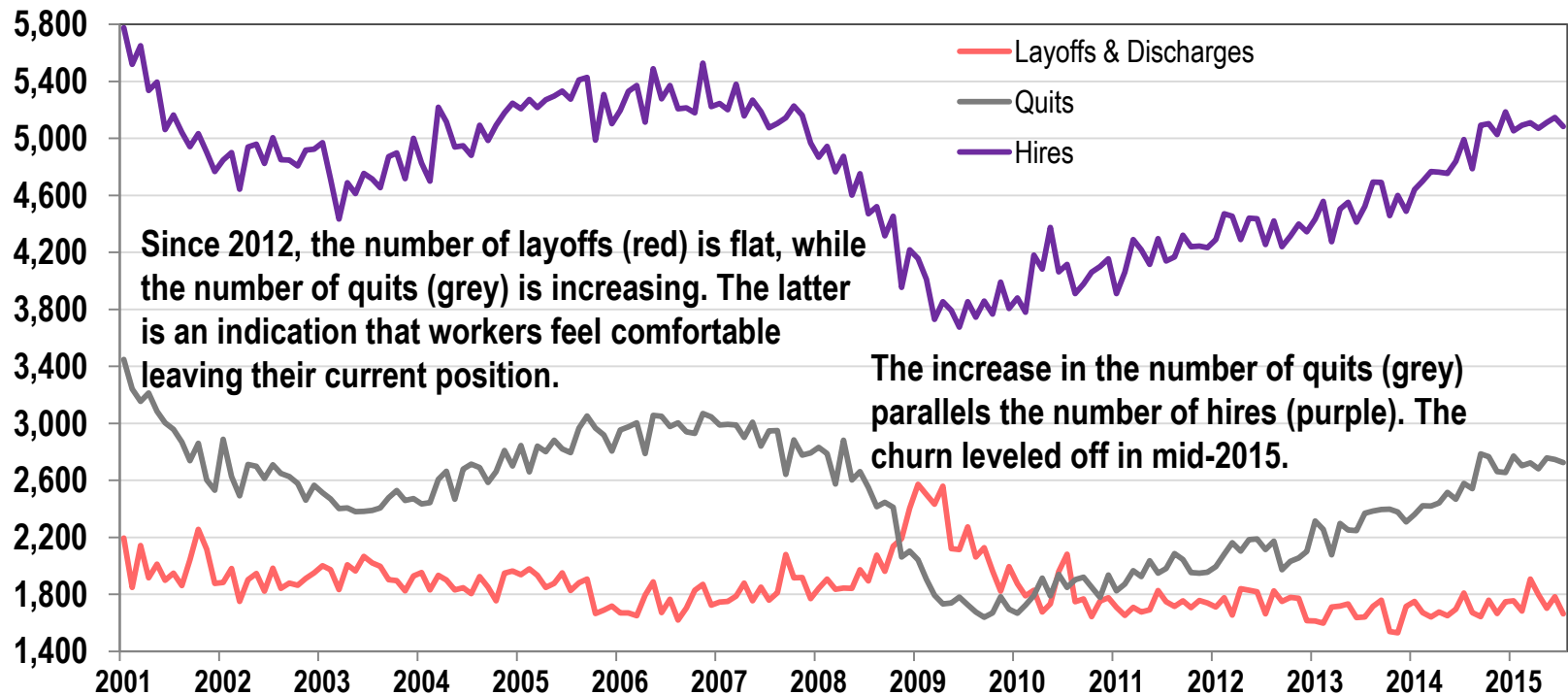


Source: Bureau of Labor Statistics, NSA, cber.co.

U.S. Hires, Layoffs/Discharges, and Quits

Hires, Layoffs/Discharges, and Quits

Thousands



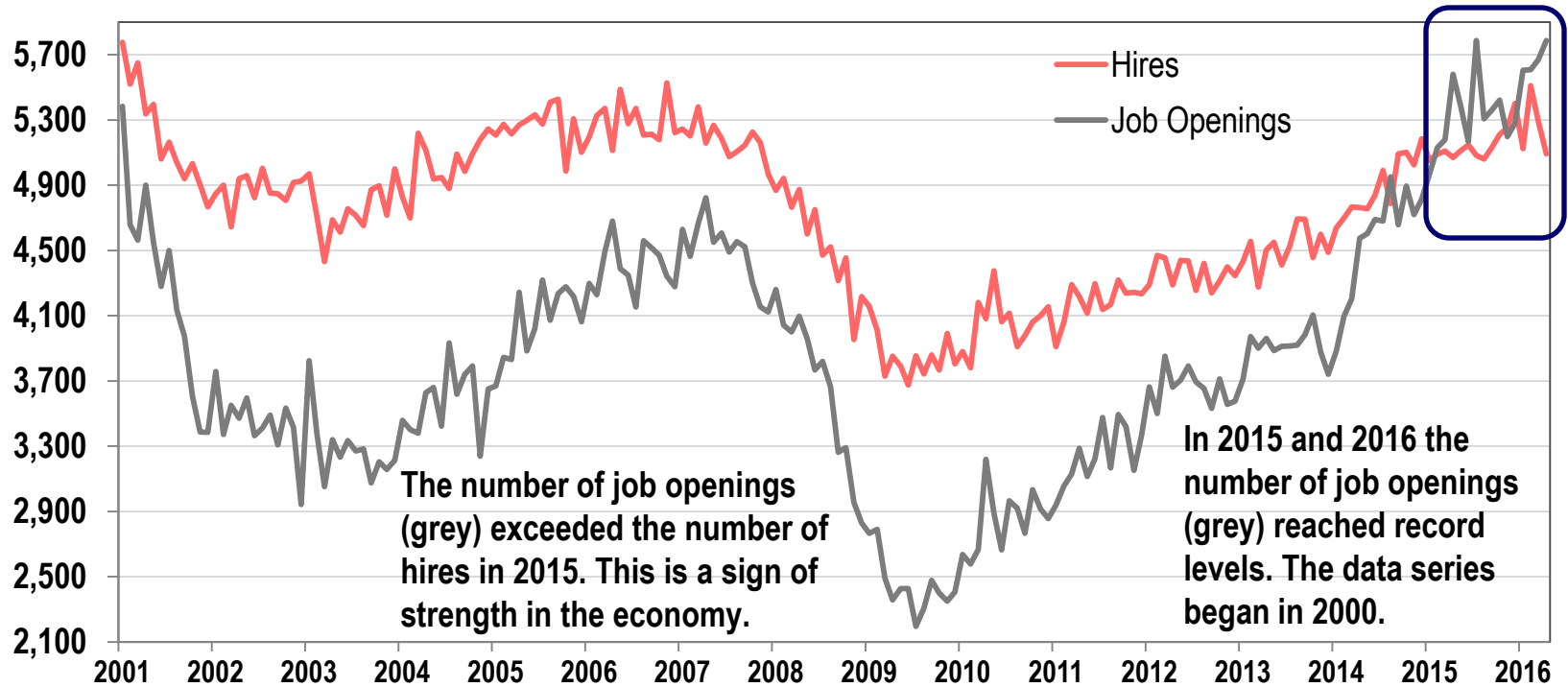
Source: Bureau of Labor Statistics, SA, cber.co.

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U.S. Job Openings and Hires

Job Openings and Hires

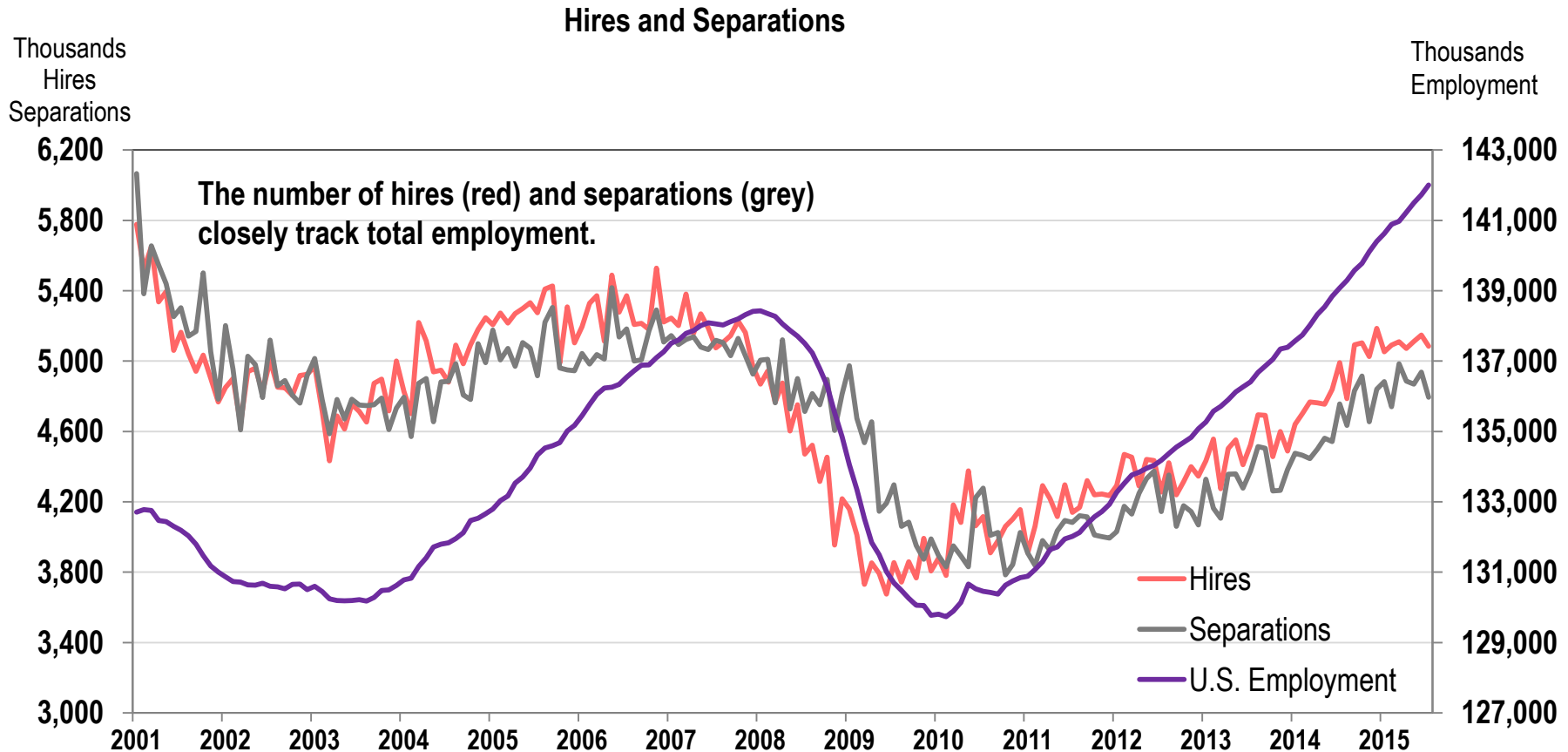
Thousands



Source: Bureau of Labor Statistics, MSA; cber.co.

Colorado-based Business and Economic Research <http://cber.co>

U.S. Hires and Separations



Source: Bureau of Labor Statistics, NSA, cber.co.



U.S. Economy

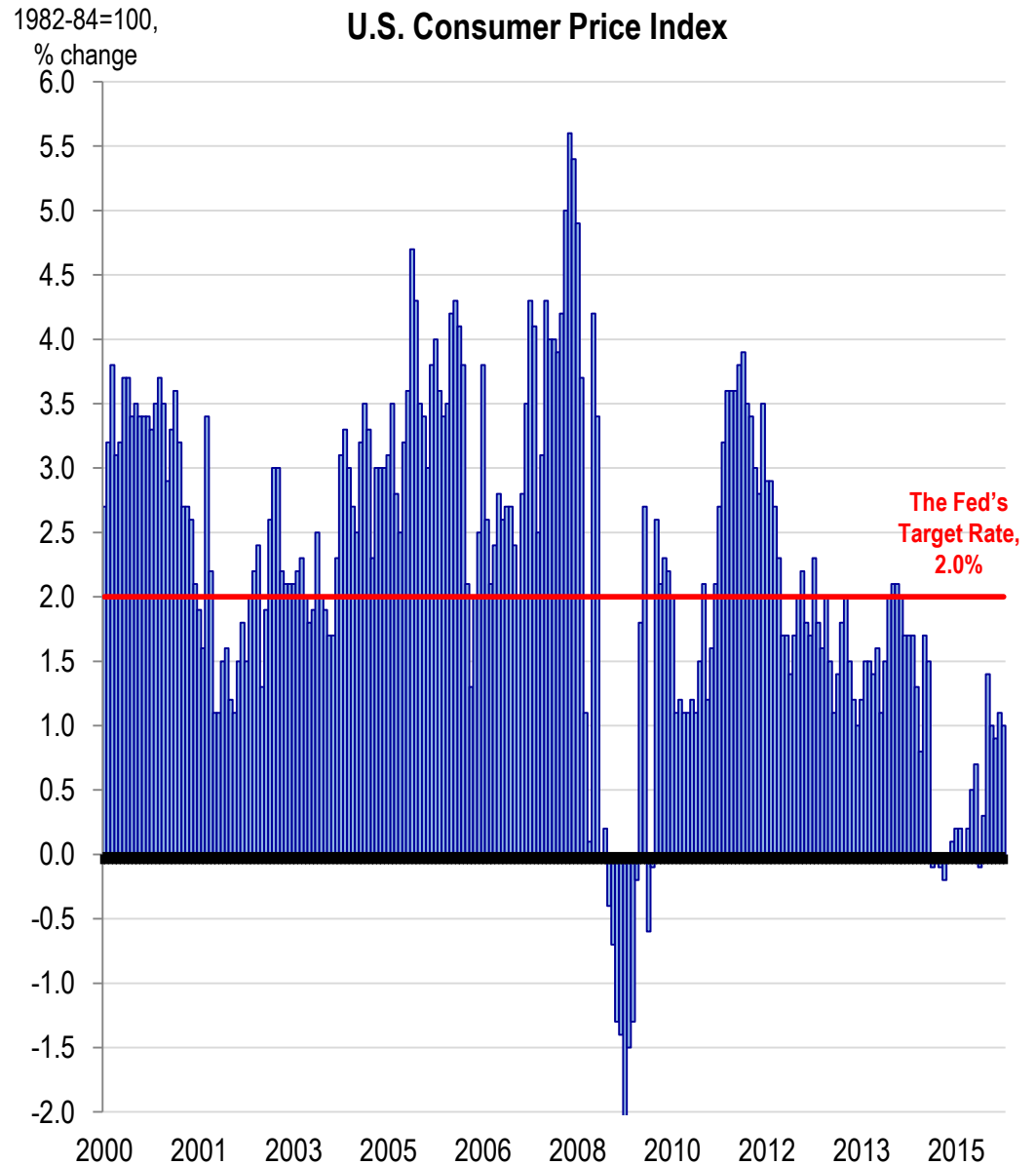
Inflation, Financial Markets, and Price of Oil

Consumer Price Index (CPI)

Lower fuel costs caused U.S. inflation, as measured by the CPI, to drop precipitously in 2015.

Inflation will increase as the Fed raises interest rates, housing prices increase, gasoline prices rise, and wages increase.

It is the Fed's intent to manage inflation so that it approaches their target rate of 2.0%.



Source: Bureau of Labor Statistics, cber.co.

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● Is the Bull Dead or Is the Bull on Life Support?



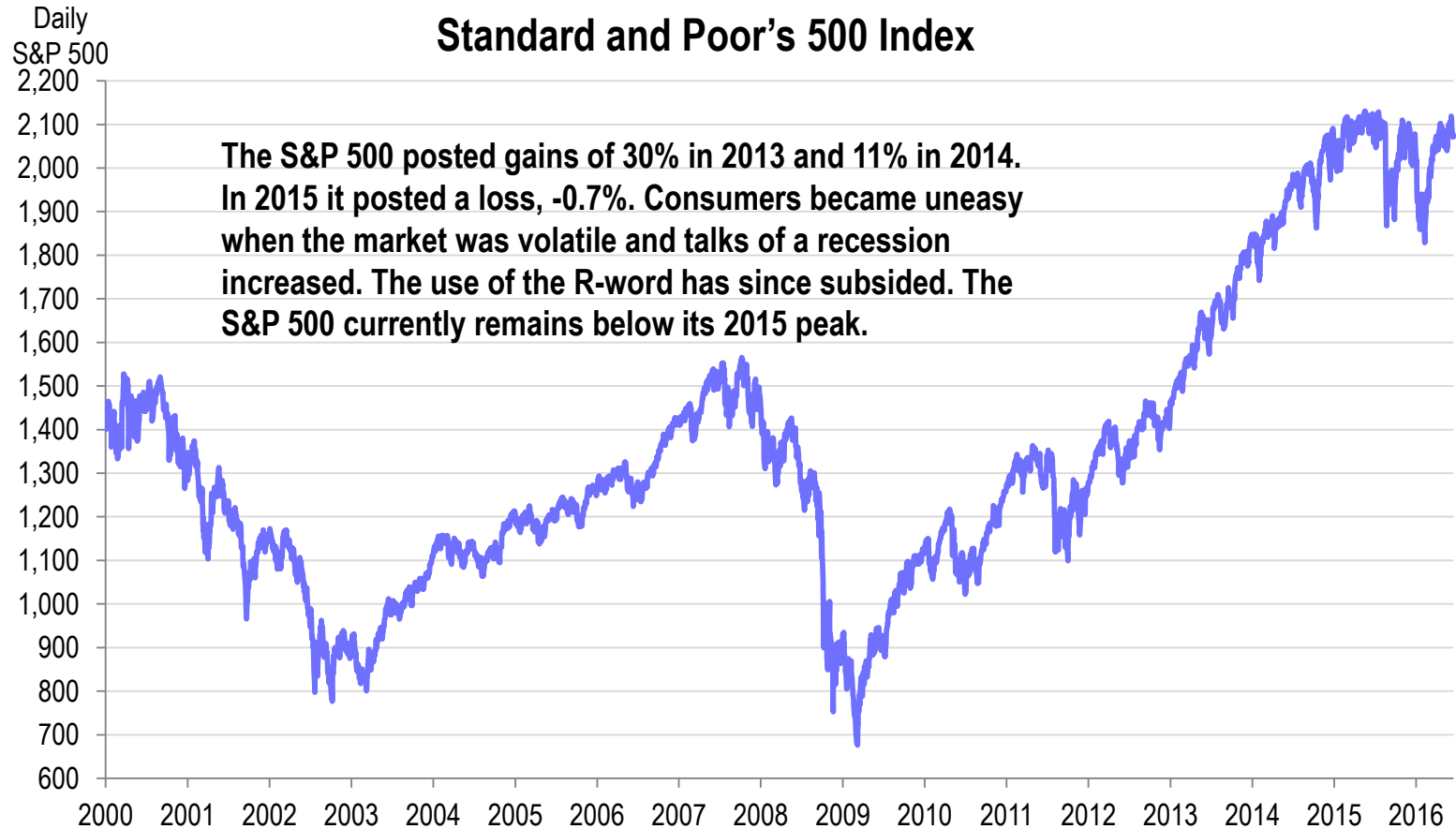
The S&P 500 peaked at 2,131 on May 21, 2015.

On June 17, 2016 the market closed at 2,071.

For the past year the market has moved sideways. Is the bull dead, is it on life support, or is the bear going to come out of hibernation?

The Volatility Index had decreased, but the Brexit and BLS jobs numbers stirred it up again.

Standard and Poor's 500 Index



Source: FRED, S&P 500, cber.co.

● CBOE Volatility Index

● VIX (VIXCLS)



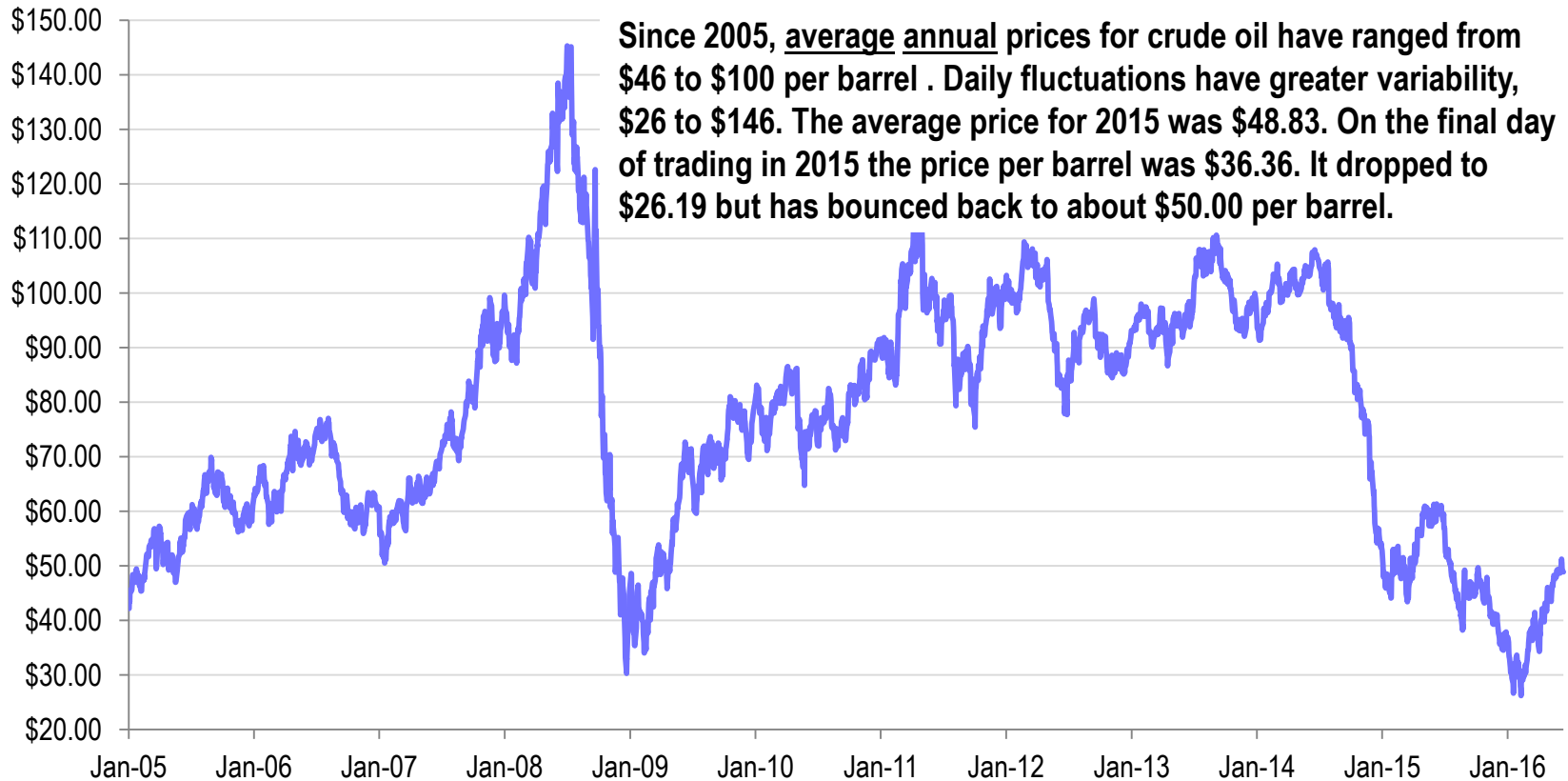
Source: FRED, CBOE, cber.co.

Crude Oil Prices

West Texas Intermediate

Dollars
per Barrel

Crude Oil Prices: West Texas Intermediate, Cushing, Oklahoma



Source: FRED, EIA, cber.co.



The U.S. Economy

Services, Manufacturing, Retail, and Savings

Services and Manufacturing

Mixed Messages

Purchasing managers in service and manufacturing companies are telling different stories.

- The index for purchasing managers in the services sectors has been above 50 every month since August 2009. The index trended downwards at the end of 2015, but has remained above 50.
- Manufacturing purchasing managers became optimistic about the economy in mid-2009; however, their level of confidence has been more volatile. The index was generally positive (49.5 to 59.0), but dropped back to 50 in both 2012 and 2013. It was at or below 50 from September, 2015 until February, 2016. Since then it has trended upwards.

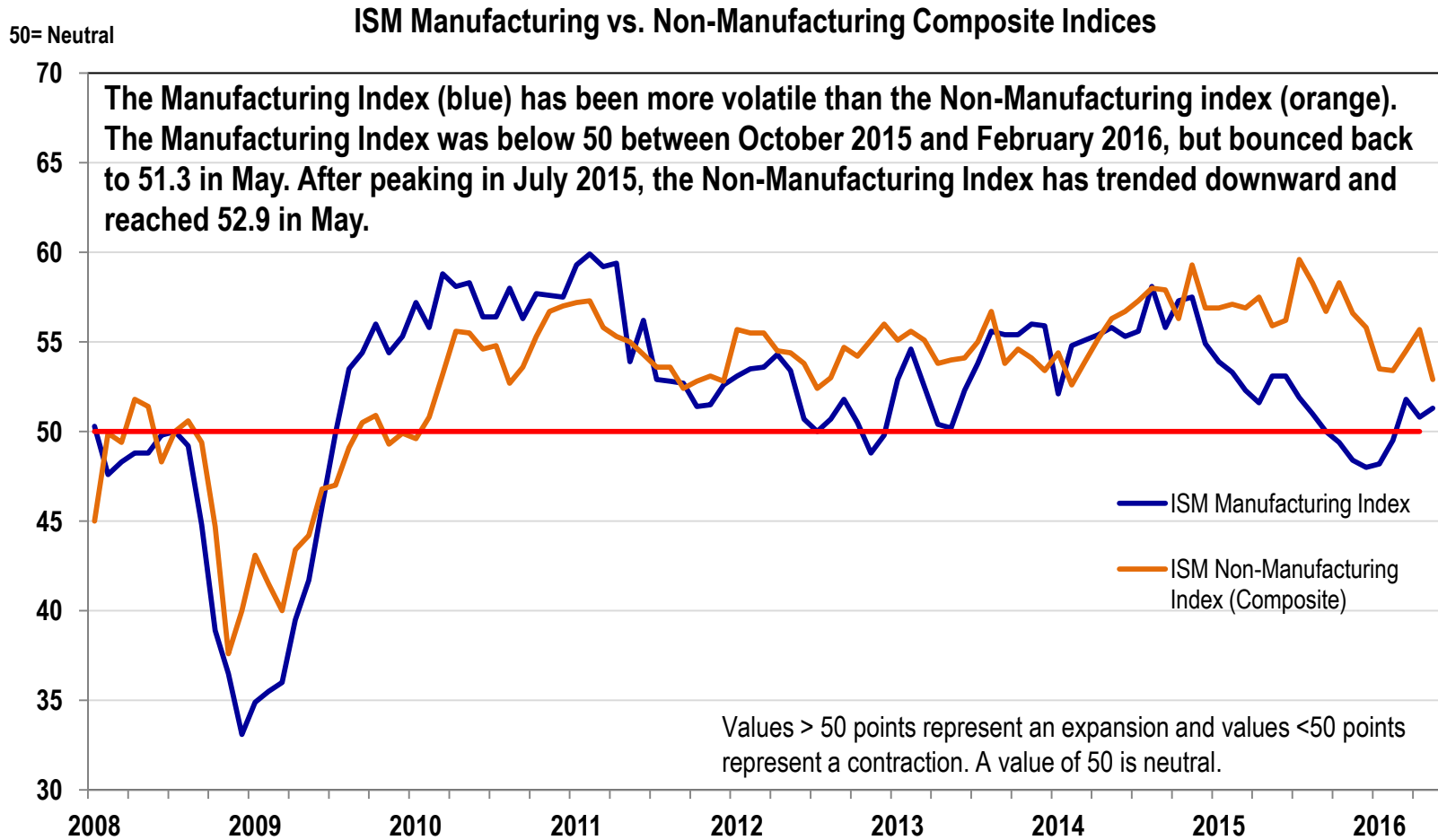
Manufacturing shipments increased at a strong rate between 2010 and 2012 and a solid rate between 2012 and mid-2014. Since mid-2014 shipments have decreased.

U.S. manufacturing employment has been flat since mid-2015.

Auto and light truck sales returned to pre-recession levels and posted record sales in 2015. The industry should continue to benefit from low fuel prices and interest rates in 2016, although sales may continue at a slower rate of growth.

ISM PMI Composite Indices

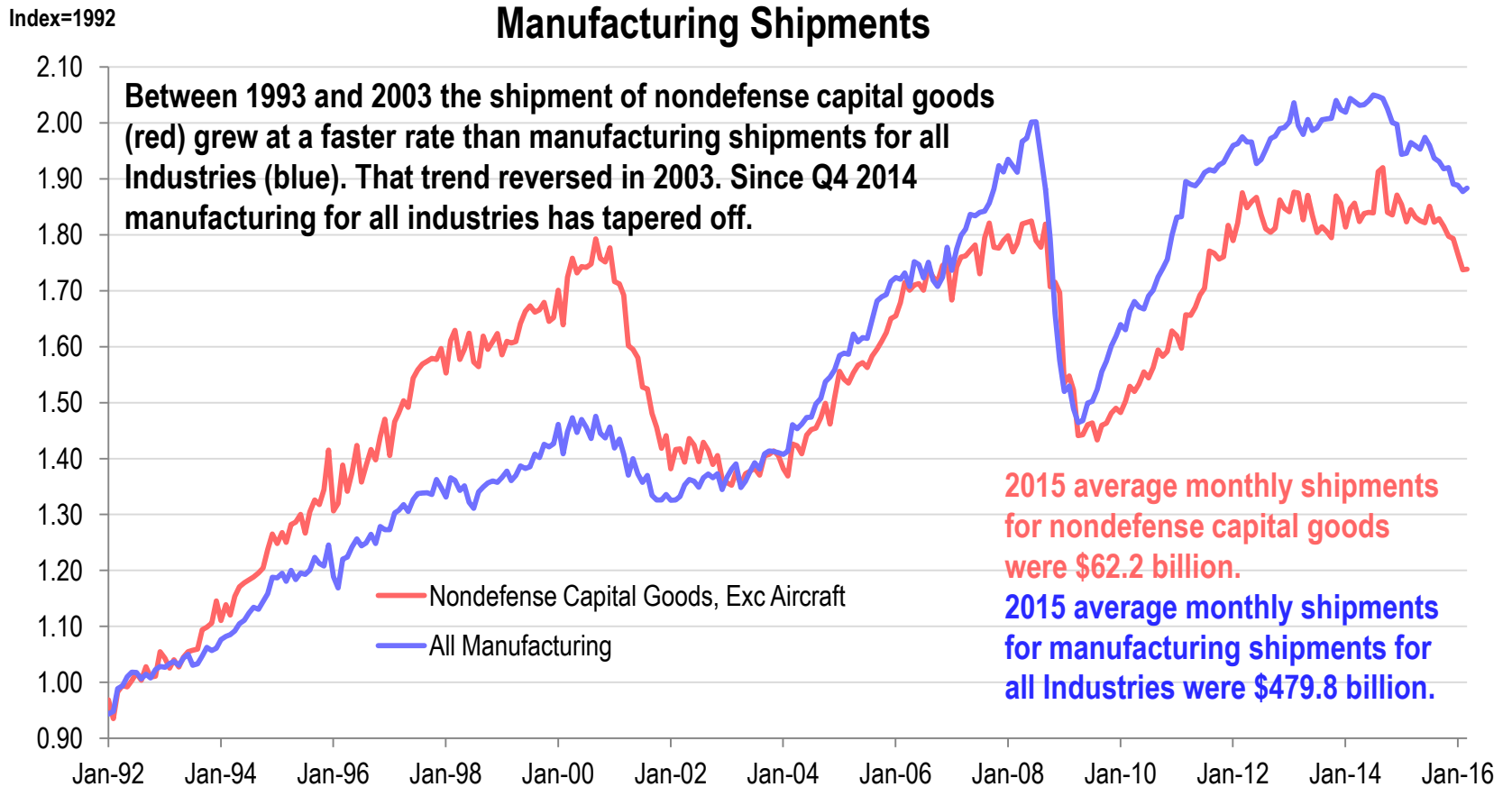
Manufacturing vs. Non-manufacturing



Sources: Institute for Supply Management (ISM), FRED, cber.co.

U.S. Manufacturing Shipments

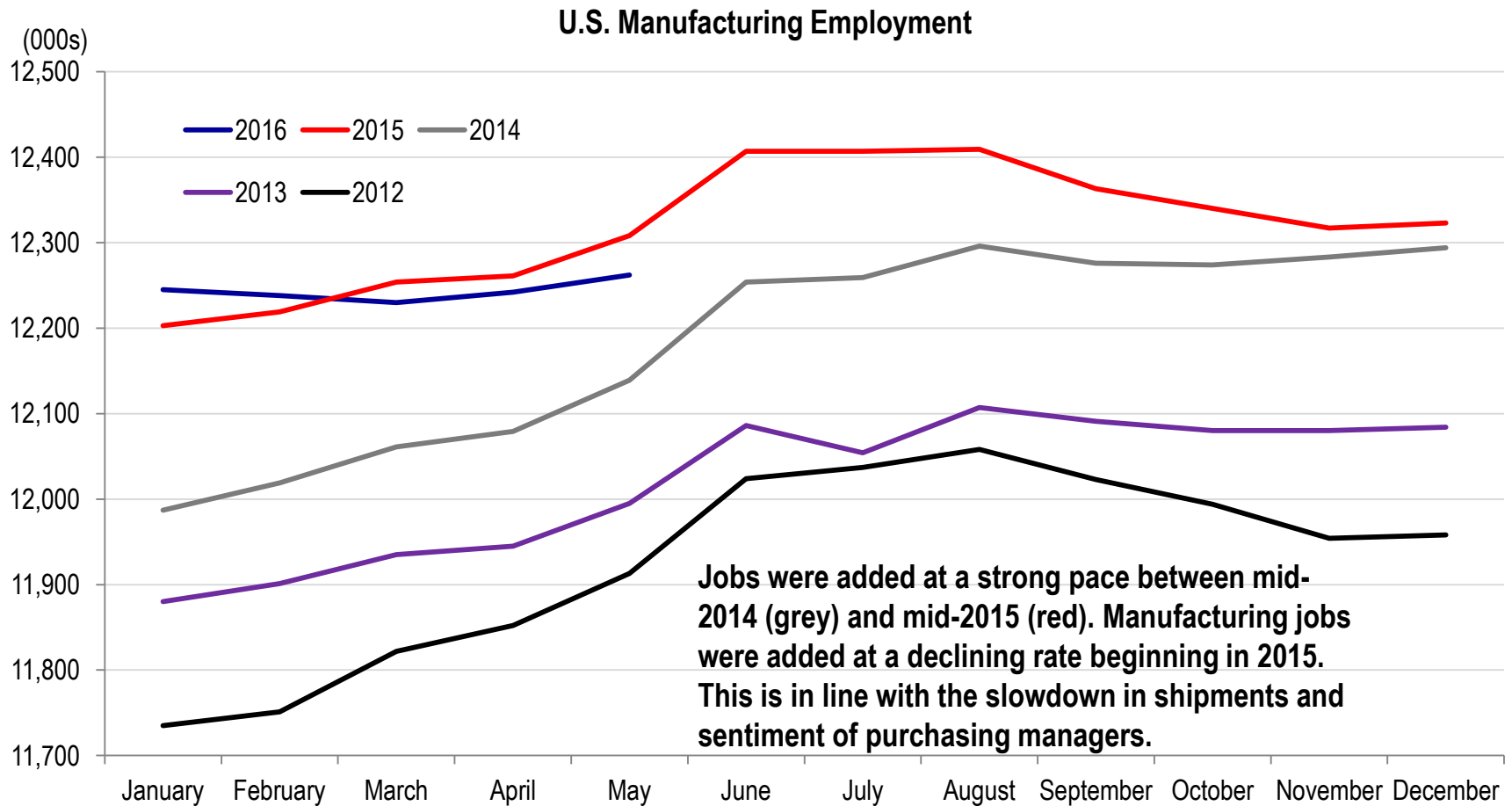
All Industries vs. Nondefense Capital, Excluding Aircraft



Source: FRED, SA. U.S. Bureau of the Census, cber.co. Note: Not adjusted for inflation.

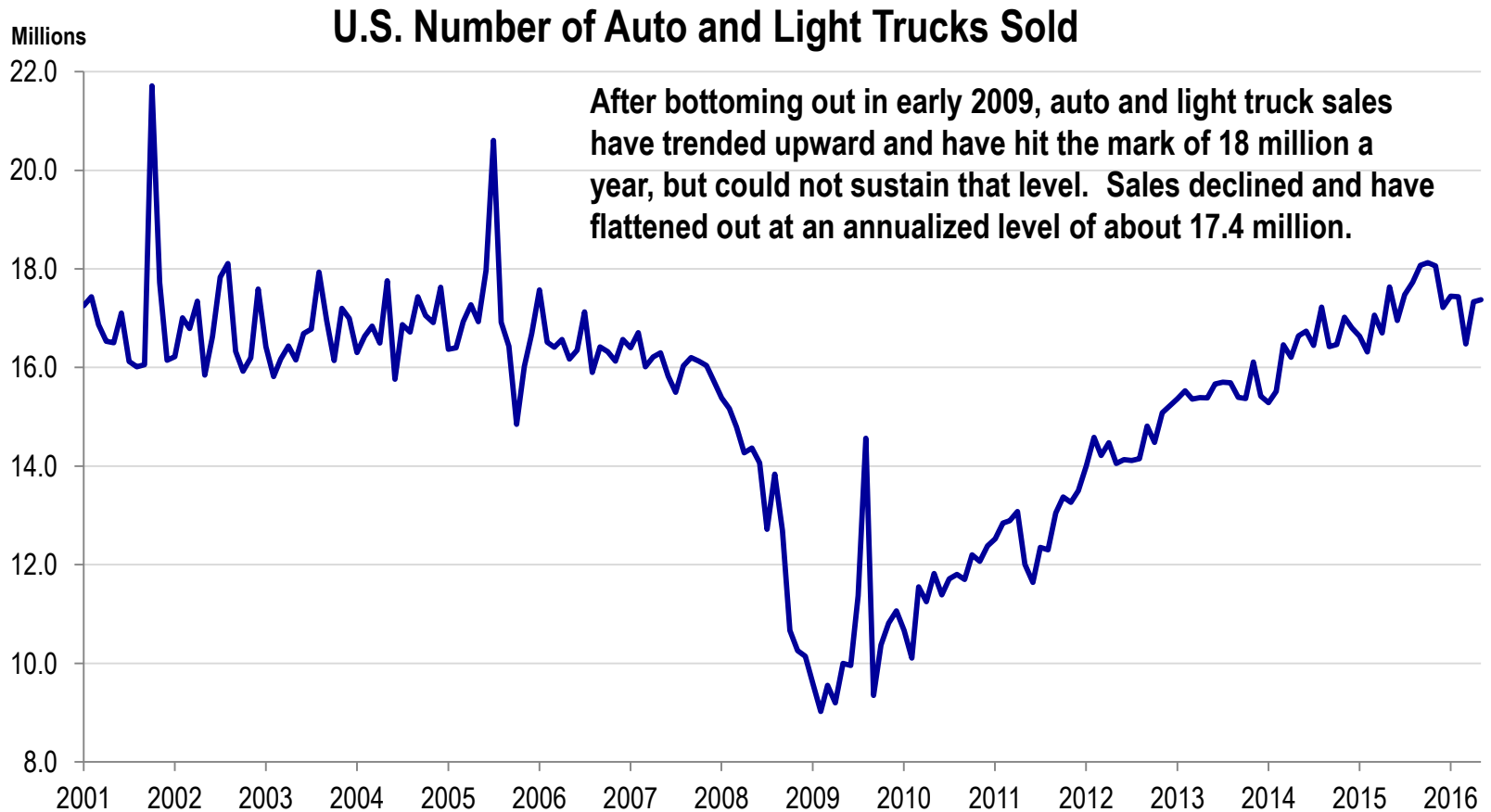
U.S. Manufacturing Employment

2012 to Current



Source: Bureau of Labor Statistics, NSA, cber.co.

U.S. Weekly Auto and Light Truck Sales

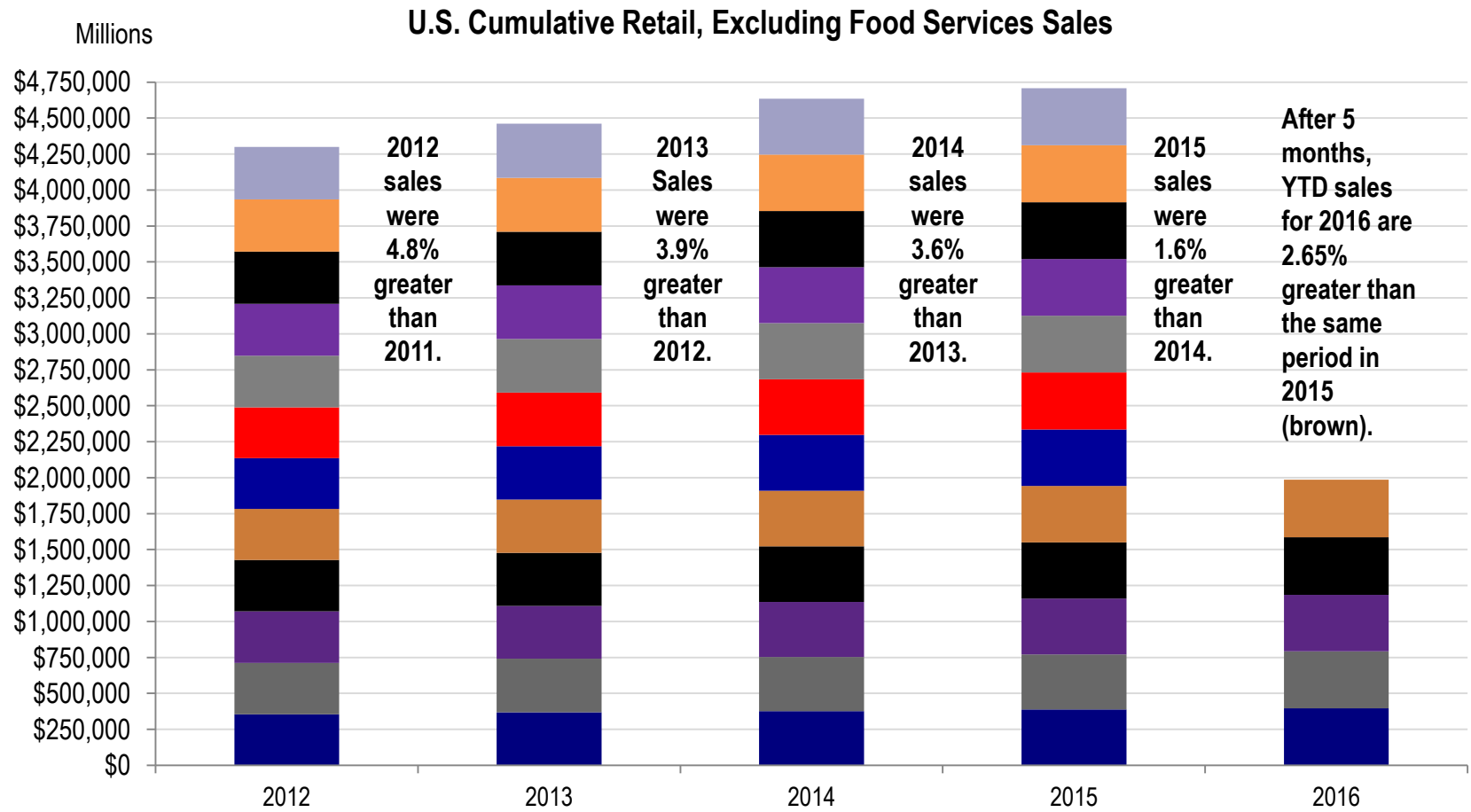


Source: FRED, BEA, cber.co.

Note: Seasonally Adjusted Annualized Rate.

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Cumulative Retail, Excluding Food Services Sales

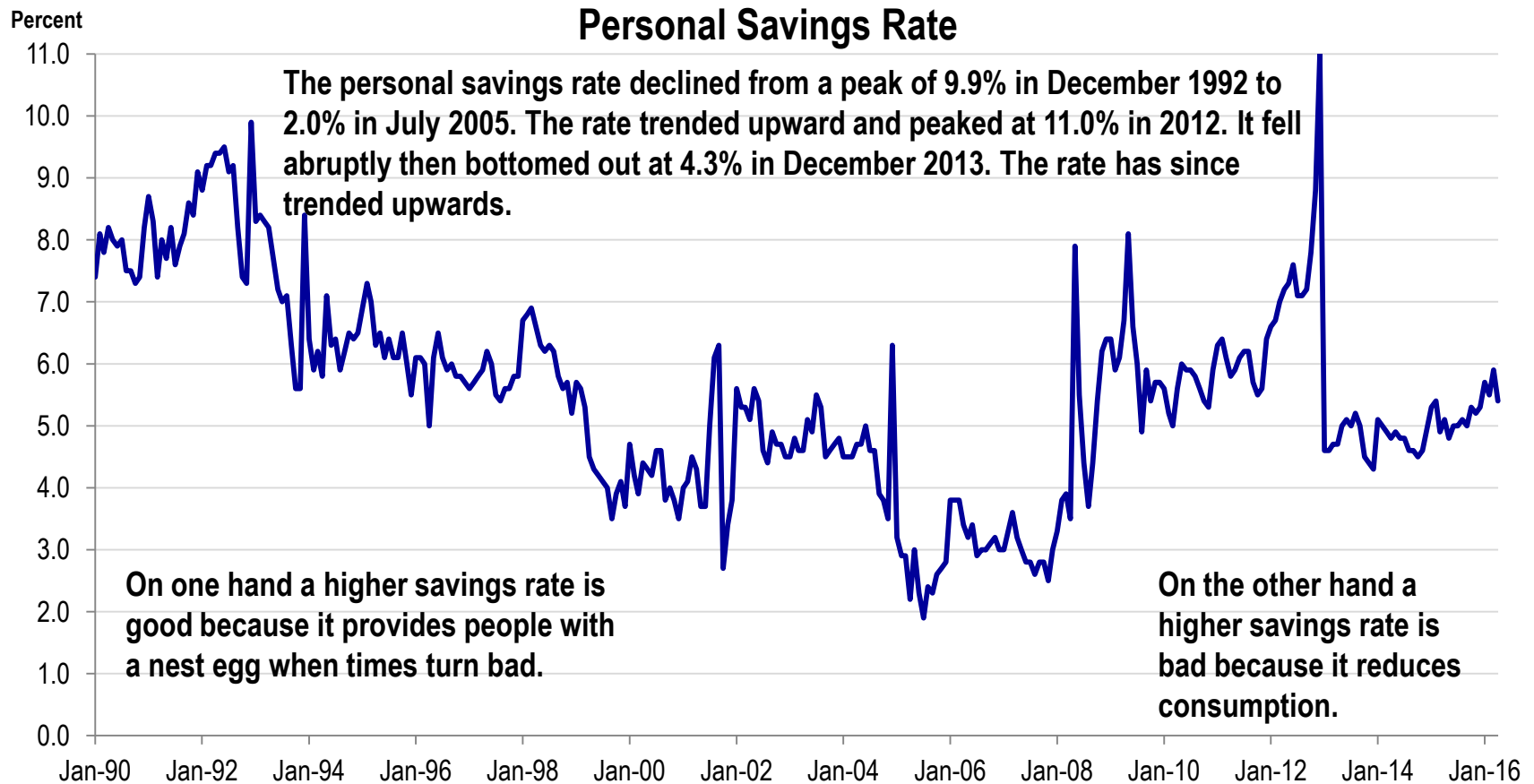


Source: U.S. Census Bureau, FRED, cber.co .

Note: Data is in descending order with December at the top and January at the bottom, not adjusted for inflation.

U.S. Personal Savings Rate

Percentage of Disposable Personal Income

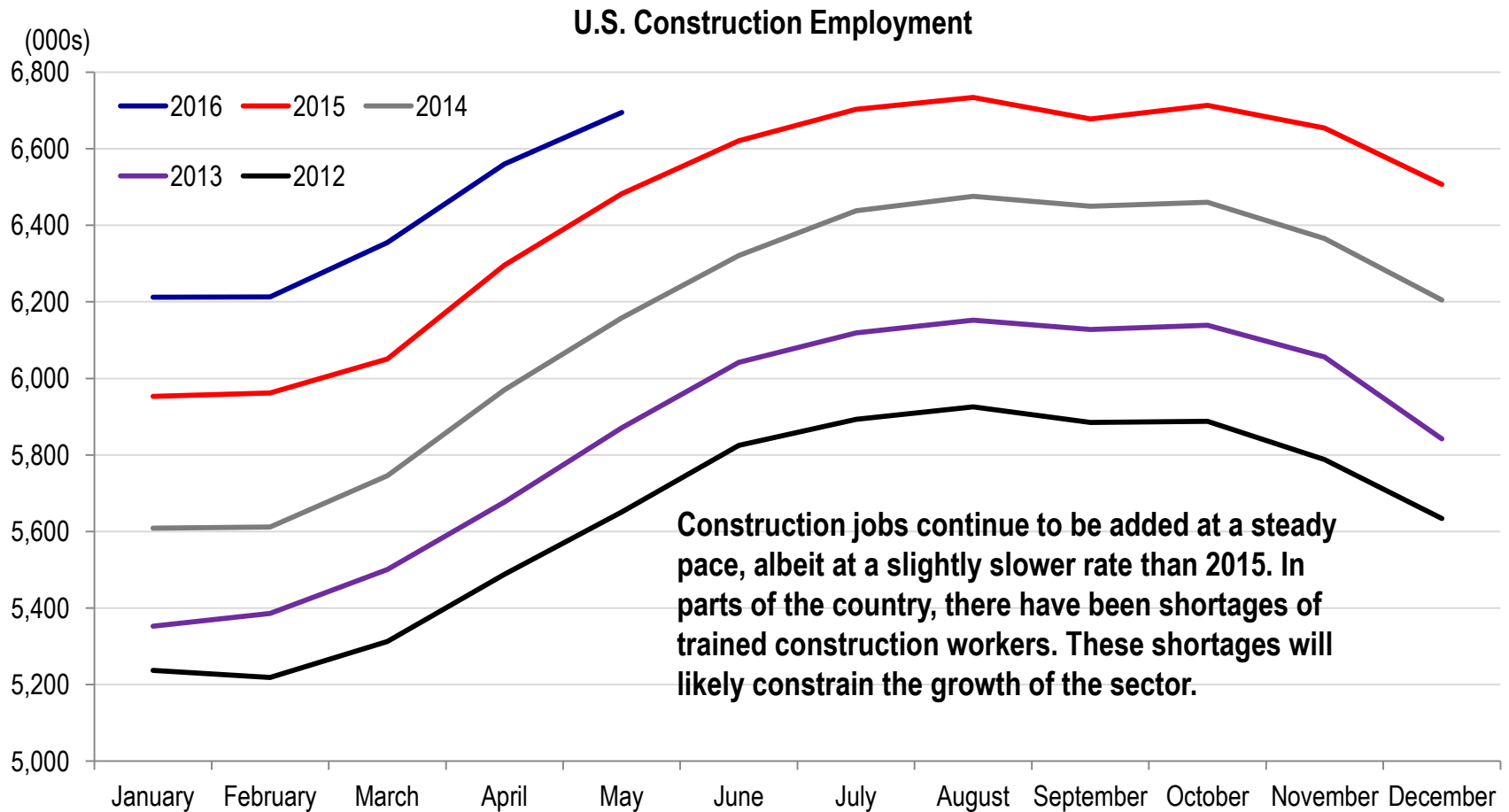


Source: FRED, SA, cber.co.



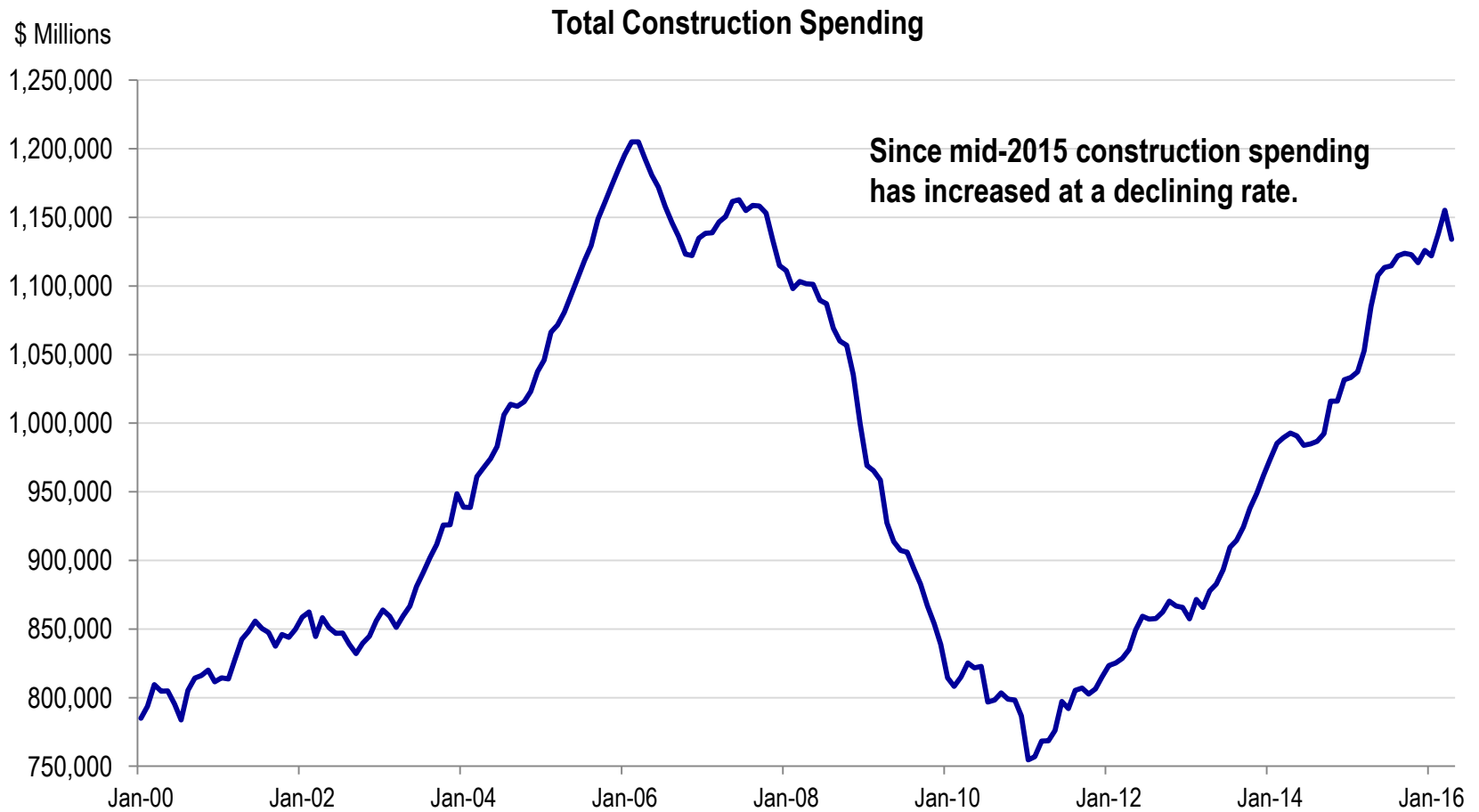
The U.S. Economy Construction and Housing

U.S. Construction Employment 2012 to 2015



Source: Bureau of Labor Statistics, NSA; cber.co.

Total U.S. Construction Spending

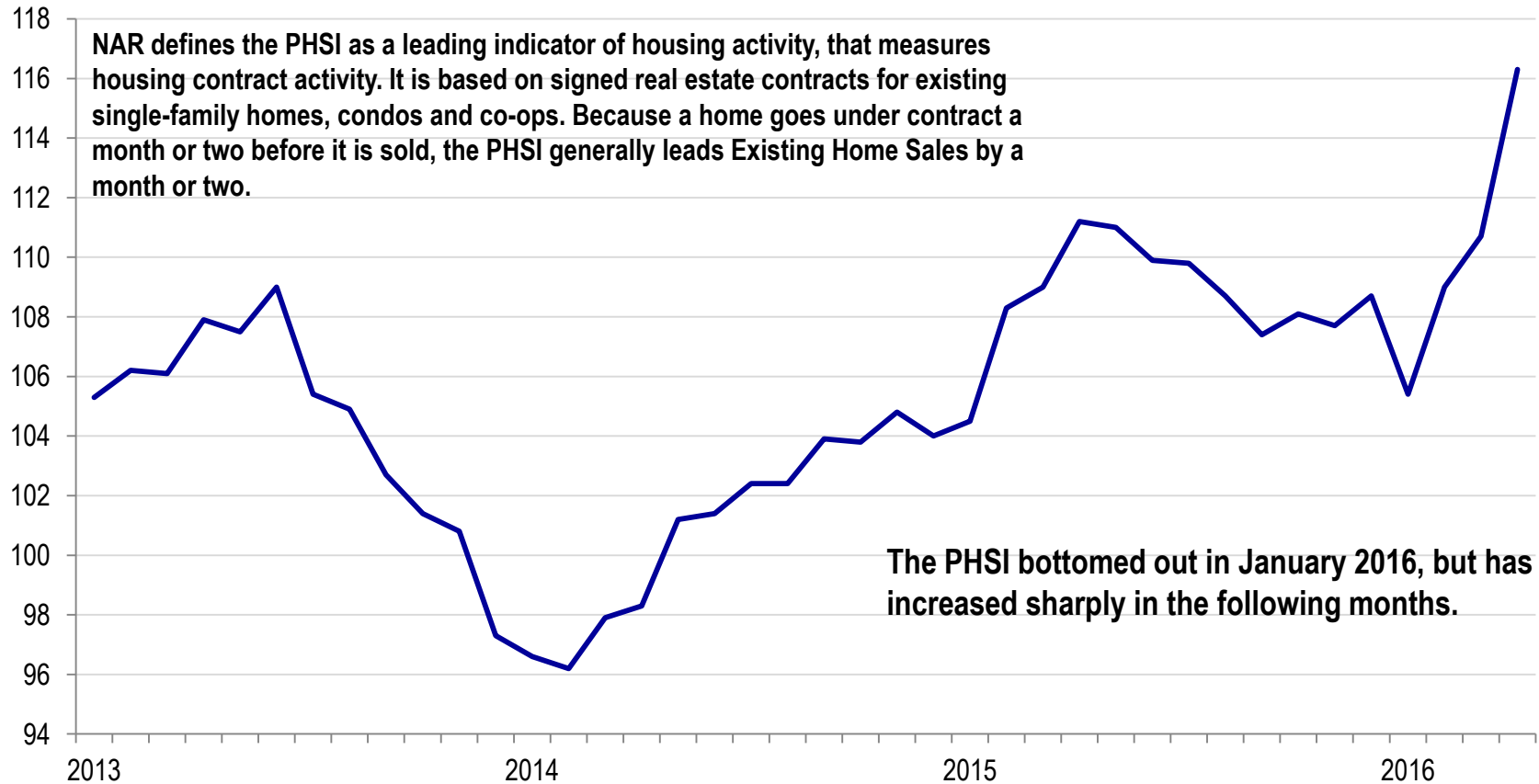


Source: FRED, Census Bureau, cber.co. Note: Not adjusted for inflation.

Pending Home Sales Index

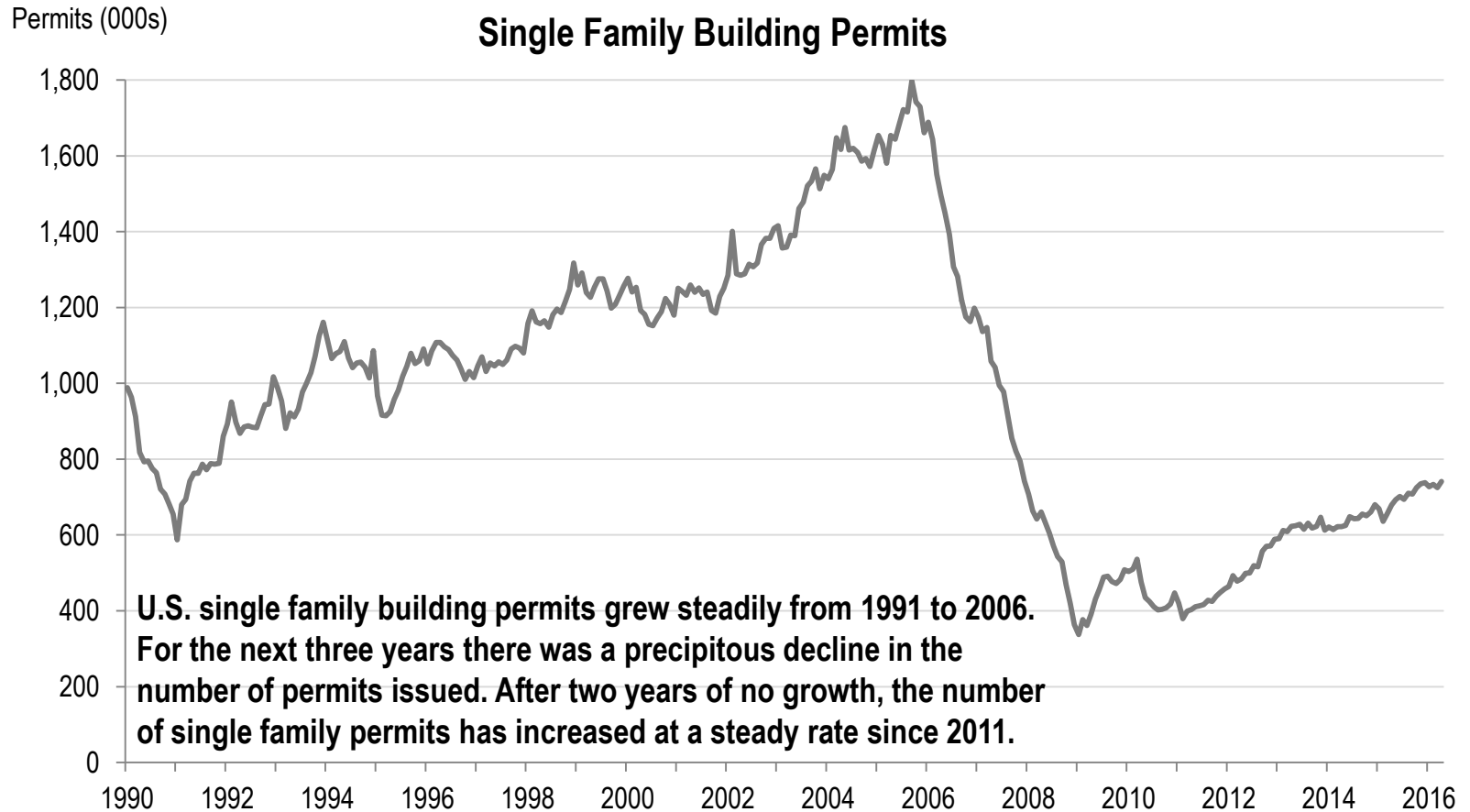
1973=100

Pending Home Sales Index



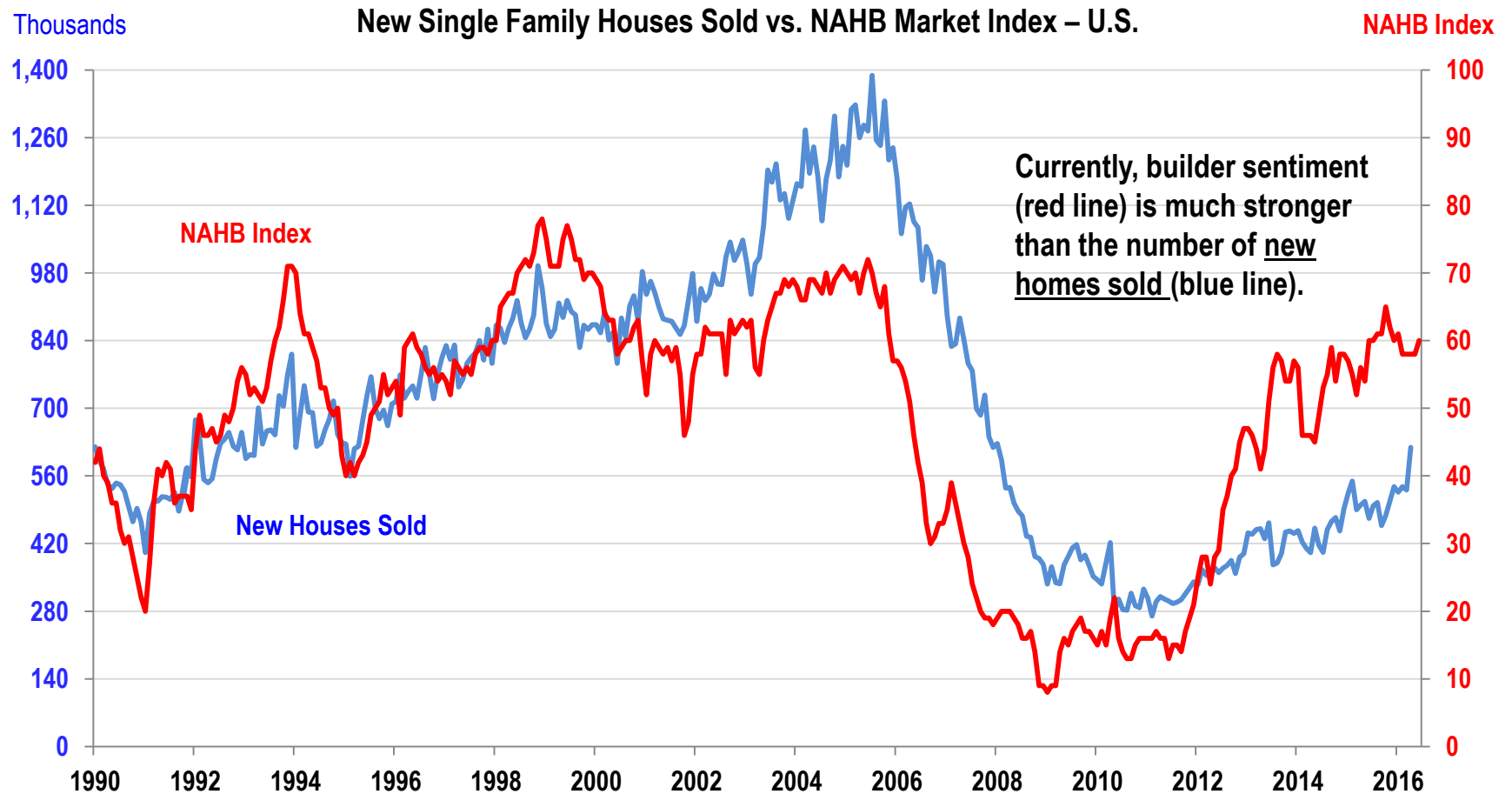
Source: National Association of Realtors, SA; cber.co.

New Single Family Building Permits – U.S.



Source: FRED, U.S. Census Bureau, cber.co.

New Single-Family Houses Sold vs. NAHB Market Index



Source: FRED, Census Bureau SA., NAHB; cber.co.

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Summary of U.S. Economy

A case can be made that the Federal Reserve acted judiciously when it opted to delay interest rate hikes based on concerns about the U.S. economy, in particular, the BLS report that 38,000 workers were added in May. At the same time, this summary explains why the U.S. economy should continue to post solid growth for the remainder of the year.

- The U.S. economy is geographically solid, with strength in the western half of the country and weakness in states that have strong ties to energy and agriculture.
- Wages across the country are rising for people in all industries, company size, age groups, and job tenure. The rate of these increases has exceeded the rate of inflation.
- Jobs are being added across most industries.
- The number of people quitting their jobs is high. This is an indication they have options. In addition, the number of openings is high.
- U.S. Initial unemployment claims are low.
- Overall, the U.S. housing market is strong and construction is solid.
- Inflation has increased slightly; this is important to the Fed.
- Consumers are spending and retail sales are solid.
- Consumers are also saving
- Oil prices have risen to about \$50 per barrel and are likely to reach \$60 in 2017.
- Agriculture prices may be nearing the bottom, i.e. the future may be brighter for agriculture.
- The U.S. is approaching full employment, which means the U.S. is more likely to see slightly slower levels of job growth in the future.



The Colorado Economy

38,000 U.S. Jobs in May – Really?

What Does This Mean for Colorado?

In early June, BLS reported the U.S. added only 38,000 jobs in May. This does not align with data produced by BLS and other groups. This is important to Colorado because the state's economy is closely linked to the U.S. economy.

The charts and information in the Colorado section show that the Colorado economy will continue to show solid growth. The following information supports why that is likely to happen.

- Colorado real GDP growth for 2015 grew at a greater rate than the U.S.
- Colorado added 6,700+ business establishments in 2015.
- For the 8th consecutive month, DIA set a record for passenger traffic.
- Construction will be stronger in 2016 than 2015.
- Denver housing prices continue to rise at a faster rate than the U.S.
- Manufacturing continues to show growth, albeit at a declining rate.
- Colorado job and GDP growth is broad-based.

The source of the following information is the *Denver Post*. It supports the position that the Colorado economy has enough momentum to drive solid growth in the months ahead.

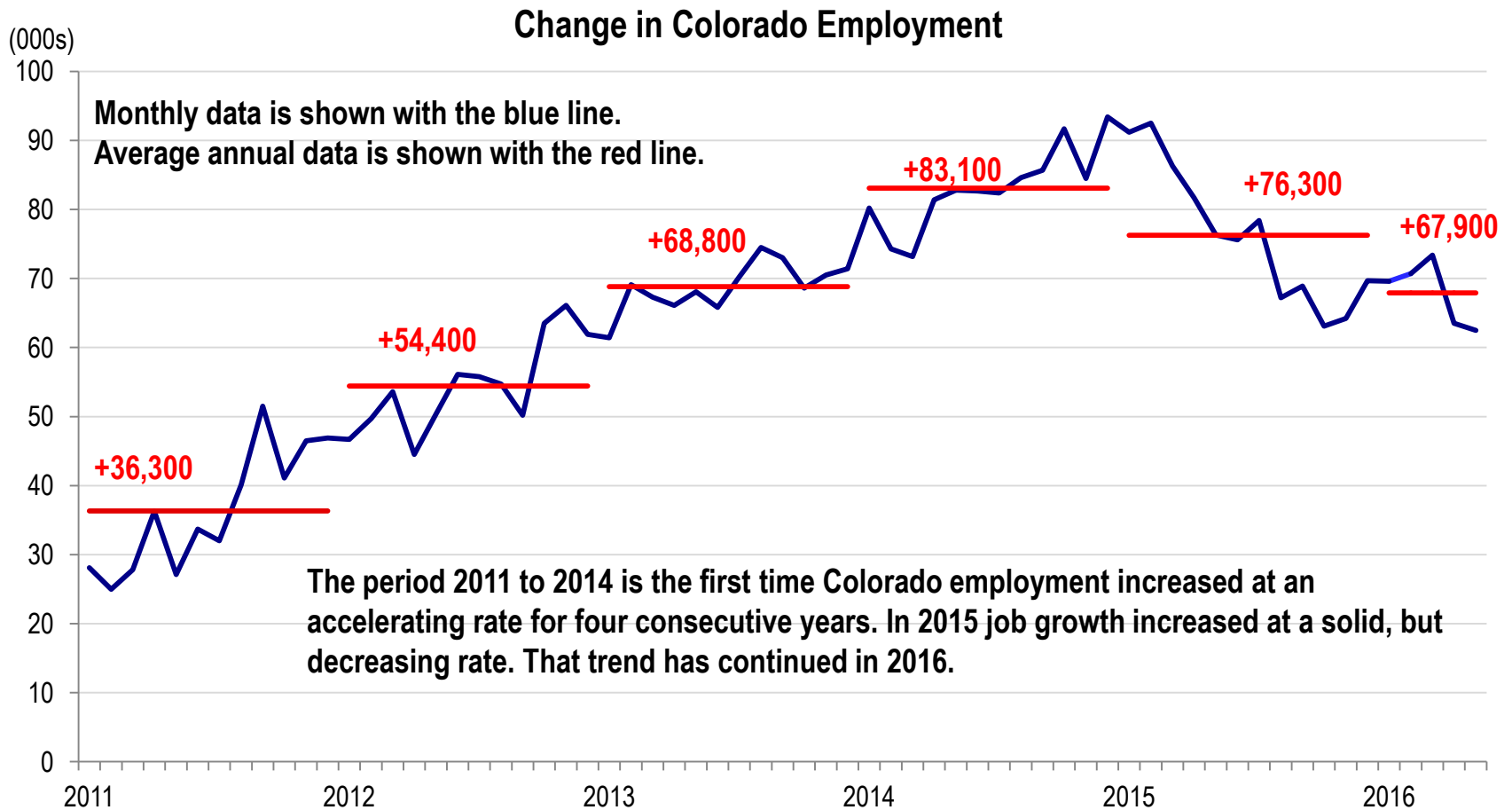
- Denver hosted 16.4 million overnight visitors, who spent \$5 billion, in 2015. That's 1 million more visitors than the previous year, and it a record for the 10th year in a row.
- Colorado Ski Country resorts posted a 5% gain for the 2015-16 season.



The Colorado Economy

Employment, Wages, and Unemployment

Change in Colorado Employment Year-Over-Year



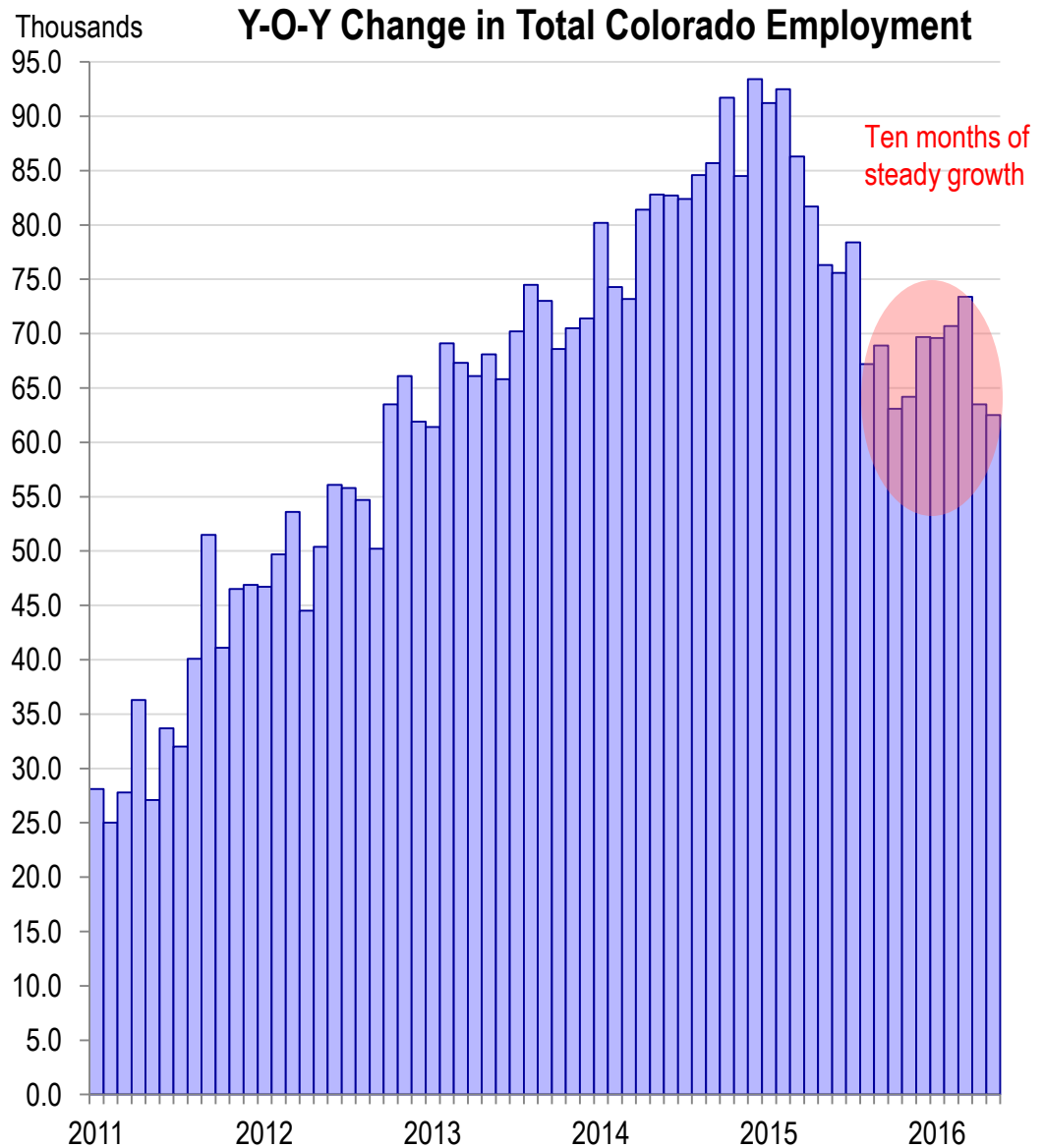
Source: Bureau of Labor Statistics, NSA, cber.co.

Y-O-Y Change in Total Colorado Employment

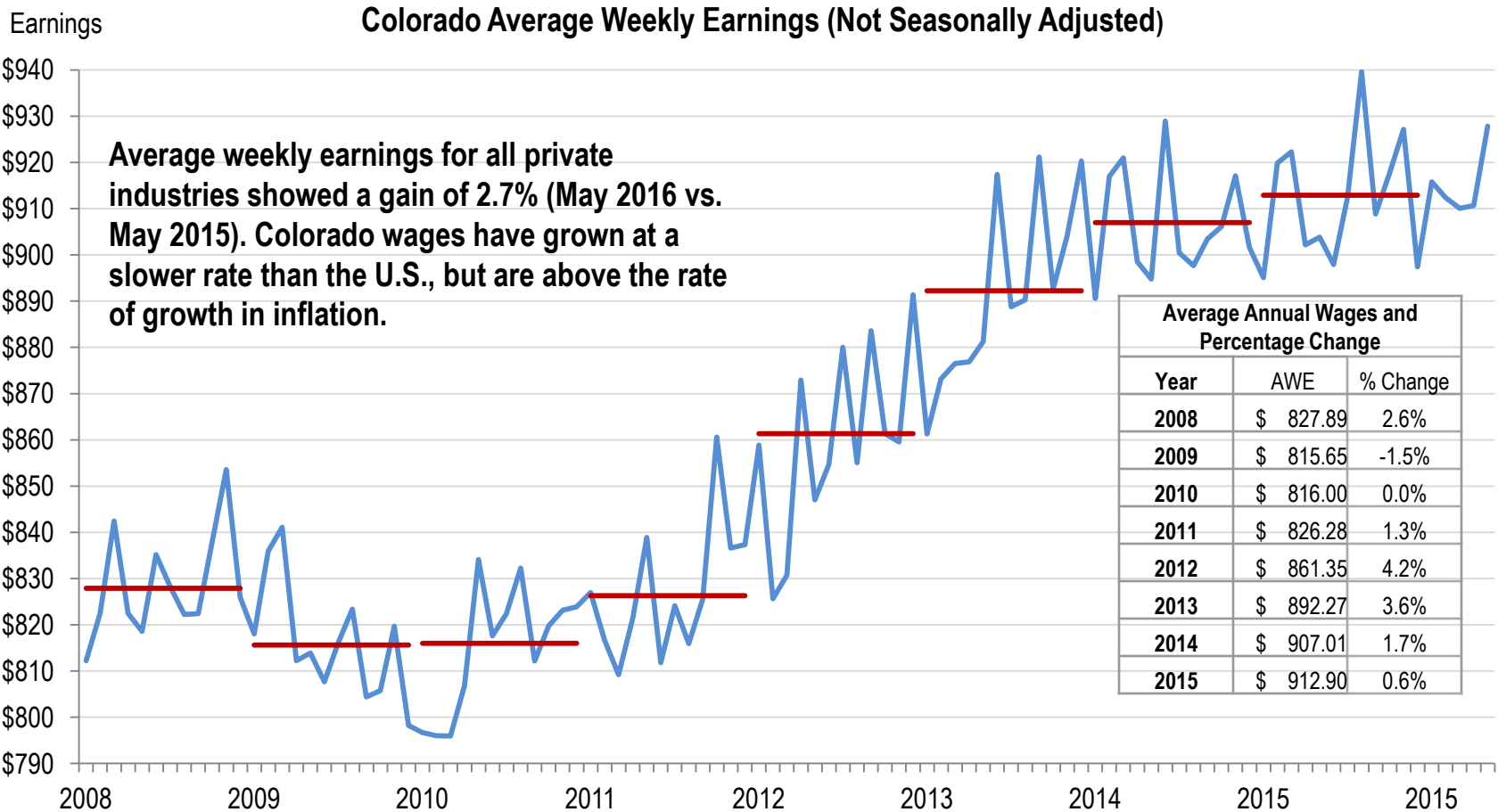
This chart makes it easy to see the strength of the monthly job growth between January 2014 and April 2015. During this 16-month period average monthly job growth was 84,300. There were more than 80,000 jobs added in 14 of the 16 months.

The recent year-over-year change in Colorado employment has been very steady. The average Y-O-Y job change was 67,300 jobs for the past 10 months (red oval), with a low of 62,500 jobs added and a high of 73,400 jobs added.

The rate of job growth has clearly declined, but it is a manageable rate of growth.



Colorado Average Weekly Earnings of All Employees (Private Sector)

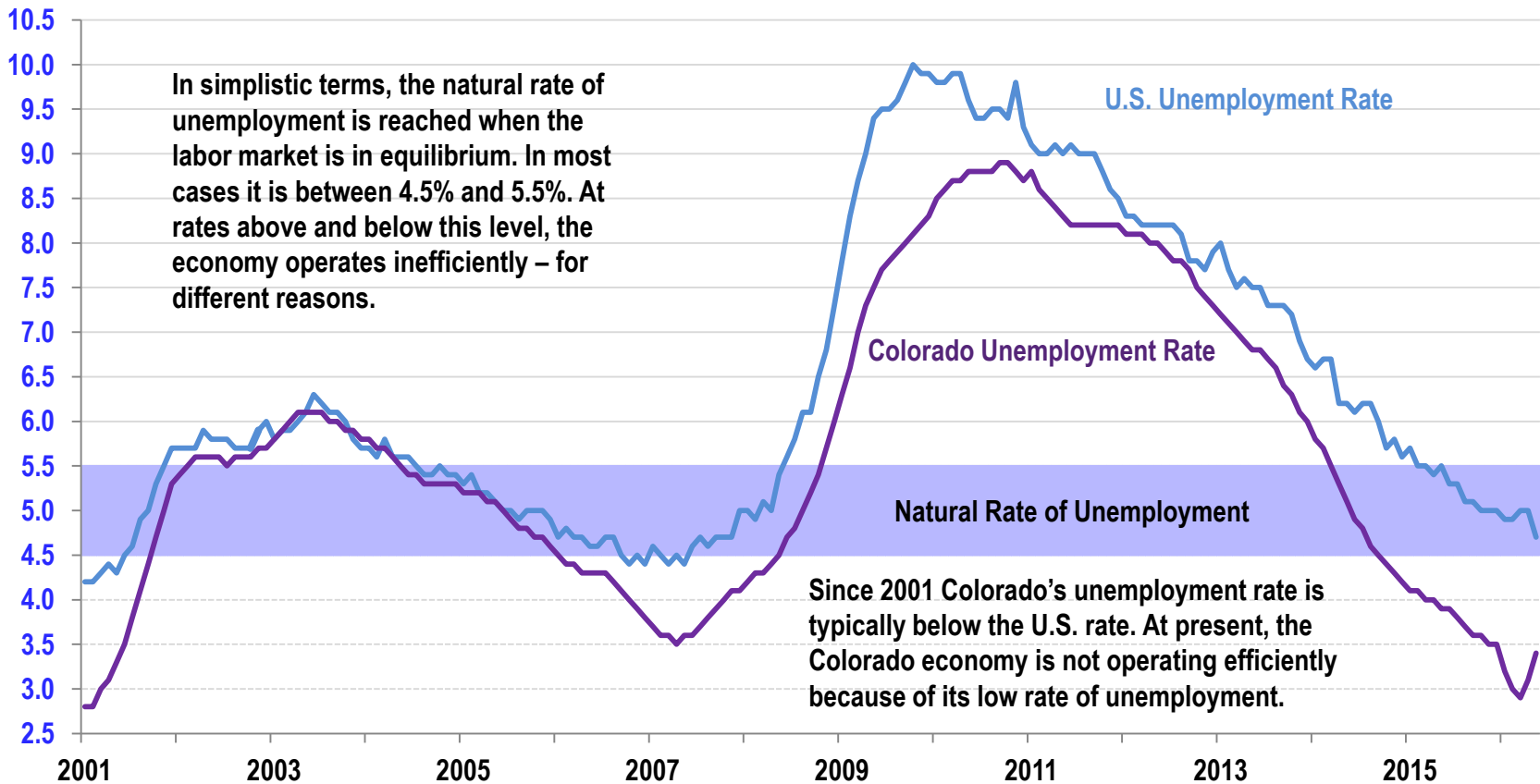


Source: Bureau of Labor Statistics, NSA, cber.co.

U.S. vs. Colorado Unemployment Rate

Percent

U.S. vs. Colorado Unemployment Rate



Source: Bureau of Labor Statistics, SA, cber.co.

Colorado-based Business and Economic Research <http://cber.co>

How Low Can it Go?

Natural Rate of Unemployment

In simplistic terms, the natural rate of unemployment is the rate at which an economy operates efficiently. It is typically between 4.5% and 5.5%.

The economy operates inefficiently when:

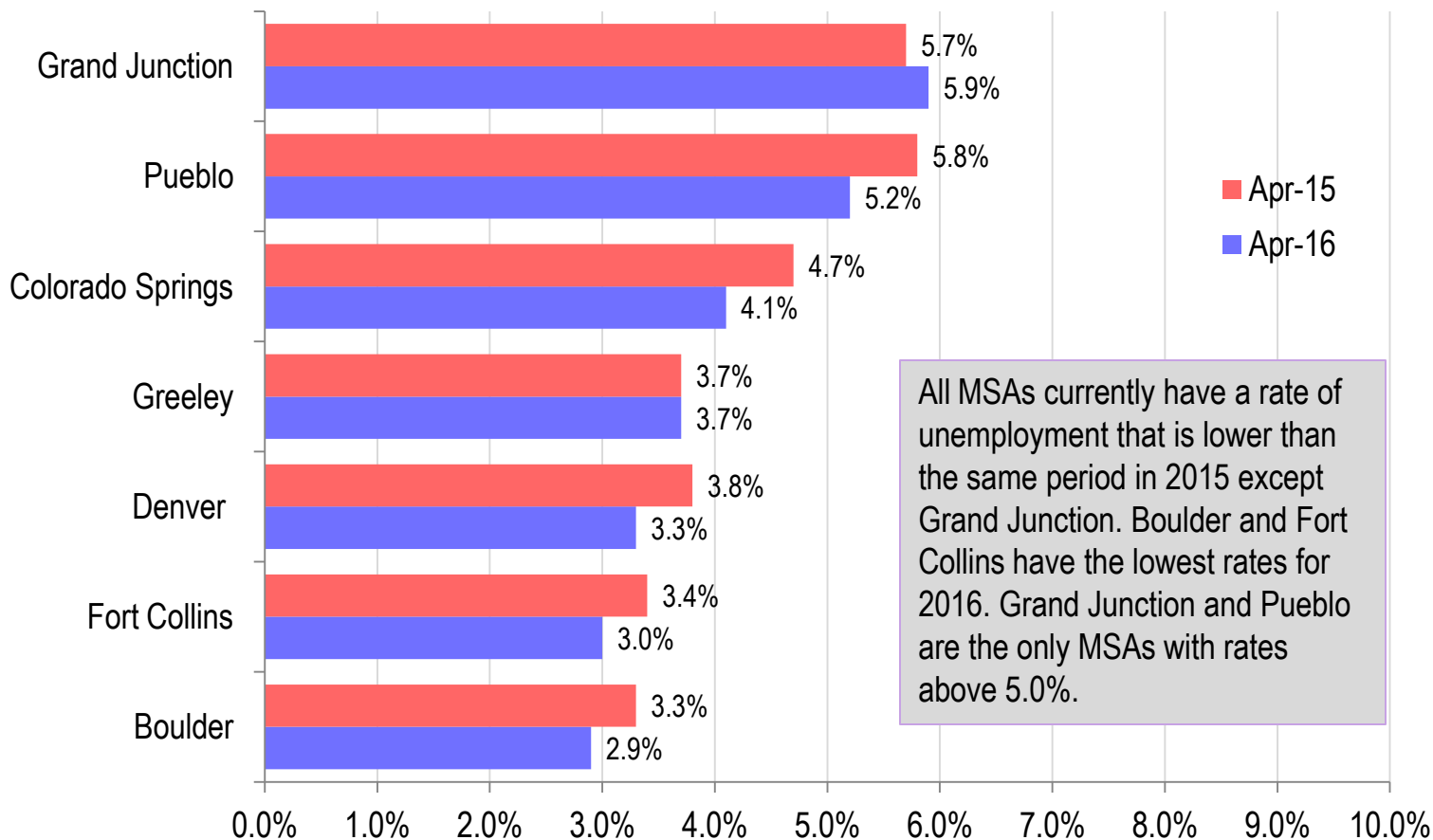
- The rate of unemployment is too high, as it was during the Great Recession.
- The rate of unemployment is too low. The current rate of unemployment in Colorado is too low.

Reasons Low Unemployment May be Bad for the Economy

- Businesses may be forced to pay higher wages. The upside is that workers have more money to spend which theoretically stimulates the economy. On the other hand, businesses may hire fewer workers to keep costs in line or they may need pass the added cost on to the consumer.
- Businesses may be forced to hire unqualified people and properly train them. The upside is that workers are better trained and more marketable. On the other hand, the added cost of training may have to be built into the price of the goods or services.
- During expansionary times, businesses increase their sales by adding workers and/or investing in capital goods or processes. If they cannot find workers they may invest in capital goods or processes that will reduce the need for labor in the long-run. For example, the oil and gas companies have gained efficiencies through capital expenditures that will reduce their long-term demand for employees.
- If companies cannot find qualified workers their services/goods may be of lower quality or they may simply lose business. For example, if a restaurant has wait times greater than an hour because they don't have enough kitchen help then customers may go elsewhere or the food may be lousy. Both are bad alternatives.

Unemployment by MSA 2015 vs. 2016

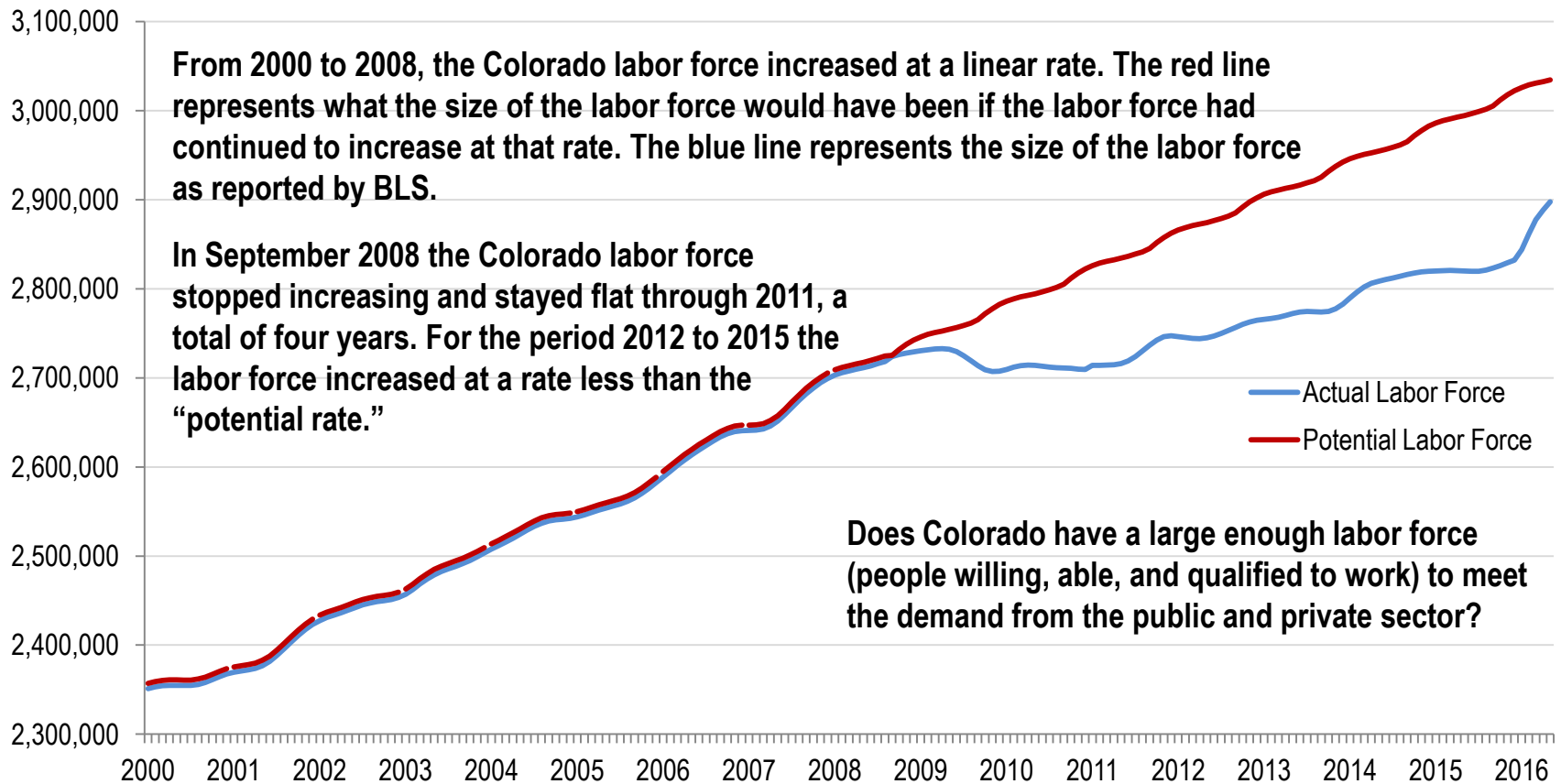
Unemployment by MSA



Source: Bureau of Labor Statistics, NSA, cber.co. Note: MSA unemployment lags by one month and is reported only on a non-seasonally adjusted basis.

Colorado Labor Force

Colorado Labor Force



Source: Bureau of Labor Statistics, NSA, cber.co.

● Labor is a Potential Risk to the Colorado Economy

-
-

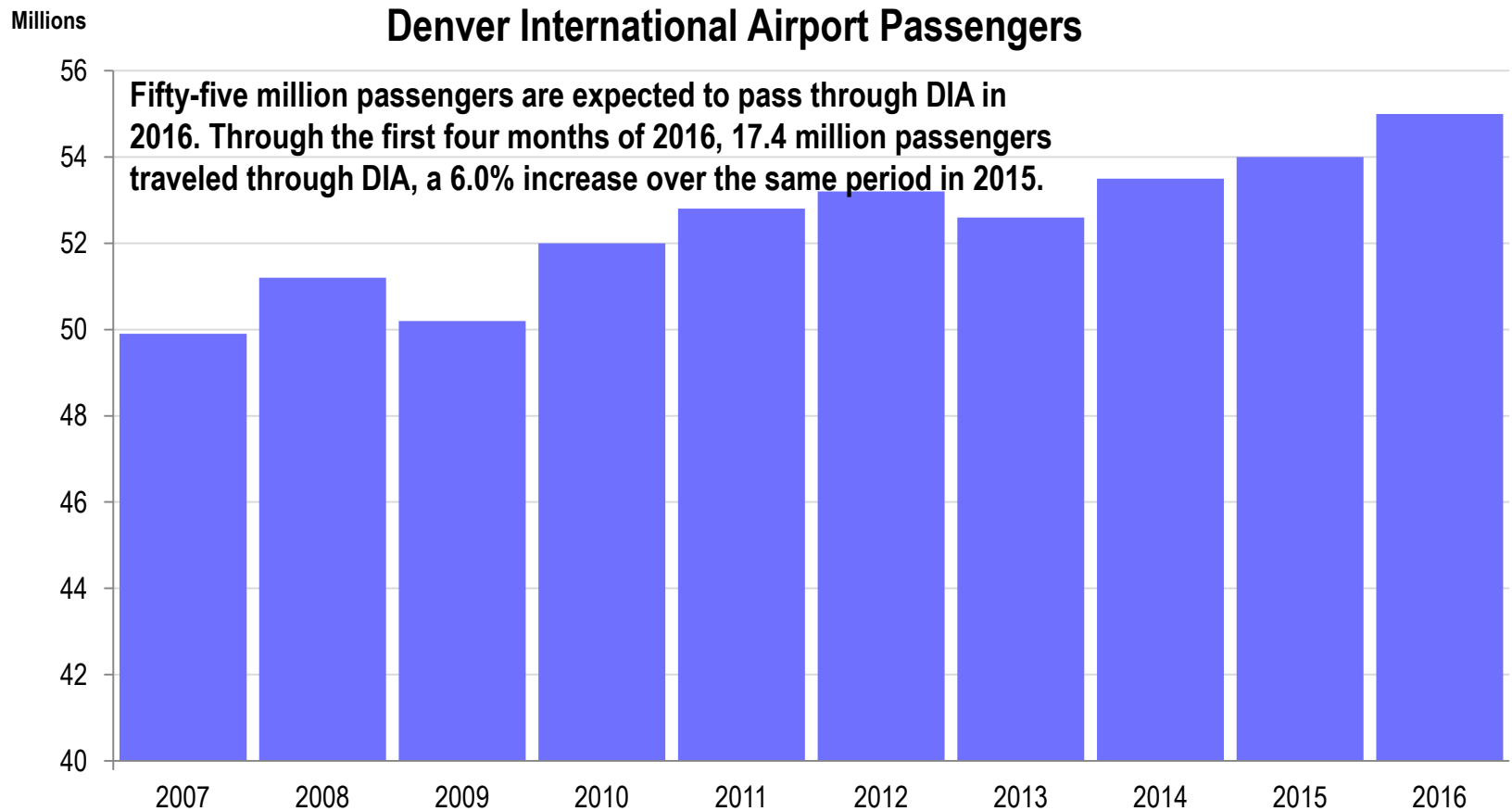
Labor, or the lack of qualified labor, is a potential near-term risk to the growth of the Colorado economy. The state must do a better job of training the workforce through Colorado's education and government-funded training programs. In addition, it will be necessary for businesses to aggressively attract workers from outside the state.



The Colorado Economy

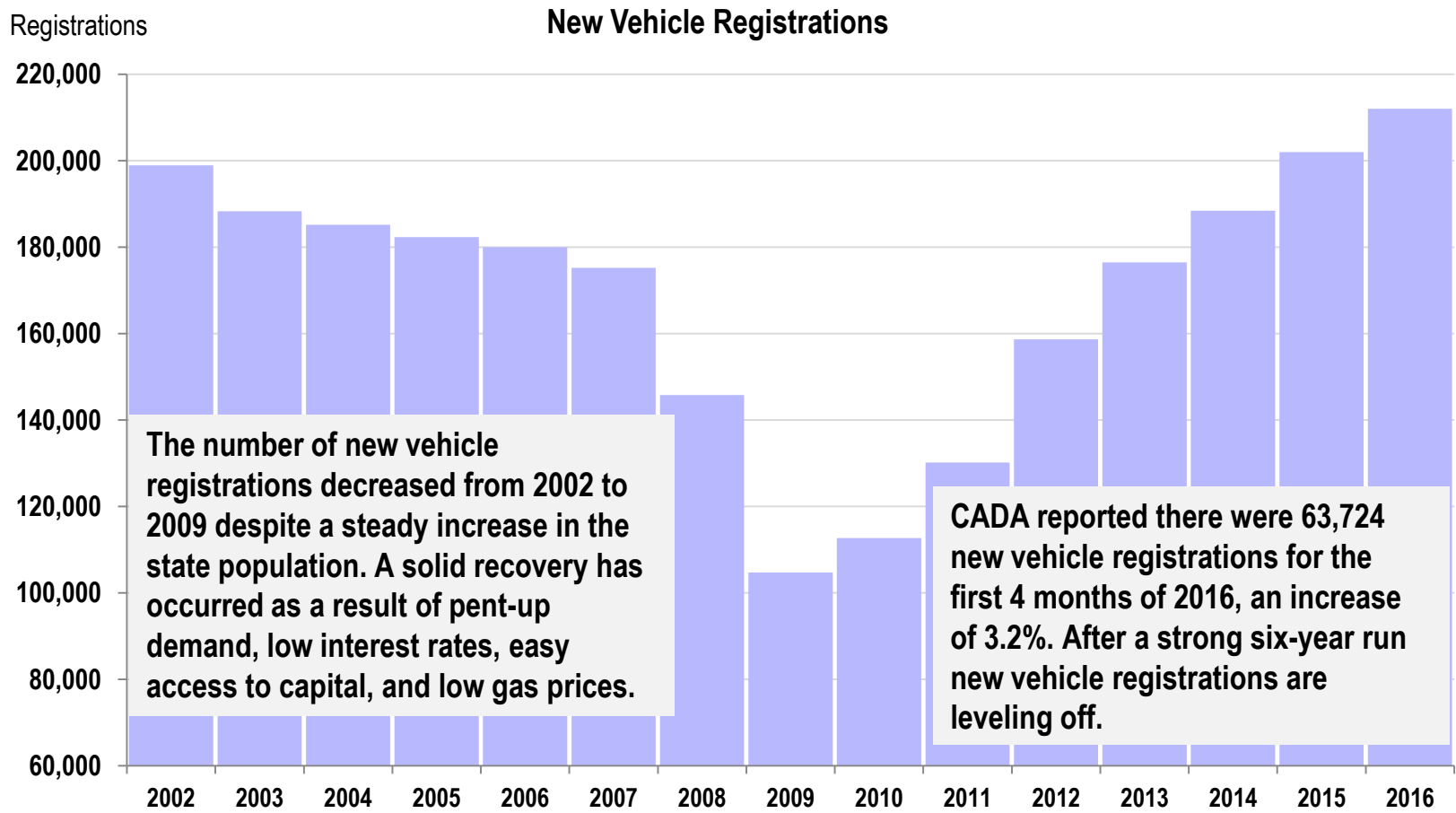
DIA, Auto Sales, Manufacturing

DIA Passengers



Source: flydenver.com, cber.co.

New Vehicle Registrations Colorado



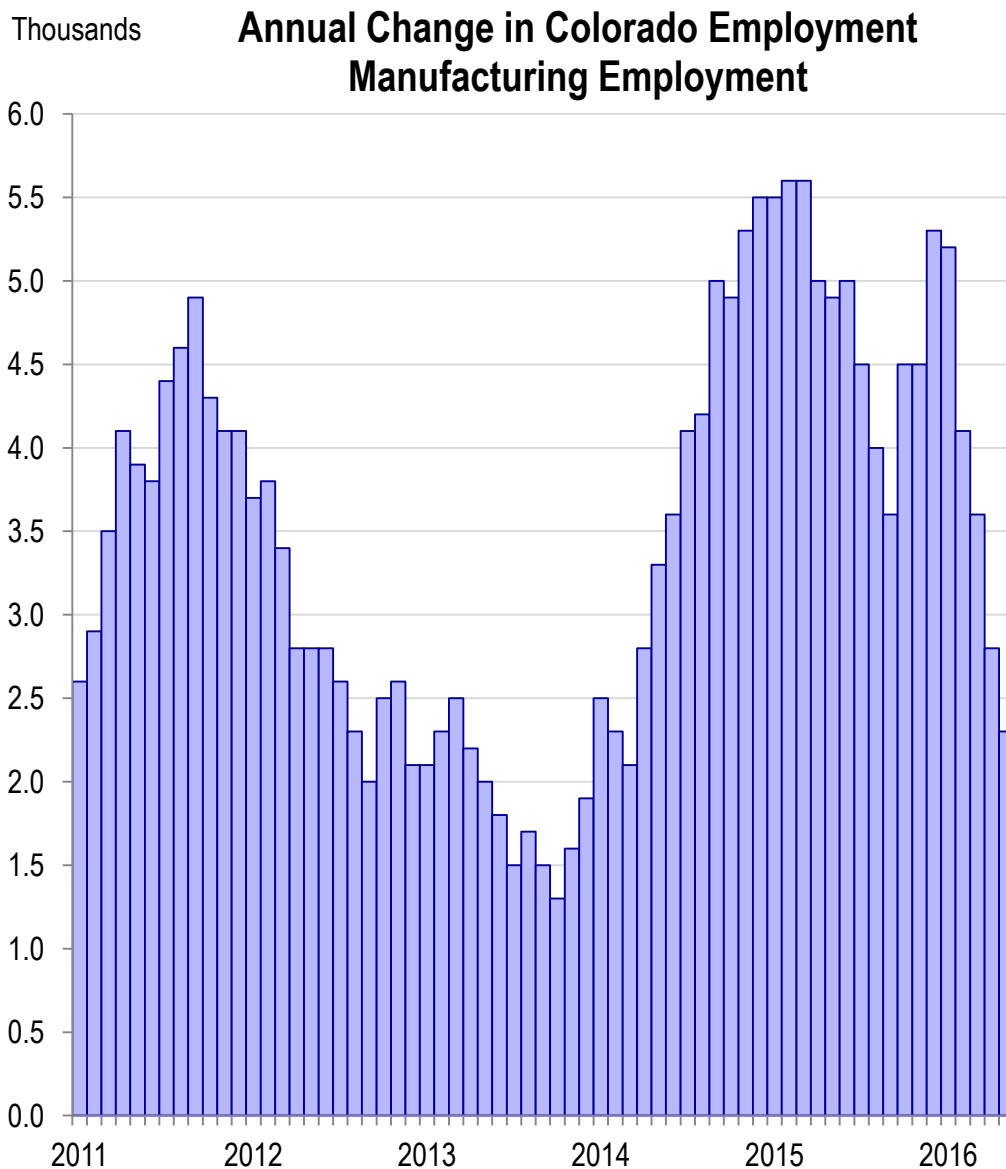
Source: Colorado Auto Dealers Association, cber.co.

● Annual Employment
 ● Change in Colorado
 ● Employment -
 ● Manufacturing

Since Q4 2010 the year-over-year change in Colorado manufacturing employment has been volatile, but positive.

Between 2011 and 2016 the y-o-y change in employment has fluctuated between 1,300 per month to 5,600 per month.

This year the y-o-y change in the number of monthly jobs added has declined sharply from 5,200 workers in January to 2,300 in May.



Source: Bureau of Labor Statistics, cber.co.



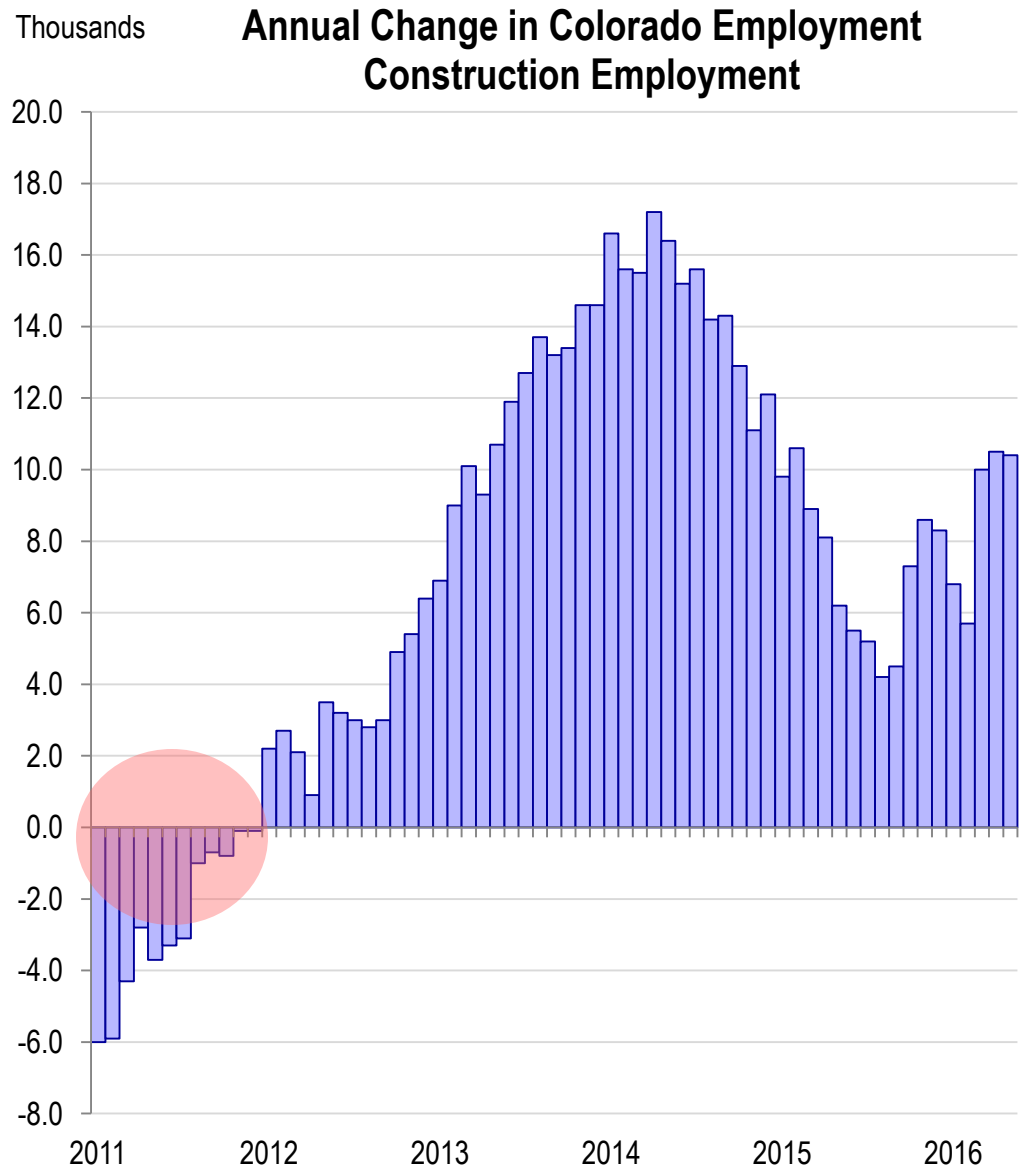
The Colorado Economy Construction and Housing

Annual Employment Change in Colorado Employment - Construction

The year-over-year change in Colorado construction employment was negative throughout 2011 (red).

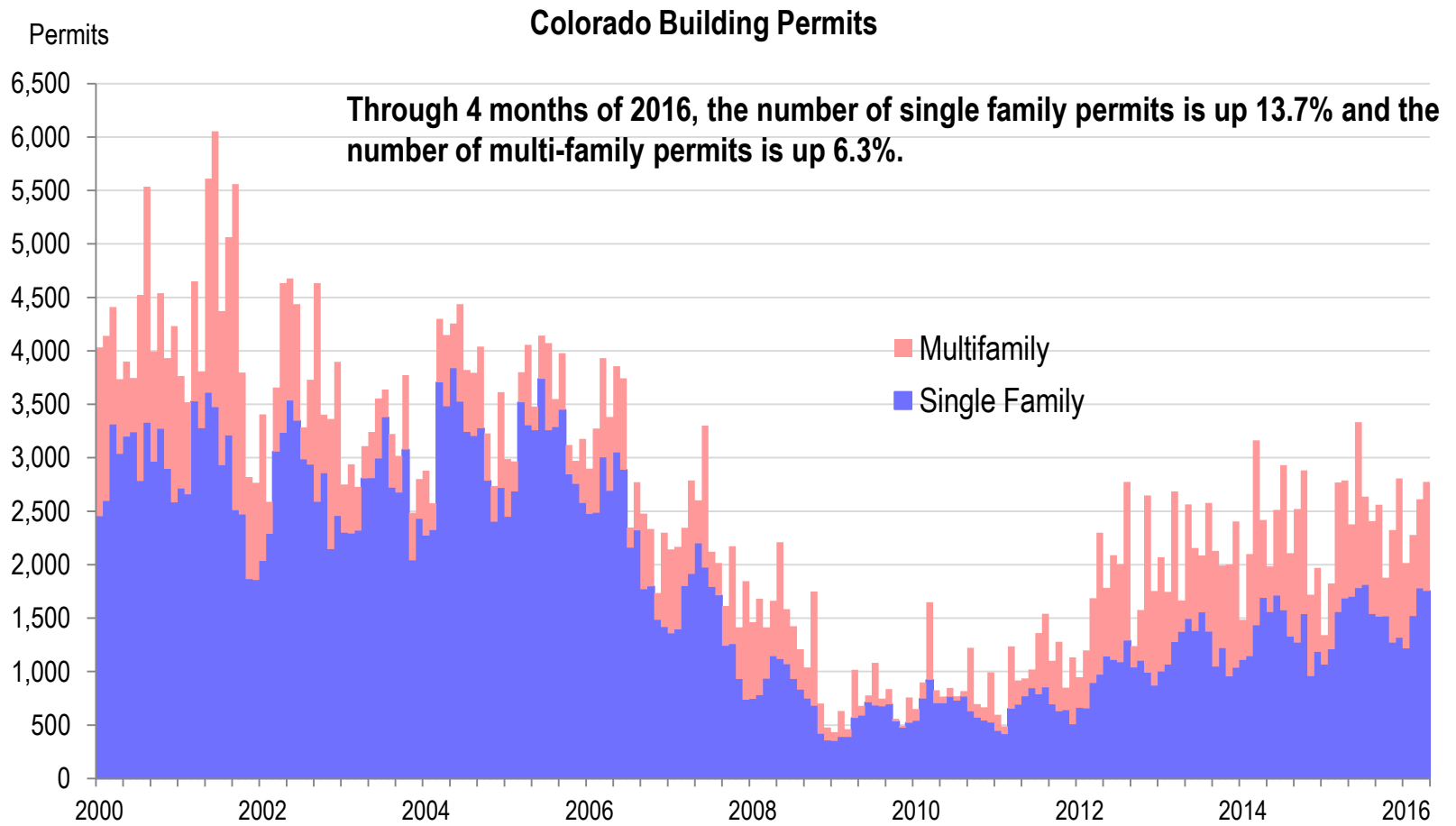
For this 5+ year period the y-o-y change has been volatile (which is normal for the industry). The largest change, 17,200 jobs, occurred in April 2014.

Between that peak and August 2015 construction employment increased at a decreasing rate. Since then the level of growth has trended upwards.



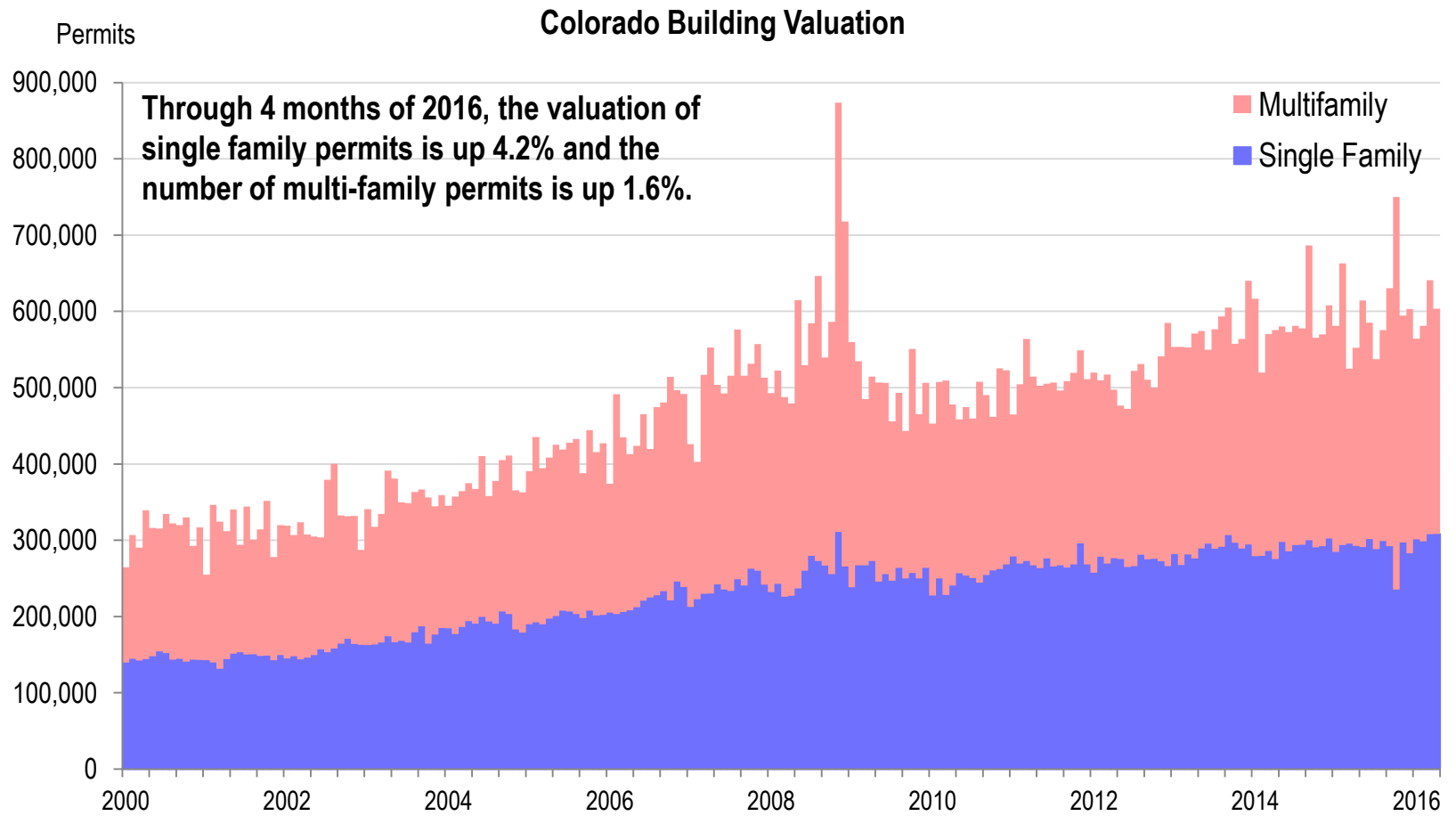
Source: Bureau of Labor Statistics, cber.co.

Colorado Building Permits (Units)



Source: TAMU Real Estate Center, U.S. Census Bureau, cber.co.

Colorado Building Valuation



Source: TAMU Real Estate Center, U.S. Census Bureau, cber.co.

Percentage of Population by Category U.S. and Colorado

The age breakdown of the U.S. (blue) and Colorado (red) population shows a high percentage of millennials (20 to 34) and baby boomers (50 to 69). Colorado is a “younger” state than the U.S.

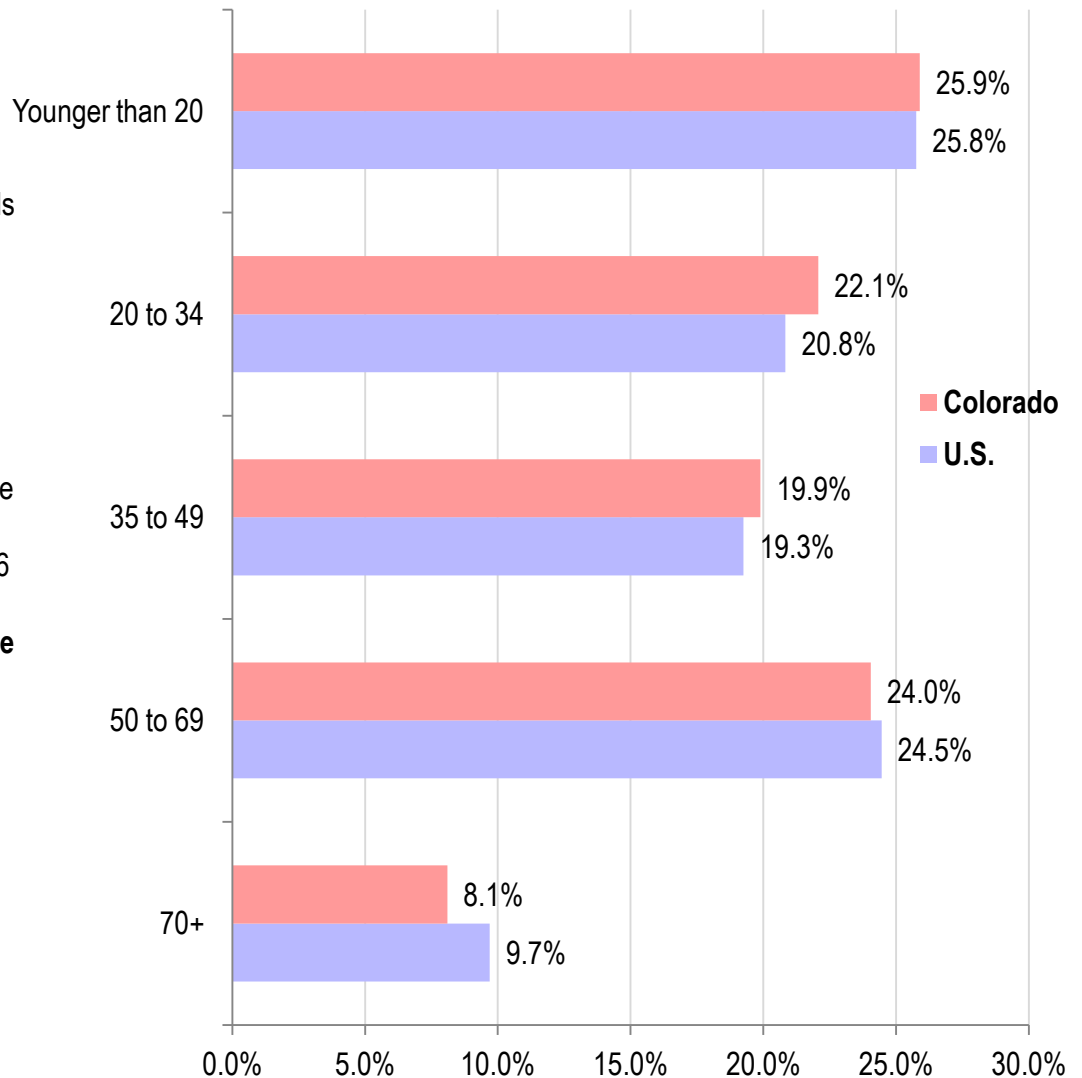
In a nutshell, baby boomers will be downsizing or re-locating. Some millennials are living with their parents or in a group situation (four people sharing rent in a house). As their financial situation improves they will be moving to multi-family or single family units and ultimately forming households. Their average age is 26 and the average age of a first time home owner is 32.

Changes in these two categories should benefit the Construction Sector for several years.

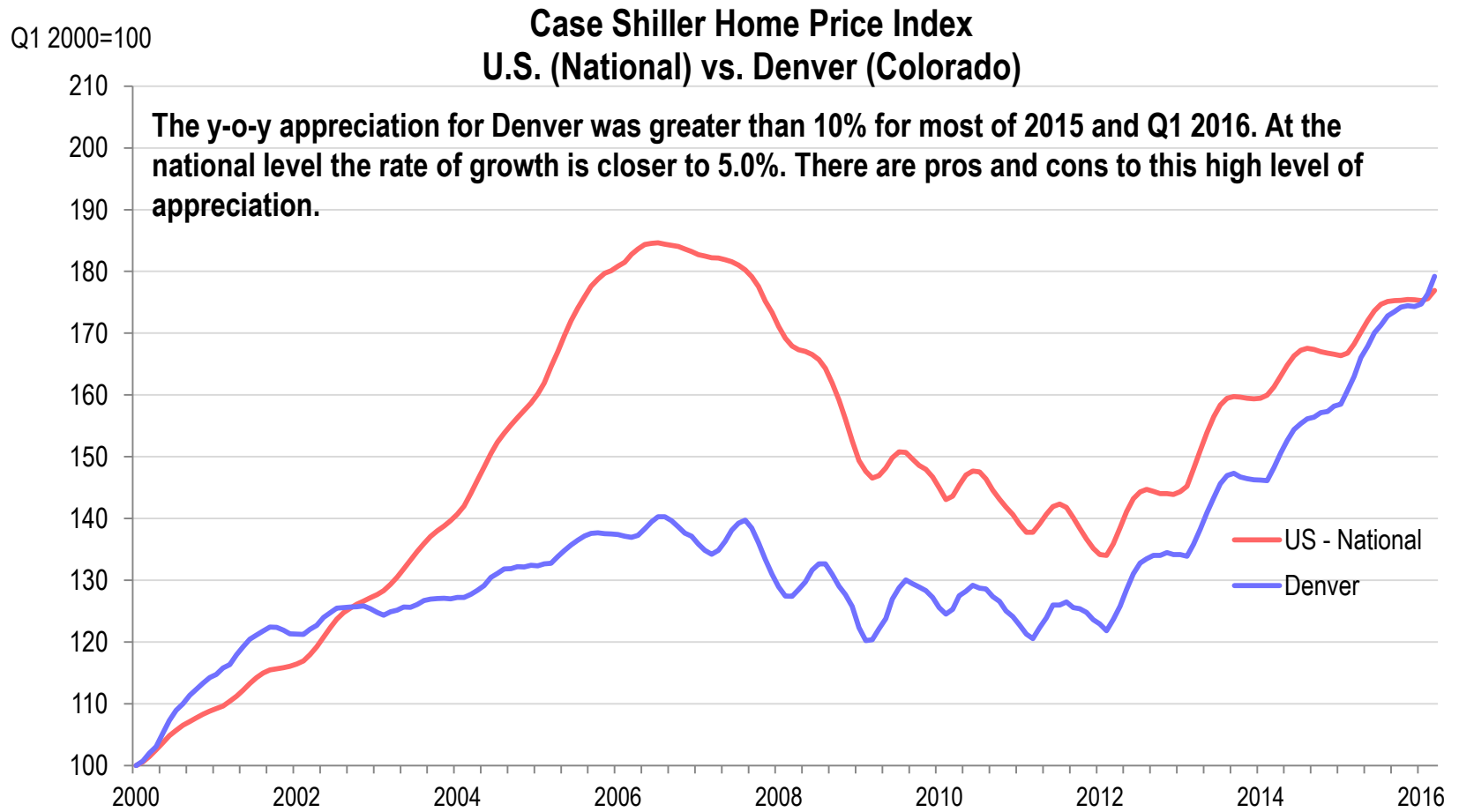
Total Colorado population (July 1, 2014) is 5,355,866 and the breakdown by category is:

- <20 1,386,838
- 20 to 34 1,181,859
- 35 to 49 1,065,346
- 50 to 69 1,288,037
- 70+ 433,786

Percentage of Population by Category



Case Shiller Home Price Index National vs. Denver (Colorado)



Source: S&P Case-Shiller, cber.co.

● Construction and Housing are Potential Risks to ● the Colorado Economy ●

Construction is a volatile sector; jobs can be added and lost very quickly. The sector is fueling our economy at a steady, manageable pace. There is a risk that pace may become too fast or too slow.

At the moment, rising costs for rent and housing could deter growth in the near-term, if affordable housing continues to be an issue in areas of high job growth.



The Colorado Economy

Real GDP

- Momentum Created by Broad-based Real GDP in
- 2015 Will Carry Over to 2016
-

Colorado's Real GDP growth for 2015 was greater than the U.S., 3.6% vs. 2.4%. In addition, most Colorado sectors grew at a faster rate than the U.S. The momentum created in 2015 has carried into 2016.

Colorado vs. U.S. Real GDP Growth 2015 - Goods

This chart shows the Real GDP growth for Colorado (blue) and the U.S. (red) by key goods sectors for 2015 vs. 2014.

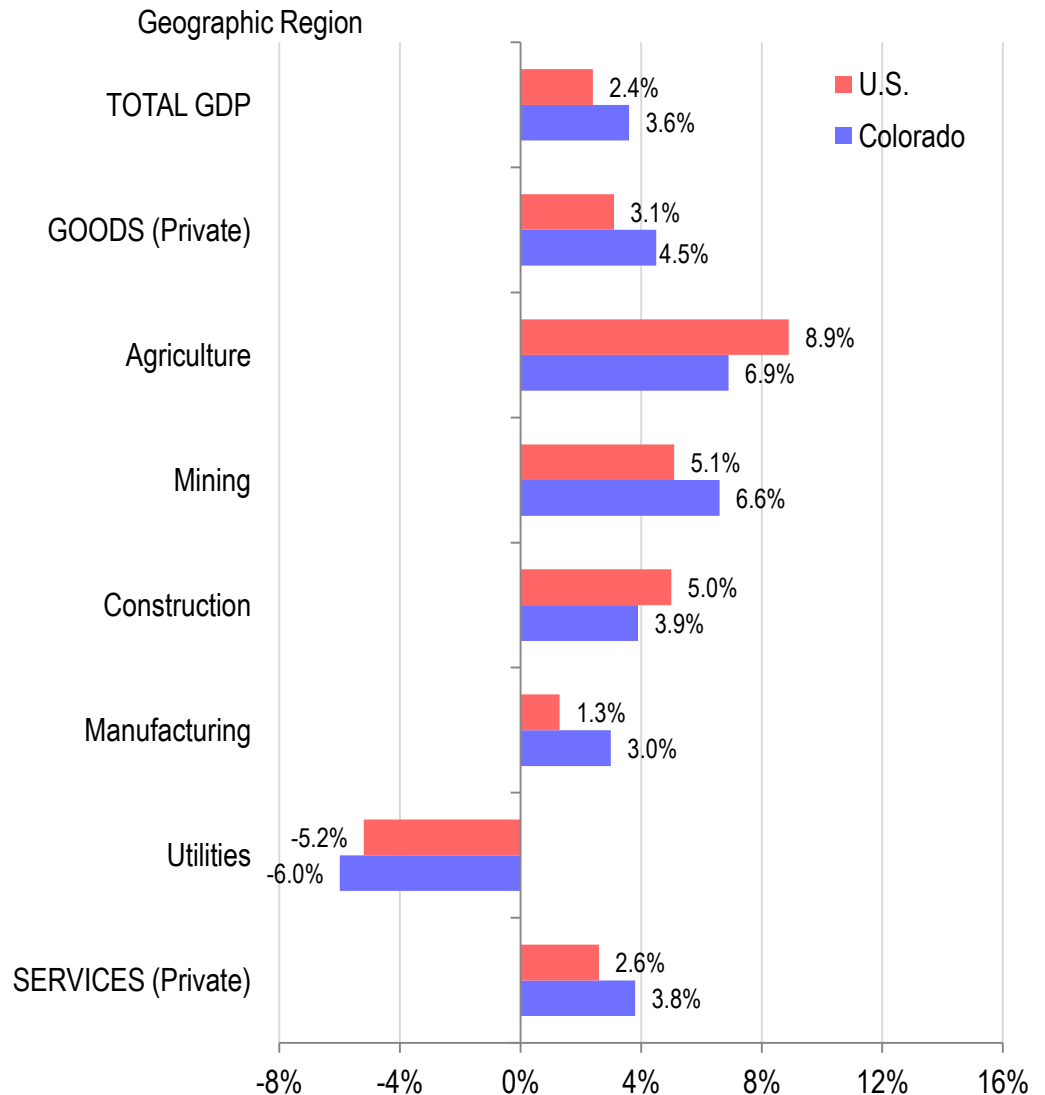
For this period Colorado outperformed the U.S. in:

- Mining
- Manufacturing
- Utilities

The U.S. outperformed Colorado in:

- Agriculture
- Construction

Real GDP Growth Colorado vs. U.S.



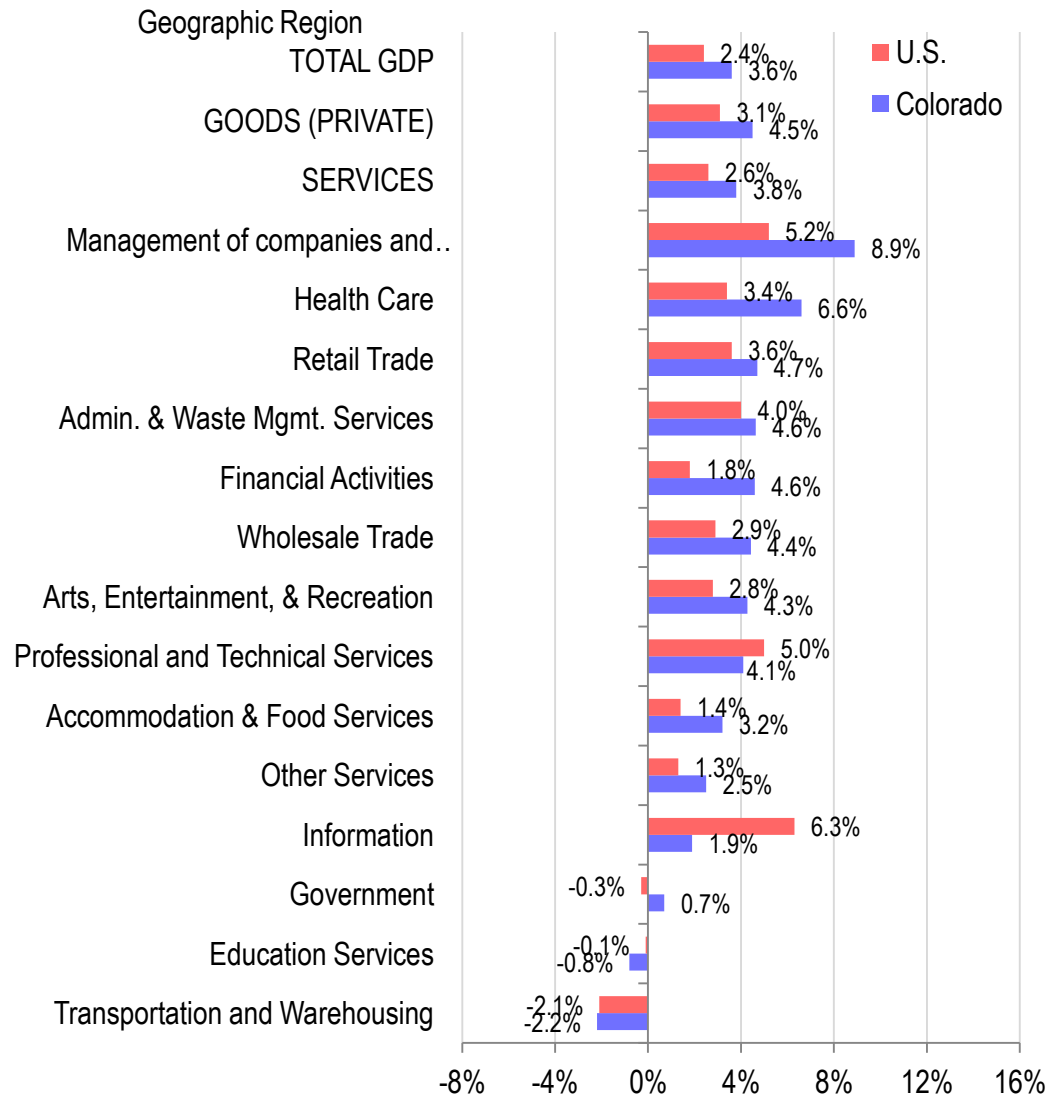
Colorado vs. U.S. Real GDP Growth 2015 - Services

This chart shows the Real GDP growth for Colorado (blue) and the U.S. (red) by key sectors for the period Q3 2015 vs. Q3 2014.

For this period the Colorado GDP outperformed the U.S. GDP in all industries, except:

- Information
- Professional, Scientific, and Technical Services
- Educational Services
- Transportation and Warehousing.

Real GDP Growth Colorado vs. U.S.



Source: BEA, cber.co.

Colorado-based Business and Economic Research <http://cber.co>



The Colorado Economy

Number of Private Establishments

State and County

● The Strength of the Colorado Economy, as Measured by the Number of Business Establishments at the County Level

There are many ways to measure the strength of the counties within a state. This could be done based on assets such as:

- Airports
- Major highways
- Colleges
- National or state parks
- Military bases

The could also be measured by changes in data such as:

- Population
- Employment
- Establishments
- Wages
- Industry concentration

In this brief analysis, Colorado's 64 counties are compared by using the compound annual growth rate (CAGR) for the number of private sector wage and salary establishments for two periods:

- 2001 to 2015
- 2010 to 2015.

This first metric evaluates the long term growth of the counties and the latter measures their recovery from the Great Recession.

The rationale for evaluating change in the number of establishments is simple. Business establishments provide jobs that attract people to live in that county. Establishment growth will be accompanied by growth in employment, key industries, wages, and population. Because these metrics are interrelated, an analysis by population or employment growth would produce similar results.

Number of Colorado Private Establishments

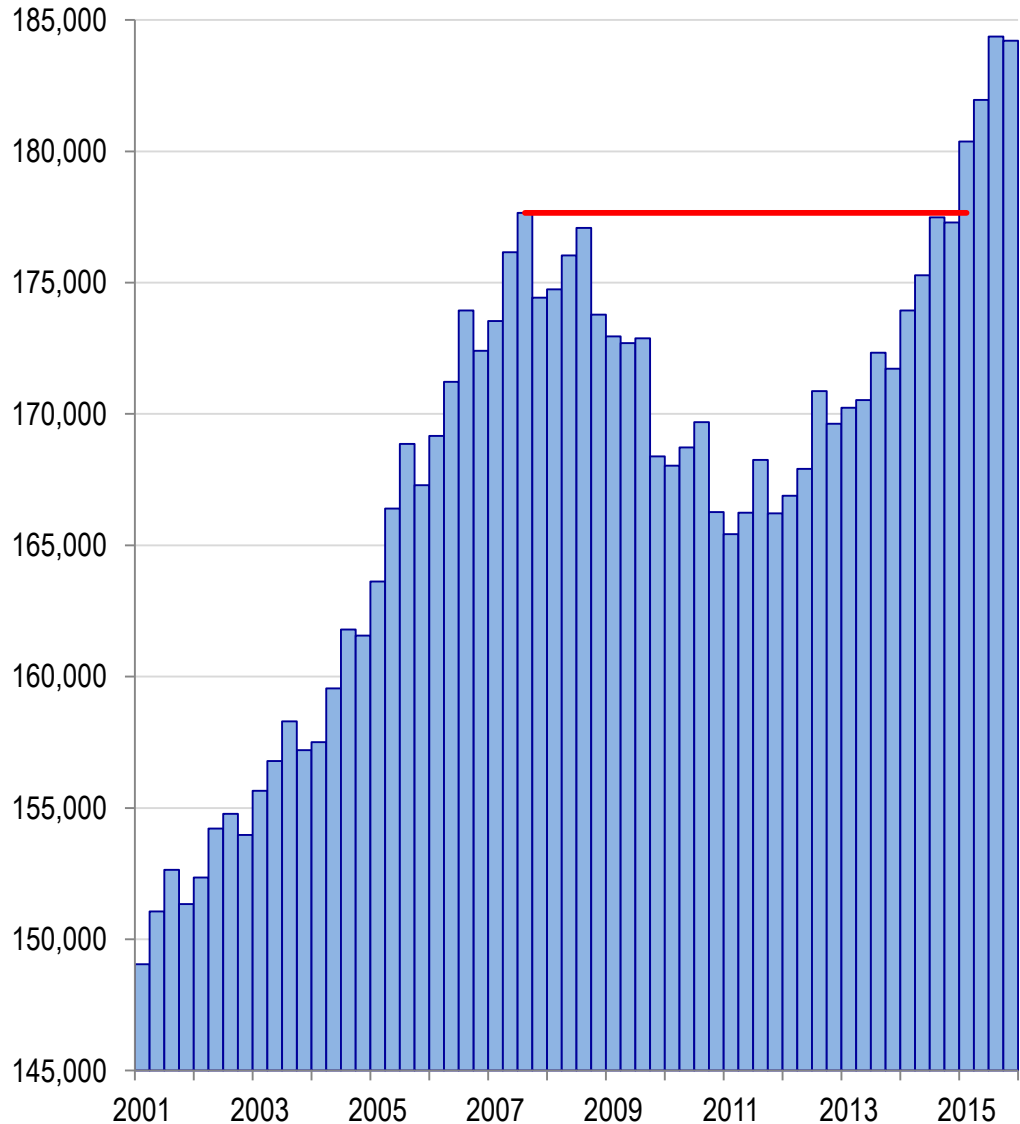
The number of Colorado private sector establishments peaked at 177,657 in Q3 2007.

As a result of the Great Recession, the number of Colorado business establishments declined and bottomed out at 165,249 in Q1 2011.

Since then, there has been steady growth in the number of establishments and in Q1 2015 the state returned to the previous 2007 peak. At the end of 2018 there were more than 184,000 business establishments in Colorado.

The creation of new establishments will be a source of job growth in 2016 and beyond.

Number of Private Establishments



Source: Bureau of Labor Statistics, cber.co.

● Long-Term Change in Number of Establishments in ● Colorado Counties 2001 to 2015 ●

Colorado has 64 counties and 7 MSAs. The MSAs include 17 counties. The Denver MSA has 10 counties and the Colorado Springs MSA has 2 counties.

Note: The tables on the following pages are sorted by the column with the heading, “CAGR 2001 to 2015” – the fifth column. CAGR = compound annualized growth rate.

The source for all the tables in this section is BLS QCEW data. There is a small number of organizations that could not be classified, hence when the data is added, it will vary slightly from the total for Colorado.

Key points from the following four tables:

- 13 counties added establishments at a faster rate than the state (>1.37%).
- 8 counties added establishments at the rate of 1.00% to 1.36%.
- 21 counties added establishments at the rate of 0.0% to 1.0%.
- **The change in the number of establishments was negative for 22 counties.**
- There were MSA counties in all four groups.

Counties with Annualized Growth Rates for Establishments (2001 to 2015) that are Greater than Colorado (1.37%)

- There are 13 counties with CAGRs for 2001 to 2015 that are greater than the rate for Colorado.
- There are 58,266 private establishments in these 13 counties.
- There are 634,169 wage and salary employees in these counties.
- Four of these counties have fewer than 300 private establishments.
- There are 8 MSA counties in this group: Broomfield, Douglas, Weld, Larimer, Mesa, Elbert, Gilpin, and El Paso.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Broomfield	34,493	\$ 81,453	2,550	4.80%	4.25%
Douglas	100,090	\$ 62,759	10,961	4.57%	3.19%
Weld	86,596	\$ 47,618	6,515	2.73%	2.85%
Larimer	116,882	\$ 46,206	11,056	1.91%	2.21%
Ouray	1,333	\$ 35,476	292	1.72%	-0.67%
San Juan	217	\$ 20,600	66	1.58%	0.62%
Washington	750	\$ 42,048	124	1.55%	2.80%
Gunnison	6,148	\$ 33,016	1,076	1.55%	0.13%
Mesa	50,572	\$ 40,287	4,633	1.51%	-0.80%
Elbert	2,489	\$ 39,635	614	1.49%	1.11%
El Paso	209,390	\$ 45,520	17,747	1.43%	1.31%
Garfield	20,654	\$ 46,997	2,490	1.42%	-1.19%
Gilpin	4,555	\$ 39,154	142	1.39%	0.57%
Total	634,169		58,266		

Source: BEA, cber.co.

Counties with Annualized Growth Rates for Establishments (2001 to 2015) that are 1.0% to 1.36% (< Colorado)

- There are 8 counties with CAGRs for 2001 to 2015 that are less than the rate for Colorado, but greater than 1.0%.
- There are 45,828 private establishments in these 8 counties.
- There are 619,635 wage and salary employees in these counties.
- There are 3 MSA counties in this group: Denver, Adams, and Teller.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Denver	412,202	\$ 65,227	29,246	1.36%	3.18%
Chaffee	5,386	\$ 30,539	879	1.33%	1.45%
Adams	156,584	\$ 47,296	9,872	1.29%	2.22%
Yuma	2,965	\$ 37,888	378	1.27%	1.32%
La Plata	20,267	\$ 42,821	2,419	1.22%	0.18%
Routt	12,316	\$ 43,781	1,657	1.21%	-0.13%
San Miguel	4,324	\$ 39,884	631	1.01%	0.42%
Teller	5,591	\$ 36,418	746	1.01%	-0.24%
Total	619,635		45,828		

Counties with Annualized Growth Rates for Establishments (2001 to 2015) that are 0.0% to 1.00%

- There are 21 counties with CAGRs for 2001 to 2015 that are 0.0% to 1.0%.
- There are 66,450 private establishments in these 21 counties.
- There are 725,579 wage and salary employees in these counties.
- There are 3 MSA counties: Boulder, Arapahoe, Jefferson, and Park.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Boulder	144,530	\$ 62,998	14,137	0.98%	2.08%
Arapahoe	280,215	\$ 62,430	20,587	0.89%	1.88%
Archuleta	3,110	\$ 29,504	516	0.86%	0.43%
Summit	17,943	\$ 36,002	2,165	0.84%	0.48%
Dolores	539	\$ 65,003	57	0.80%	3.07%
Eagle	27,910	\$ 42,565	3,315	0.69%	0.13%
Cheyenne	410	\$ 44,934	72	0.62%	0.85%
Delta	5,887	\$ 31,114	834	0.61%	-0.66%
Jefferson	193,488	\$ 52,699	18,794	0.60%	1.12%
Jackson	372	\$ 31,406	75	0.49%	1.39%
Montrose	11,017	\$ 34,470	1,255	0.47%	-1.15%
Phillips	1,071	\$ 36,254	150	0.44%	3.22%
Lake	1,564	\$ 32,768	214	0.38%	1.16%
Morgan	9,896	\$ 41,101	682	0.38%	0.48%
Rio Blanco	1,775	\$ 58,241	238	0.34%	-1.98%
Moffat	3,665	\$ 46,536	417	0.33%	-1.38%
Park	1,482	\$ 36,924	482	0.32%	0.04%
Montezuma	6,206	\$ 34,803	755	0.08%	-0.60%
Grand	5,943	\$ 31,068	795	0.05%	-2.01%
Fremont	8,107	\$ 30,394	849	0.05%	-0.37%
Costilla	449	\$ 29,312	61	0.00%	-1.56%
Total	725,579		66,450		

Source: BEA, cber.co.

Counties with Annualized Growth Rates for Establishments (2001 to 2015) that are Less Than 0.0%

- There are 22 counties with CAGRs for 2001 to 2015 that are negative.
- There are 9,126 private establishments in these 22 counties.
- There are 98,673 wage and salary employees in these counties.
- There are two MSA counties in this group: Pueblo, and Clear Creek.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Alamosa	5,865	\$ 34,745	502	-0.04%	-0.66%
Pitkin	13,691	\$ 49,202	1,758	-0.12%	-0.08%
Saguache	1,102	\$ 29,738	140	-0.15%	-1.76%
Lincoln	1,123	\$ 31,289	127	-0.22%	0.32%
Kit Carson	2,269	\$ 36,434	272	-0.26%	1.22%
Pueblo	46,962	\$ 38,664	3,032	-0.26%	-0.88%
Mineral	444	\$ 26,524	64	-0.33%	0.96%
Conejos	847	\$ 30,472	118	-0.35%	2.17%
Las Animas	3,298	\$ 37,569	386	-0.36%	-2.14%
Logan	6,036	\$ 34,403	611	-0.43%	-0.13%
Kiowa	177	\$ 35,914	43	-0.48%	2.50%
Clear Creek	2,395	\$ 52,513	310	-0.64%	-2.17%
Custer	636	\$ 30,096	131	-0.82%	-3.06%
Bent	687	\$ 33,675	64	-0.84%	0.64%
Rio Grande	2,973	\$ 33,437	361	-0.89%	-2.08%
Otero	4,302	\$ 32,922	432	-1.10%	-1.33%
Prowers	3,102	\$ 31,344	355	-1.16%	-0.44%
Crowley	539	\$ 34,766	37	-1.23%	-1.55%
Sedgwick	451	\$ 34,695	67	-1.26%	-0.30%
Hinsdale	186	\$ 26,828	68	-1.41%	-2.71%
Baca	410	\$ 28,568	86	-1.74%	-0.46%
Huerfano	1,178	\$ 28,112	162	-1.84%	-2.93%
Total	98,673		9,126		

Source: BEA, cber.co.

● Change in Number of Establishments in Colorado Counties

● Since the End of Great Recession 2010 to 2015

Colorado has 64 counties and 7 MSAs. The MSAs include 17 counties. The Denver MSA has 10 counties and the Colorado Springs MSA has 2 counties.

Note: The tables on the following pages are sorted by the column with the heading, “CAGR 2010 to 2015” – the last column. CAGR = compound annualized growth rate.

The source for all the tables in this section is BLS QCEW data. There is a small number of organizations that could not be classified, hence when the data is added, it will vary slightly from the total for Colorado.

Key points from the following tables:

- 13 counties added establishments at a faster rate than the state (>1.67%).
- 8 counties added establishments at the rate of 1.00% to 1.67%.
- 14 counties added establishments at the rate of 0.0% to 1.0%.
- **The change in the number of establishments was negative for 29 counties.**
- There were MSA counties in all four groups.

Counties with Annualized Growth Rates for Establishments (2010 to 2015) that are Greater than Colorado (1.67%)

- There are 13 counties with CAGRs for 2010 to 2015 that are greater than the rate for Colorado.
- There are 105,416 private establishments in these 13 counties.
- There are 1,334,976 wage and salary employees in these counties.
- Five of these counties have fewer than 200 private establishments.
- There are 8 MSA counties in this group: Broomfield, Douglas, Denver, Weld, Adams, Larimer, Boulder, and Arapahoe.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Broomfield	34,493	\$ 81,453	2,550	4.80%	4.25%
Phillips	1,071	\$ 36,254	150	0.44%	3.22%
Douglas	100,090	\$ 62,759	10,961	4.57%	3.19%
Denver	412,202	\$ 65,227	29,246	1.36%	3.18%
Dolores	539	\$ 65,003	57	0.80%	3.07%
Weld	86,596	\$ 47,618	6,515	2.73%	2.85%
Washington	750	\$ 42,048	124	1.55%	2.80%
Kiowa	177	\$ 35,914	43	-0.48%	2.50%
Adams	156,584	\$ 47,296	9,872	1.29%	2.22%
Larimer	116,882	\$ 46,206	11,056	1.91%	2.21%
Conejos	847	\$ 30,472	118	-0.35%	2.17%
Boulder	144,530	\$ 62,998	14,137	0.98%	2.08%
Arapahoe	280,215	\$ 62,430	20,587	0.89%	1.88%
Total	1,334,976		105,416		

Source: BEA, cber.co.

Counties with Annualized Growth Rates for Establishments (2010 to 2015) that are 1.0% to 1.67% (< Colorado)

- There are 8 counties with CAGRs for 2001 to 2015 that are less than the rate for Colorado (1.67%), but greater than 1.0%.
- There are 38,973 private establishments in these 8 counties.
- There are 417,923 wage and salary employees in these counties.
- There are three MSA counties: El Paso, Jefferson, Elbert.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Chaffee	5,386	\$ 30,539	879	1.33%	1.45%
Jackson	372	\$ 31,406	75	0.49%	1.39%
Yuma	2,965	\$ 37,888	378	1.27%	1.32%
El Paso	209,390	\$ 45,520	17,747	1.43%	1.31%
Kit Carson	2,269	\$ 36,434	272	-0.26%	1.22%
Lake	1,564	\$ 32,768	214	0.38%	1.16%
Jefferson	193,488	\$ 52,699	18,794	0.60%	1.12%
Elbert	2,489	\$ 39,635	614	1.49%	1.11%
Total	417,923		38,973		

Source: BEA, cber.co.

Counties with Annualized Growth Rates for Establishments (2001 to 2015) that are 0.0% to 1.00%

- There are 14 counties with CAGR for 2010 to 2015 that are between 0.0% and 1.0%.
- There are 11,821 private establishments in these 8 counties.
- There are 98,516 wage and salary employees in these counties.
- There are two MSA counties: Gilpin and Park.

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Mineral	444	\$ 26,524	64	-0.33%	0.96%
Cheyenne	410	\$ 44,934	72	0.62%	0.85%
Bent	687	\$ 33,675	64	-0.84%	0.64%
San Juan	217	\$ 20,600	66	1.58%	0.62%
Gilpin	4,555	\$ 39,154	142	1.39%	0.57%
Summit	17,943	\$ 36,002	2,165	0.84%	0.48%
Morgan	9,896	\$ 41,101	682	0.38%	0.48%
Archuleta	3,110	\$ 29,504	516	0.86%	0.43%
San Miguel	4,324	\$ 39,884	631	1.01%	0.42%
Lincoln	1,123	\$ 31,289	127	-0.22%	0.32%
La Plata	20,267	\$ 42,821	2,419	1.22%	0.18%
Gunnison	6,148	\$ 33,016	1,076	1.55%	0.13%
Eagle	27,910	\$ 42,565	3,315	0.69%	0.13%
Park	1,482	\$ 36,924	482	0.32%	0.04%
Total	98,516		11,821		

Source: BEA, cber.co.

● Counties with Annualized Growth Rates for Establishments ● (2010 to 2015) that were Less Than 0.0%



The following slide shows the counties that had growth rates for establishments that are less than 0.0% for the period 2010 to 2015. The counties are divided into two columns.

- There are 29 counties with CAGR for 2010 to 2015 that are 0.0% to 1.0%.
- There are 23,460 private establishments in these 21 counties.
- There are 226,641 wage and salary employees in these counties.
- There are 4 MSA counties in this group: Teller, Mesa, Pueblo, and Clear Creek.

Counties with Annualized Growth Rates for Establishments (2010 to 2015) that are Less Than 0.0%

County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015	County	2015 Employees	2015 Avg. Ann. Wages	2015 Establishments	CAGR 2001 to 2015	CAGR 2010 to 2015
Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%	Colorado	2,097,706	\$ 54,512	182,725	1.37%	1.67%
Pitkin	13,691	\$ 49,202	1,758	-0.12%	-0.08%	Garfield	20,654	\$ 46,997	2,490	1.42%	-1.19%
Logan	6,036	\$ 34,403	611	-0.43%	-0.13%	Otero	4,302	\$ 32,922	432	-1.10%	-1.33%
Routt	12,316	\$ 43,781	1,657	1.21%	-0.13%	Moffat	3,665	\$ 46,536	417	0.33%	-1.38%
Teller	5,591	\$ 36,418	746	1.01%	-0.24%	Crowley	539	\$ 34,766	37	-1.23%	-1.55%
Sedgwick	451	\$ 34,695	67	-1.26%	-0.30%	Costilla	449	\$ 29,312	61	0.00%	-1.56%
Fremont	8,107	\$ 30,394	849	0.05%	-0.37%	Saguache	1,102	\$ 29,738	140	-0.15%	-1.76%
Prowers	3,102	\$ 31,344	355	-1.16%	-0.44%	Rio Blanco	1,775	\$ 58,241	238	0.34%	-1.98%
Baca	410	\$ 28,568	86	-1.74%	-0.46%	Grand	5,943	\$ 31,068	795	0.05%	-2.01%
Montezuma	6,206	\$ 34,803	755	0.08%	-0.60%	Rio Grande	2,973	\$ 33,437	361	-0.89%	-2.08%
Delta	5,887	\$ 31,114	834	0.61%	-0.66%	Las Animas	3,298	\$ 37,569	386	-0.36%	-2.14%
Alamosa	5,865	\$ 34,745	502	-0.04%	-0.66%	Clear Creek	2,395	\$ 52,513	310	-0.64%	-2.17%
Ouray	1,333	\$ 35,476	292	1.72%	-0.67%	Hinsdale	186	\$ 26,828	68	-1.41%	-2.71%
Mesa	50,572	\$ 40,287	4,633	1.51%	-0.80%	Huerfano	1,178	\$ 28,112	162	-1.84%	-2.93%
Pueblo	46,962	\$ 38,664	3,032	-0.26%	-0.88%	Custer	636	\$ 30,096	131	-0.82%	-3.06%
Montrose	11,017	\$ 34,470	1,255	0.47%	-1.15%	Total	226,641		23,460		

Source: BEA, cber.co.

Colorado-based Business and Economic Research <http://cber.co>

● Change in Number of Establishments in Colorado Counties

● MSA vs. non-MSA counties



Colorado has 64 counties and 7 MSAs. The MSAs include 17 counties. The Denver MSA has 10 counties and the Colorado Springs MSA has 2 counties. There are 47 non-MSA counties.

The source for all the tables in this section is BLS QCEW data. There is a small number of organizations that could not be classified, hence when the data is added, it will vary slightly from the total for Colorado.

Key points from the following table regarding the individual MSAs:

- The number of establishments in Colorado Springs, Grand Junction, Denver, Fort Collins, and Greeley MSAs grew at a faster rate than the overall state between 2001 and 2015. Pueblo and Boulder increased at a slower rate.
- The number of establishments in Boulder, Denver, Fort Collins, and Greeley grew at a faster rate than the overall state between 2010 and 2015. Pueblo, Colorado Springs, and Grand Junction increased at a slower rate than the state.



MSA vs. Non-MSA Establishment Growth

MSA	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	CAGR 2001 vs.2015	CAGR 2010 vs. 2015
Pueblo	3,146	3,186	3,249	3,271	3,330	3,371	3,348	3,330	3,241	3,169	3,110	3,056	3,007	2,987	3,032	-0.26%	-0.88%
Boulder Colorado Springs	12,335	11,602	11,606	11,702	12,139	12,454	12,753	12,862	12,793	12,755	12,770	13,033	13,252	13,505	14,137	0.98%	2.08%
Grand Junction	3,757	3,879	4,066	4,231	4,476	4,707	5,000	5,218	5,100	4,823	4,658	4,659	4,575	4,563	4,633	1.51%	-0.80%
Denver	75,211	77,070	78,529	79,939	82,815	84,998	86,360	85,978	84,453	83,374	82,915	84,724	86,377	88,402	93,558	1.57%	2.33%
Ft. Collins	8,479	8,708	8,947	9,121	9,574	9,933	10,191	10,314	10,085	9,912	9,850	10,048	10,196	10,460	11,056	1.91%	2.21%
Greeley	4,470	4,678	4,921	5,193	5,520	5,799	5,928	5,939	5,802	5,661	5,617	5,699	5,824	6,062	6,515	2.73%	2.85%
Total MSA	122,602	124,763	127,349	129,983	135,094	139,252	141,990	141,795	139,192	137,074	136,169	138,620	140,739	143,601	151,424	1.52%	2.01%
Total non-MSA	26,130	26,527	27,066	27,602	28,705	29,744	30,624	30,767	29,898	28,629	27,684	27,661	27,623	27,615	28,239	0.56%	-0.27%

Source: BEA, cber.co.

Colorado-based Business and Economic Research <http://cber.co>

Summary - The Colorado Economy - Number of Private Establishments

State and County

2001 to 2015 – Long Term Growth

This analysis shows that:

- The number of establishments in the MSAs increased at a CAGR of 1.52%.
- The number of establishments in the non-MSAs grew at a CAGR of .56%.
- The number of establishments in the state increased by 1.37%.
- Not all MSA counties grew at a rate above the state.
- There were some non-MSA counties that experienced growth in the number of their establishments that was above the state average.

2010 to 2015 - Post Great Recession

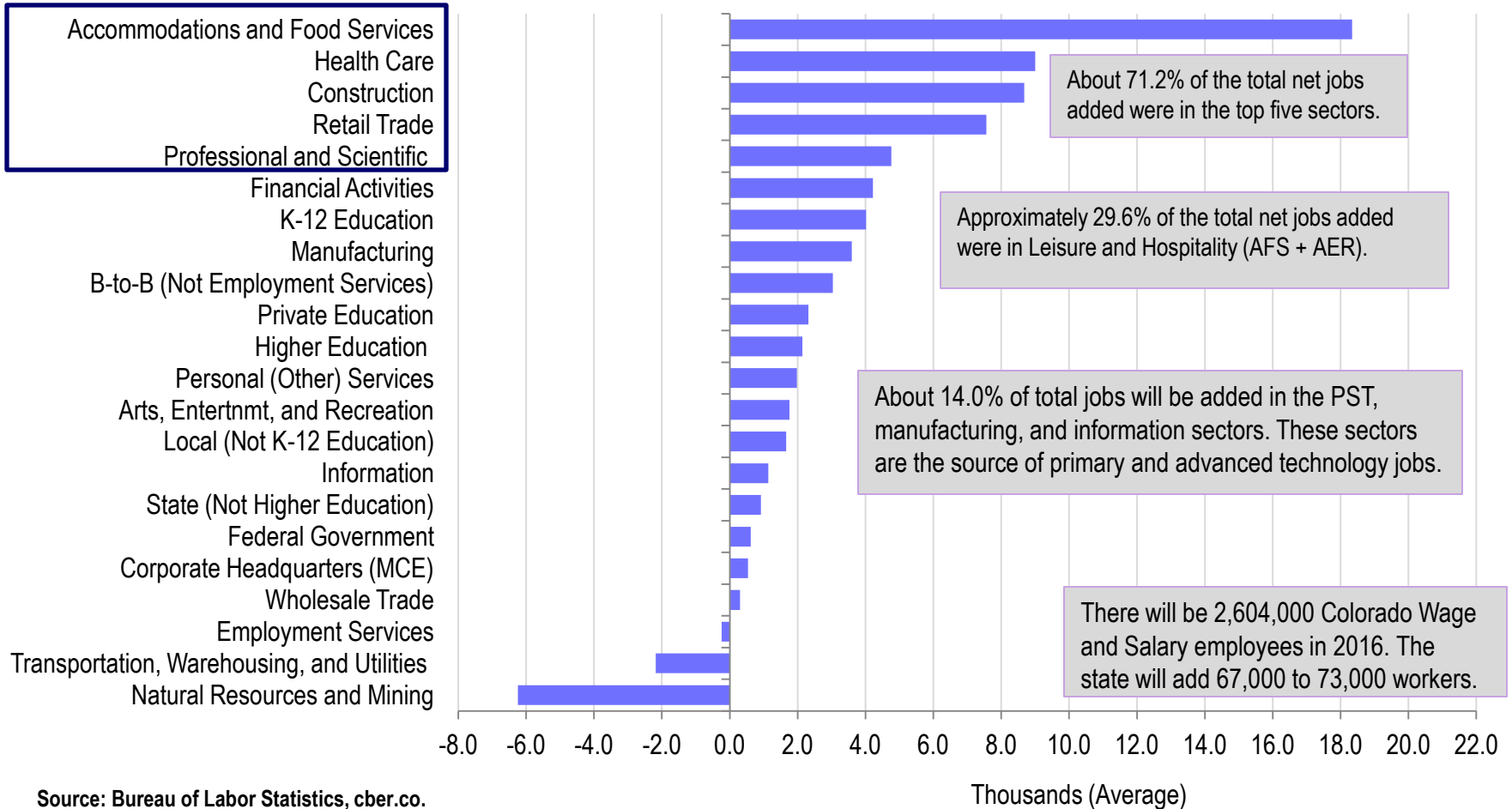
- The number of establishments in the MSAs increased at a CAGR of 2.01%.
- The number of establishments in the non-MSAs changed at a CAGR of -.27%.
- The number of establishments in the state increased by 1.67%.
- Not all MSA counties grew at a rate above the state.
- There were some non-MSA counties that experienced growth in the number of their establishments that was above the state average.



The Colorado Economy Summary

Job Changes First 5 Months of 2016 vs. Same Period in 2015

Job Change All Sectors



Source: Bureau of Labor Statistics, cber.co.



Summary of the Colorado Economy

Reasons to Feel Good About the Colorado Economy

The best thing the Colorado economy has going for it is momentum:

- State real GDP growth for 2015 grew at a greater rate than the U.S. and that growth is broad-based.
- Strong growth in business establishments in 2015 – although most of the growth is in the Front Range.
- Record passenger traffic at DIA.
- Strong construction on tap for 2016 and 2017.
- Manufacturing continues to show growth, albeit at a declining rate.
- Tourism is coming off a record year in 2015.
- The Colorado ski industry showed a strong gain over the previous year.
- Colorado job growth includes most sectors.

Potential Risks to Strong Economic Growth

The following factors could cause the Colorado economy to grow at a pace slower than the current rate:

- Lack of a qualified workers to fill key positions.
- Lack of affordable housing.
- Construction is directly and indirectly responsible for the expansion of the local economy. An abrupt slowdown in construction could indirectly cause a slowdown in a number of industries.



cber.co Colorado Economic Review Through May 2016

This analysis is for informational purposes only. Any opinions or interpretations of data are those of the presenter. As such, they do not represent the viewpoints of any group or particular organization.

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ABOUT THE AUTHOR

Gary Horvath has produce annual employment forecasts of the state economy for over 25 years. They have been supplemented by monthly economic updates and indices that track economic performance over the short term. In addition he has directed three statewide analyses that included reviews of all 64 county economies.

In addition, Horvath was the principal investigator for a state and federally funded project to prepare a nanotechnology roadmap for Colorado. As well, he was a co-founder of the Colorado Photonics Industry Association, a trade group for Colorado’s Photonics cluster. Horvath has been an active board member of the group since its inception.

Horvath has also served on the Board of Directors for the Economic Development Council of Colorado, Northwest Denver Business Partnership, Adams County Economic Development, and Broomfield Economic Development Corporation. Horvath has also been the lead for the photonics/electronics cluster, which is part of OEDIT’s early stage and proof of concept grant programs.