



## REVIEW OF CURRENT CONDITIONS: THE ECONOMIC OUTLOOK AND ITS IMPACT ON WORKERS COMPENSATION

The exhibits below are updated to reflect the current economic outlook for factors that typically impact workers compensation. Each exhibit also provides some context for the outlook, relative to the historical data. Forecasts are derived from Moody's Analytics.

### EMPLOYMENT GROWTH

After posting the fastest growth since the recession, 2.4% in 2015, private employment growth has slowed this year to a projected increase of 1.9%. On average, the economy added 221,000 private sector jobs per month last year compared with an increase of 162,000 per month through November of 2016.

Education and Healthcare, and Professional and Business Services have continued to add the most jobs this year, but at a slower pace than in 2015. Last year, Mining was the only major sector to post a decline, but this year both Mining and Manufacturing are losing jobs. This is a concern for the workers compensation industry since the Manufacturing industry group accounts for 16% of manual premium in NCCI states. The Construction industry group makes up 24% of premiums in NCCI states and has posted a small increase through November.

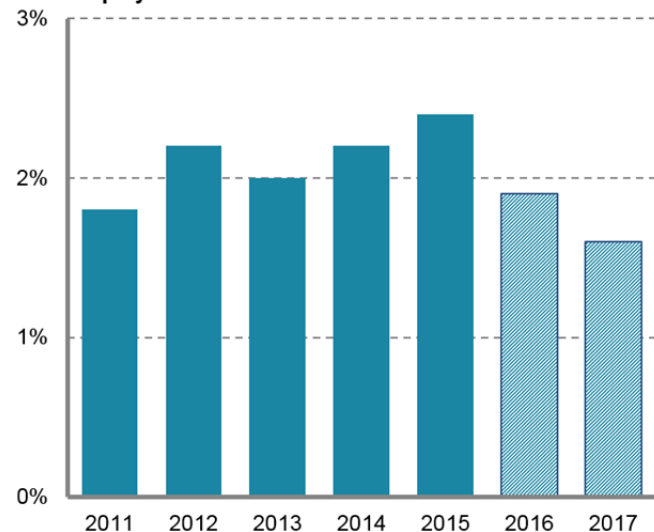
Real gross domestic product (GDP) growth accelerated during the course of the year, from a 0.8% seasonally adjusted annual rate in the first quarter to 1.4% in the second quarter and 3.5% in the third quarter. The significant acceleration in the third quarter was due to increases in consumer spending, exports, and government spending. Nonetheless, Moody's expects that overall annual growth in real GDP for 2016 will decline to 1.6% from 2.6% in 2015, which is consistent with the slowing employment growth.

As seen in the graph above, Moody's forecasts that employment growth will slow to 1.9% this year and 1.6% next year. Moody's post-election employment forecast for 2017 is unchanged from the pre-election forecast.

As mentioned in previous editions of the *Quarterly Economics Briefing (QEB)*, employment expansion leads to increased premium, but inexperienced new hires may also put upward pressure on claim frequency. Both impacts are likely to be muted during 2017 if employment growth continues to slow. Looking further ahead, we note that Moody's current forecast calls for employment growth to re-accelerate in 2018.

### Employment: Forecast Is for Slowing Growth

Growth Rate:  
Private Employment



Sources: US Bureau of Labor Statistics; Moody's Analytics

## WAGE GROWTH

After increasing by 3.1% in both 2014 and 2015, wage growth is forecast to slow this year to 2.2% before accelerating next year to 4.2%. This is the first time wage growth is expected to exceed 4% since the Great Recession. Moody's post-election forecast for 2017 is unchanged from the pre-election forecast.

The expected acceleration in wages is due to tightening labor market conditions, as evidenced by the unemployment rate below 5%. The unemployment rate has averaged 4.9% through November 2016—down from 5.3% in 2015—and fell to a post-recession low of 4.6% in November.

A broad measure of unemployment that includes discouraged workers and part-time workers who would prefer a full-time schedule is also declining. It averaged 9.7% this year compared to 10.5% in 2015, and also fell to a post-recession low of 9.3% in November. However, the broad unemployment rate during 2016 remains more than a percentage point higher than its 8.3% value in 2007, the year before the Great Recession.

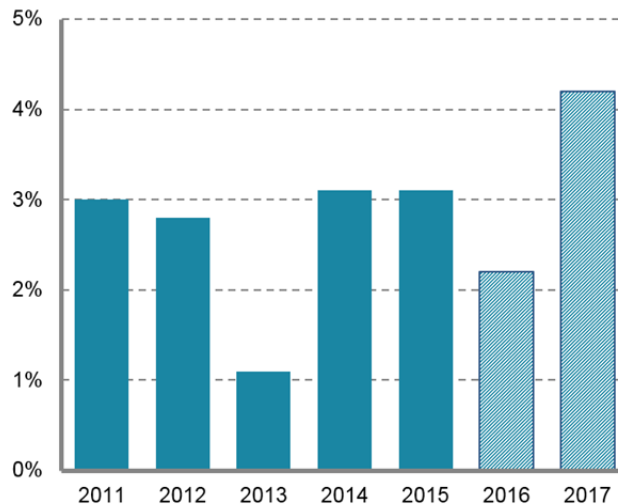
With the economy approaching full employment, future demand for labor is likely to accelerate wage growth as employers offer higher pay to attract new hires. Increased wages will lead to increases in premium as well as indemnity severity.

## MEDICAL INFLATION

Moody's forecasts that medical inflation will accelerate to 3.8% in 2016 and 3.6% in 2017, up from 2.6% in 2015. The forecast for accelerating medical inflation reflects an expectation for higher price inflation generally. However, Moody's expects medical inflation to outpace general inflation—forecast to run at 1.2% in 2016 and 2.7% in 2017—by one or more percentage points. Accelerating medical inflation implies increased medical cost per claim. However, changes in medical severity are driven by changes in both price (as measured by medical inflation) and utilization. In 2015, workers compensation medical severity declined for NCCI states<sup>1</sup> although medical inflation increased by 2.6%. This implies that workers compensation medical utilization

### Wages: Forecast to Accelerate to Above 4% for the First Time Since the Recession

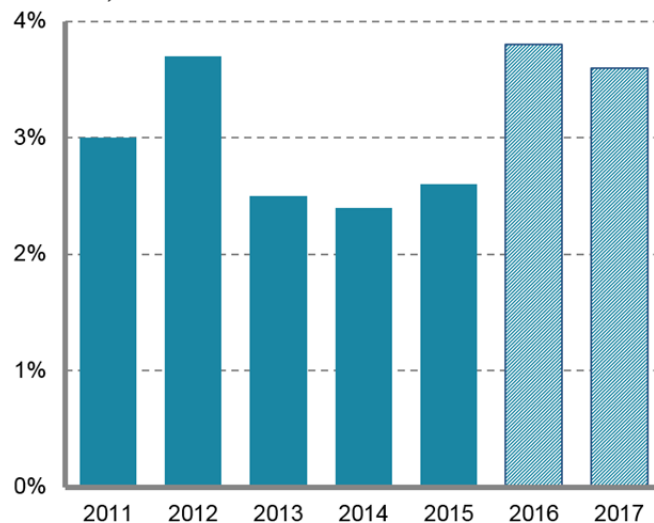
Growth Rate:  
Average Weekly Wage



Sources: US Bureau of Labor Statistics; Moody's Analytics; NCCI

### Medical Inflation: Forecast to Accelerate this Year

Growth Rate:  
Medical CPI, Urban Consumers



Sources: US Bureau of Labor Statistics; Moody's Analytics

<sup>1</sup> NCCI states include AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, and WV.

Analysis and charts prepared in November and December 2016.

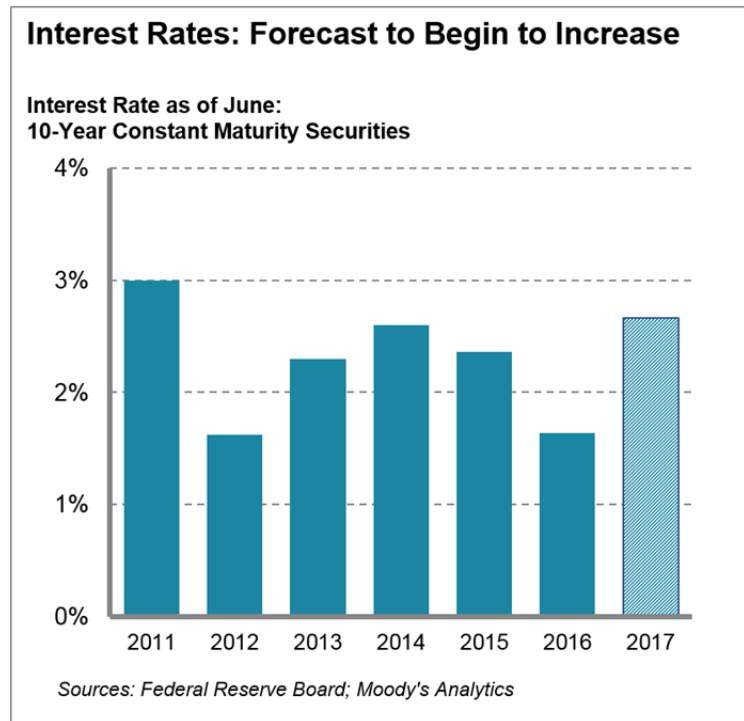
decreased last year. See the *Issues Report* published on [ncci.com](http://ncci.com) for more information about the decline in utilization.

## INTEREST RATES

While low interest rates continue to constrain investment income, an expectation for increasing price inflation suggests that interest rates may begin to rise as well.

The Federal Open Market Committee (FOMC) increased the target range of the federal funds rate by 25 basis points to 0.50%–0.75% at its December meeting after leaving rates unchanged over all seven previous meetings throughout the year. Projections released after the December meeting indicate the Fed expects three increases in 2017. The FOMC’s last increase was also 25 basis points in December 2015. Prior to that increase, the Fed had maintained the rate at 0%–0.25% for seven years since December 2008.

Interest rates for the 10-year Treasury note as of June in past years are shown in the chart at right. This 10-year rate has been at or below 3% for the last six years and declined to 1.6% this year. Last June’s low was influenced by uncertainty surrounding the British vote to exit the European Union. Looking forward, Moody’s expects the interest rate on the 10-year Treasury note to increase to 2.7% in the second quarter of next year, in line with the expected increase in inflation from 2016 to 2017. Moody’s forecast for the 10-year Treasury rate is 0.3% higher than its pre-election forecast.



Increasing investment yields will increase investment income as asset portfolios are re-invested. However, faster medical price inflation can be expected to have an offsetting negative effect on operating income, depending in part on future trends in medical utilization. The overall impact on insurers’ net income of potential future increases in interest rates and medical inflation is uncertain, and will depend on their relative magnitudes and timing.

## MOODY’S ANALYTICS POST-ELECTION FORECAST

While much is uncertain about the Trump administration, Moody’s post-election forecast is based on the following key themes.

- Moody’s expects President-elect Trump to increase fiscal stimulus through tax cuts and government spending, including increased spending on infrastructure, military, and veterans’ benefits. This fiscal stimulus is expected to be largely deficit financed.
- Since the increased fiscal stimulus is coming at a time when the economy is already approaching full employment, and since it will lead to higher deficits, both inflation and interest rates are expected to increase.
- President-elect Trump’s proposals on international trade and immigration are cited as a counterbalance to the fiscal stimulus.

In the preceding sections, we mentioned how Moody’s forecasts for 2017 have changed since the election. Most of the changes for next year are minimal. Given the current strong state of the economy, their expectation is that the economy will continue to perform well in the near term. However, Moody’s has noted more significant changes for 2018 and

beyond. Their post-election forecast is for GDP growth to accelerate in 2018 to 3.0% due to the additional fiscal stimulus, but then slow in 2019 and 2020 to 2.2% and 1.4%, respectively.

## DRILLING DOWN: EMPLOYMENT AND WAGE GROWTH BY STATE AND ECONOMIC SECTOR

In this edition, we focus on recent labor market conditions by state and economic sector. This allows us to identify states with strong versus weak growth and the primary drivers of growth. Charts and tables will focus on the labor market at the state level and drivers of employment and wage growth in 2015 and 2016.

Our analysis is based on consolidating the economic sectors into five main groups. Below is a description of the groups and our observations for each:

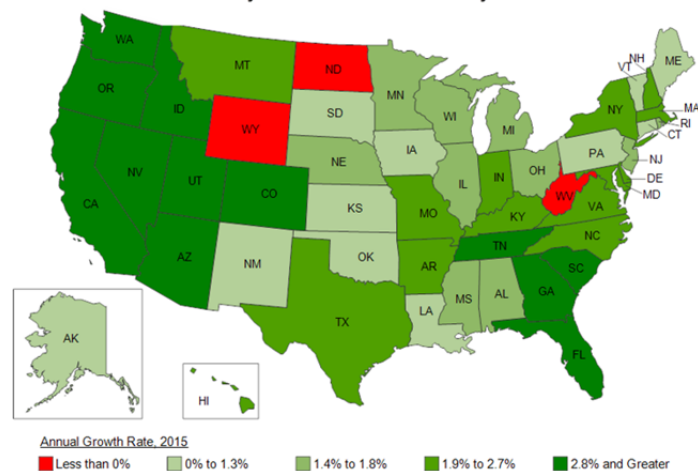
1. **Large Service Sectors** are the four large service-related job classifications of Trade, Transportation, and Utilities; Professional and Business Services; Education and Health Services; and Leisure and Hospitality. These four sectors make up about 70% of US employment and are the primary drivers of job growth for most states.
2. **Manufacturing** is a relatively small sector on average with a 10% share of employment countrywide, but makes a small contribution to growth in certain states. It is of particular interest to the workers compensation industry and is showing gains in some states but losses in others.
3. **Energy** is referred to as Natural Resources and Mining in the tables in this report. It is a very small sector on average, making up less than 1% of US employment, but produces a significant contribution in a few states. The sector has experienced large declines in most states in 2015 and 2016.
4. **Construction** is a small sector in most states (5% on average for the US) that is roughly correlated with each state's overall employment growth. It is not an independent mover like Manufacturing or Energy, but is of interest to workers compensation.
5. **All Other Sectors** include the remaining three sectors (Information, Financial Activities, and Other Services). They are small on average and make up 14% of US employment, and contribute little to overall growth in most states.

## PRIVATE EMPLOYMENT GROWTH

The maps in this section show changes in employment by state for 2015 and 2016. In both years, the fastest growing states are in the West and Southeast and the slowest growing are in the Midwest and Rust Belt. States that have experienced declines in employment are those dominated by energy and resource extraction.

Figure 1 shows the change in private nonfarm employment in 2015 by state. States with declines in employment are colored red, and those with positive employment growth are grouped by quartiles that are determined using employment changes in 2016 so they are consistent with the quartiles shown in Figure 2. The slowest-growth states are colored the lightest shade of green, while the fastest-growth states are colored the darkest shade of green. The District of Columbia is not included in the quartiles because it depends

Figure 1  
2015 Annual Growth in Employment-Total Private Industry



Sources: US Bureau of Labor Statistics, Moody's Analytics





# QUARTERLY ECONOMICS BRIEFING

**Table 1—Percent Share of Total Private Employment, 2015**  
Color based on comparison across both states and economic sectors

State	Total Private	Trade, Transport, & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	100%	22.5%	16.4%	18.4%	12.6%	10.3%	0.7%	5.4%	2.3%	6.8%	4.7%
District Of Columbia	100%	6.1%	30.6%	24.2%	13.8%	0.2%	0.0%	2.7%	3.2%	5.7%	13.4%
Alabama	100%	24.1%	14.5%	14.5%	12.1%	16.4%	0.7%	5.2%	1.4%	6.1%	5.1%
Alaska	100%	25.7%	11.6%	18.4%	13.6%	5.5%	6.7%	6.8%	2.4%	4.7%	4.5%
Arizona	100%	22.7%	17.9%	17.8%	13.4%	7.1%	0.6%	5.7%	2.0%	8.7%	4.0%
Arkansas	100%	25.3%	13.9%	17.6%	11.2%	15.5%	0.8%	4.9%	1.3%	4.9%	4.4%
California	100%	21.6%	18.4%	18.1%	13.5%	9.5%	0.2%	5.3%	3.6%	5.9%	4.0%
Colorado	100%	21.0%	18.7%	14.7%	14.7%	6.6%	1.5%	7.0%	3.3%	7.5%	4.8%
Connecticut	100%	20.7%	15.1%	22.7%	10.6%	11.1%	0.0%	4.0%	2.3%	9.1%	4.5%
Delaware	100%	21.2%	15.6%	19.6%	12.8%	7.1%	0.0%	5.5%	1.2%	12.2%	4.8%
Florida	100%	24.0%	17.4%	17.1%	16.1%	4.9%	0.1%	6.1%	1.9%	7.6%	4.7%
Georgia	100%	25.2%	17.9%	15.0%	12.5%	10.6%	0.3%	4.6%	3.0%	6.6%	4.4%
Hawaii	100%	23.3%	16.3%	15.9%	22.4%	2.7%	0.1%	6.8%	1.7%	5.5%	5.2%
Idaho	100%	24.6%	14.7%	17.5%	12.4%	11.2%	0.7%	6.9%	1.7%	6.0%	4.2%
Illinois	100%	23.4%	17.9%	17.5%	11.2%	11.3%	0.2%	4.2%	2.0%	7.4%	4.9%
Indiana	100%	22.3%	12.6%	17.3%	11.5%	19.9%	0.3%	4.9%	1.3%	5.0%	4.8%
Iowa	100%	24.2%	10.6%	17.2%	10.7%	16.5%	0.2%	6.0%	1.9%	8.1%	4.6%
Kansas	100%	23.2%	15.6%	17.0%	11.0%	14.1%	0.8%	5.3%	1.8%	6.9%	4.2%
Kentucky	100%	24.7%	13.8%	16.9%	12.0%	15.4%	0.9%	4.8%	1.6%	5.9%	4.0%
Louisiana	100%	23.6%	12.8%	18.3%	13.7%	8.7%	2.9%	8.5%	1.5%	5.5%	4.5%
Maine	100%	23.4%	12.6%	24.3%	12.5%	9.9%	0.5%	5.2%	1.5%	6.0%	4.2%
Maryland	100%	21.5%	19.9%	20.2%	12.4%	4.8%	0.1%	7.1%	1.8%	6.8%	5.3%
Massachusetts	100%	18.7%	17.5%	25.0%	11.5%	8.2%	0.0%	4.5%	2.9%	7.2%	4.4%
Michigan	100%	21.1%	17.5%	17.8%	11.4%	16.1%	0.2%	4.1%	1.6%	5.7%	4.6%
Minnesota	100%	21.5%	14.7%	20.9%	10.6%	13.0%	0.3%	4.7%	2.1%	7.5%	4.7%
Mississippi	100%	25.3%	11.7%	15.5%	14.5%	16.0%	0.9%	5.2%	1.5%	4.9%	4.5%
Missouri	100%	22.6%	15.7%	19.0%	12.3%	11.1%	0.2%	4.9%	2.3%	7.1%	4.9%
Montana	100%	25.5%	10.9%	19.3%	16.7%	5.2%	2.2%	7.2%	1.7%	6.4%	4.9%
Nebraska	100%	24.8%	14.0%	17.9%	10.6%	11.7%	0.1%	5.8%	2.1%	8.6%	4.4%
Nevada	100%	21.6%	15.1%	11.1%	30.9%	3.8%	1.3%	6.3%	1.3%	5.4%	3.3%
New Hampshire	100%	24.4%	13.5%	20.8%	12.1%	11.8%	0.2%	4.3%	2.2%	6.3%	4.5%
New Jersey	100%	25.1%	19.1%	19.3%	10.6%	7.0%	0.0%	4.3%	2.2%	7.4%	5.0%
New Mexico	100%	21.9%	15.7%	20.9%	14.6%	4.3%	4.0%	6.8%	2.0%	5.2%	4.5%
New York	100%	20.1%	16.2%	24.1%	11.4%	5.8%	0.1%	4.6%	3.4%	9.0%	5.2%
North Carolina	100%	22.6%	16.8%	16.3%	13.0%	13.1%	0.2%	5.4%	2.2%	6.2%	4.3%
North Dakota	100%	27.9%	9.8%	16.3%	10.9%	6.8%	6.3%	9.3%	1.8%	6.5%	4.5%
Ohio	100%	21.8%	15.4%	19.5%	11.6%	14.8%	0.3%	4.3%	1.5%	6.3%	4.6%
Oklahoma	100%	23.3%	14.1%	17.6%	12.3%	10.4%	4.1%	5.9%	1.6%	6.1%	4.7%
Oregon	100%	22.7%	15.4%	17.5%	12.9%	12.6%	0.5%	5.6%	2.3%	6.4%	4.1%
Pennsylvania	100%	21.9%	15.1%	23.3%	10.7%	11.1%	0.7%	4.6%	1.7%	6.2%	5.0%
Rhode Island	100%	18.0%	14.9%	24.8%	13.3%	9.7%	0.0%	4.0%	2.0%	7.7%	5.4%
South Carolina	100%	23.4%	16.0%	14.3%	14.5%	14.3%	0.2%	5.3%	1.6%	5.9%	4.5%
South Dakota	100%	25.0%	8.8%	19.7%	13.1%	12.1%	0.3%	6.3%	1.7%	8.4%	4.5%
Tennessee	100%	24.4%	15.9%	16.8%	12.5%	13.5%	0.2%	4.6%	1.8%	6.0%	4.3%
Texas	100%	24.0%	16.0%	15.8%	12.4%	8.8%	2.7%	6.8%	2.0%	7.2%	4.2%
Utah	100%	23.0%	17.0%	15.9%	11.7%	10.8%	0.9%	7.4%	3.0%	6.9%	3.4%
Vermont	100%	21.6%	10.6%	24.8%	14.2%	12.0%	0.3%	5.9%	1.8%	4.7%	4.0%
Virginia	100%	20.9%	22.2%	16.3%	12.2%	7.4%	0.3%	5.9%	2.2%	6.3%	6.3%
Washington	100%	22.7%	15.0%	17.6%	11.9%	11.2%	0.2%	6.7%	4.4%	5.7%	4.5%
West Virginia	100%	22.1%	10.9%	21.0%	12.2%	7.8%	4.2%	5.3%	1.5%	6.0%	9.0%
Wisconsin	100%	21.5%	12.6%	17.6%	10.9%	18.9%	0.2%	4.4%	2.0%	6.1%	6.0%
Wyoming	100%	25.5%	8.3%	12.3%	16.4%	4.5%	10.9%	10.6%	1.7%	5.1%	4.6%

Sources: US Bureau of Labor Statistics, Moody's Analytics

The following tables contain changes in employment by state and economic sector for 2015 and 2016. Within each table, the cells are shaded from green for strong positive growth rates to red for sectors with declines. The growth rates for private employment used in the maps above are in the first column of each table labeled Total Private. States are listed in descending order by changes in private employment, with dashed lines indicating breaks between the quartiles established using the changes in 2016. These are the same quartile breaks used in Figures 1 and 2.

Table 2 contains the actual changes in private employment during 2015. Construction posted the largest gains in many of the states as indicated by the darkest shades of green while Natural Resources and Mining posted large declines as indicated by the many cells shaded red. However, as shown in Table 1, these are two of the smaller economic sectors.

The fastest growing states in the top quartile are performing well across most sectors as indicated by the darkest shades of green. The exception is Natural Resources and Mining, where even states in the fastest growing quartile have experienced declines. However, most of these states have a very small exposure to this industry and are sufficiently well diversified to offset those declines.

That is not the case for the three states that posted declines in total private industry employment. Prior to 2015, North Dakota experienced an employment boom driven almost entirely by development of the Bakken oil field. However, prices of oil and natural gas fell sharply beginning in mid-2014, leading to declines not only in oil and gas employment, but also to

## QUARTERLY ECONOMICS BRIEFING

declines in energy-related employment in Construction, Manufacturing, and Trade, Transportation, and Utilities. Wyoming and West Virginia, two other energy-dependent states, also posted declines in overall employment in 2015.

For the states that posted slow growth overall, the shades of green are lighter indicating slower growth for most industries. And many of the states also show offsetting losses in certain sectors. For example, a number of states in the slower-growth quartiles posted declines in the Information and Manufacturing sectors.

**Table 2—Actual Changes in Employment, 2014 to 2015**  
Color based on comparison across both states and economic sectors

State	Total Private	Trade, Transport., & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	2.4%	2.0%	3.1%	2.9%	2.9%	1.1%	-7.9%	4.8%	0.9%	1.9%	1.0%
District Of Columbia	1.9%	5.2%	2.7%	0.6%	4.1%	6.5%	0.0%	0.0%	-1.2%	0.5%	0.7%
Utah	4.3%	4.2%	4.8%	4.6%	4.7%	2.4%	-13.8%	7.4%	3.2%	5.7%	2.4%
Florida	3.9%	3.5%	5.0%	3.5%	4.2%	3.2%	2.0%	7.9%	-0.3%	2.6%	2.5%
Nevada	3.6%	3.6%	6.2%	4.8%	1.4%	1.2%	-1.0%	10.1%	0.9%	4.1%	1.5%
Oregon	3.5%	3.0%	3.8%	3.9%	4.8%	3.7%	-0.5%	3.1%	3.5%	2.7%	2.2%
Georgia	3.5%	3.2%	4.1%	3.1%	4.9%	3.2%	0.9%	6.2%	1.8%	1.7%	1.8%
Colorado	3.3%	3.0%	3.0%	4.7%	4.3%	3.4%	-8.5%	5.1%	0.6%	3.6%	2.3%
Idaho	3.3%	3.2%	2.3%	3.2%	4.6%	3.0%	-0.7%	7.3%	-0.3%	2.0%	3.4%
California	3.2%	2.6%	3.0%	3.8%	3.9%	1.4%	-8.3%	7.7%	4.2%	2.1%	1.6%
Arizona	3.2%	2.8%	3.9%	4.2%	4.4%	1.0%	-4.9%	1.9%	3.9%	2.6%	1.0%
Washington	3.1%	3.4%	4.5%	1.1%	4.0%	0.7%	-0.1%	8.4%	4.2%	1.7%	1.5%
South Carolina	3.1%	3.0%	3.4%	3.4%	3.9%	2.4%	3.9%	3.2%	5.0%	1.6%	2.3%
Tennessee	3.0%	2.3%	4.7%	2.1%	3.9%	2.4%	1.6%	6.1%	0.1%	2.6%	1.1%
North Carolina	2.7%	2.7%	3.6%	0.9%	3.3%	2.4%	0.6%	5.5%	4.2%	3.0%	1.7%
Delaware	2.6%	2.1%	0.9%	3.5%	4.1%	4.1%	2.8%	2.8%	-3.9%	3.6%	0.1%
Texas	2.6%	3.4%	2.9%	3.9%	4.6%	-1.0%	-11.1%	4.9%	-0.6%	2.9%	2.0%
Arkansas	2.3%	3.0%	3.6%	1.9%	3.8%	0.4%	-9.8%	6.5%	-1.5%	-0.1%	0.3%
Virginia	2.1%	1.8%	2.5%	2.6%	3.5%	0.6%	-5.5%	3.1%	-2.1%	1.9%	1.5%
Kentucky	2.1%	2.6%	2.7%	1.6%	2.9%	2.5%	-14.2%	4.3%	-3.1%	2.7%	-0.4%
Indiana	2.1%	1.6%	2.3%	3.0%	2.5%	2.2%	-4.8%	3.2%	-4.5%	2.1%	1.0%
Massachusetts	2.0%	1.0%	2.7%	2.7%	1.6%	0.1%	4.1%	7.1%	1.6%	1.3%	1.2%
Montana	2.0%	2.0%	2.5%	1.9%	2.7%	1.2%	-10.2%	6.1%	-0.3%	1.5%	2.0%
New York	2.0%	0.9%	2.9%	2.3%	2.7%	0.3%	1.0%	5.1%	0.3%	1.6%	1.7%
New Hampshire	1.9%	1.0%	4.1%	1.8%	2.0%	0.9%	-2.5%	5.1%	2.1%	1.4%	1.6%
Missouri	1.9%	1.5%	3.6%	2.4%	1.2%	1.9%	1.0%	3.4%	-3.7%	1.0%	0.9%
Maryland	1.9%	1.7%	1.5%	2.0%	3.1%	0.8%	5.2%	3.0%	-1.6%	1.3%	2.0%
Hawaii	1.9%	1.3%	1.3%	2.8%	0.9%	0.9%	8.7%	8.7%	0.3%	1.8%	0.4%
New Jersey	1.8%	2.1%	2.3%	2.4%	0.8%	-0.3%	-2.3%	4.4%	-1.0%	1.7%	0.7%
Michigan	1.8%	1.7%	2.3%	1.3%	1.9%	2.6%	-6.8%	4.4%	-1.2%	1.3%	-0.9%
Minnesota	1.7%	1.4%	1.0%	2.1%	1.6%	1.5%	-3.0%	6.5%	-1.4%	1.7%	1.4%
Ohio	1.7%	1.8%	1.0%	1.8%	2.6%	1.9%	-5.2%	2.4%	-1.2%	1.4%	1.6%
Alabama	1.6%	1.4%	1.9%	1.9%	3.1%	1.7%	-5.3%	1.5%	-2.3%	0.7%	0.7%
Wisconsin	1.6%	1.4%	1.3%	1.3%	2.0%	0.9%	1.2%	5.7%	2.0%	0.6%	3.1%
Illinois	1.5%	1.7%	1.0%	1.5%	3.1%	0.2%	-4.4%	5.7%	1.6%	0.9%	0.3%
Mississippi	1.5%	2.1%	3.1%	2.1%	2.4%	1.7%	-12.3%	-5.8%	1.8%	0.4%	2.0%
Nebraska	1.5%	1.3%	3.4%	1.0%	1.5%	-0.1%	-6.3%	5.4%	2.6%	-0.2%	0.7%
Rhode Island	1.4%	1.6%	4.0%	-0.1%	2.3%	1.0%	4.3%	3.1%	-2.6%	1.2%	0.7%
South Dakota	1.3%	2.1%	1.2%	1.0%	1.3%	0.5%	0.7%	4.0%	-1.9%	-0.4%	0.3%
Iowa	1.2%	1.2%	1.9%	0.9%	1.3%	-0.4%	2.2%	5.8%	-3.9%	1.6%	1.7%
New Mexico	1.2%	0.8%	0.5%	4.2%	2.4%	-1.4%	-8.4%	1.7%	2.3%	0.0%	0.1%
Pennsylvania	1.1%	1.2%	1.8%	1.1%	1.8%	0.1%	-9.6%	2.1%	-0.4%	0.3%	1.1%
Vermont	1.0%	-0.5%	2.6%	1.7%	3.2%	-1.3%	5.2%	2.9%	-3.3%	-0.3%	0.8%
Maine	1.0%	0.4%	1.6%	1.4%	1.3%	0.6%	-1.0%	1.7%	1.6%	0.5%	1.0%
Connecticut	1.0%	0.4%	2.0%	0.7%	1.0%	-0.3%	0.0%	3.5%	1.2%	1.0%	1.7%
Alaska	0.8%	2.1%	-0.3%	1.1%	2.4%	-2.6%	0.3%	-1.1%	0.4%	0.5%	-0.9%
Kansas	0.8%	1.5%	0.0%	2.1%	2.4%	-0.6%	-17.5%	1.6%	-4.6%	2.1%	-1.4%
Oklahoma	0.7%	1.8%	0.0%	1.3%	3.5%	-1.9%	-11.8%	3.3%	-1.5%	0.6%	3.1%
Louisiana	0.5%	0.8%	0.6%	1.9%	3.2%	-2.3%	-13.4%	1.3%	-2.1%	-1.4%	1.3%
West Virginia	-0.7%	-0.3%	0.2%	1.3%	0.3%	-0.5%	-13.9%	-3.8%	-1.5%	-0.9%	-0.3%
Wyoming	-1.2%	1.8%	-0.7%	0.2%	1.3%	-0.3%	-12.4%	-2.3%	0.2%	-1.3%	0.2%
North Dakota	-2.2%	-1.9%	0.6%	2.3%	-0.1%	-2.1%	-22.1%	-1.6%	-3.1%	0.6%	0.4%

Sources: US Bureau of Labor Statistics, Moody's Analytics

Table 3 combines the impacts of the actual growth rates by sector in Table 2 and the size of the sector in Table 1 to show the share-weighted changes in employment. The sum of the share-weighted employment changes by sector within a state equals the total cumulative employment change for that state. These share-weighted changes can be interpreted as the contribution of each sector to total private employment growth by state. For most sectors, larger contributions to growth

are generally posted in states in the top quartiles, and smaller contributions to growth or declines are posted in states in the lower quartiles. This can be seen by the darker shades of green toward the top of Table 3 and lighter shades of green (or red) toward the bottom. There are some exceptions. For example, the largest contribution to growth for the Education and Health Services sector of 0.8% is for New Mexico, which is in the slowest-growth quartile.

Reading across the sectors for a given state shows how much each sector contributed to overall employment growth, allowing us to determine the primary drivers of growth in that state. As mentioned in the introduction, observations are consolidated for five main groups:

- Most states that experienced growth were primarily driven by the large service sectors (Trade, Transportation, and Utilities, Professional and Business services, Education and Health Services<sup>2</sup>, and Leisure and Hospitality), but with varying degrees of intensity. Table 3 shows that these four sectors have the darkest shades of green for most states, but they become lighter as you move down the table. Their large size combined with fairly robust increases led those sectors to be top contributors for most states.
- The manufacturing sector makes small contributions to growth in certain states in the faster growth quartiles, but several states in the slowest growth quartile have small offsetting declines in manufacturing.
- Offsetting declines were also posted in natural resources and mining in some states across all quartiles. However, despite the large actual declines seen in Table 2, the energy sector did not significantly contribute to overall employment changes in most states due to its small size. However, the states with overall declines in private employment were driven by declines in natural resources.
- Despite the strong actual gains in construction employment seen in Table 2, Construction was not the top contributor to overall private employment growth for most states due to its relatively small size. The exception is Hawaii, where the posted 8.7% growth in Construction contributed 0.5% to private employment growth, more than any other sector in the state. In general, Construction's contribution is correlated with each state's overall employment growth.
- The remaining sectors (Information, Financial Activities, and Other Services) contributed little to overall growth. The information sector posted actual declines in a number of states (Table 2), but did not significantly impact overall growth due to its small size.

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<sup>2</sup> Note that the Education and Health Services sector does not include public school employees since government is excluded. Analysis and charts prepared in November and December 2016.



**Table 3—Share-Weighted Changes in Employment, 2014 to 2015**  
*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport. & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	2.4%	0.5%	0.5%	0.5%	0.4%	0.1%	-0.1%	0.3%	0.0%	0.1%	0.0%
District Of Columbia	1.9%	0.3%	0.8%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Utah	4.3%	1.0%	0.8%	0.7%	0.5%	0.3%	-0.2%	0.5%	0.1%	0.4%	0.1%
Florida	3.9%	0.8%	0.9%	0.6%	0.7%	0.2%	0.0%	0.5%	0.0%	0.2%	0.1%
Nevada	3.6%	0.8%	0.9%	0.5%	0.4%	0.0%	0.0%	0.6%	0.0%	0.2%	0.1%
Oregon	3.5%	0.7%	0.6%	0.7%	0.6%	0.5%	0.0%	0.2%	0.1%	0.2%	0.1%
Georgia	3.5%	0.8%	0.7%	0.5%	0.6%	0.3%	0.0%	0.3%	0.1%	0.1%	0.1%
Colorado	3.3%	0.6%	0.6%	0.7%	0.6%	0.2%	-0.1%	0.3%	0.0%	0.3%	0.1%
Idaho	3.3%	0.8%	0.3%	0.6%	0.6%	0.3%	0.0%	0.5%	0.0%	0.1%	0.1%
California	3.2%	0.6%	0.5%	0.7%	0.5%	0.1%	0.0%	0.4%	0.1%	0.1%	0.1%
Arizona	3.2%	0.6%	0.7%	0.7%	0.6%	0.1%	0.0%	0.1%	0.1%	0.2%	0.0%
Washington	3.1%	0.8%	0.7%	0.2%	0.5%	0.1%	0.0%	0.5%	0.2%	0.1%	0.1%
South Carolina	3.1%	0.7%	0.5%	0.5%	0.6%	0.4%	0.0%	0.3%	0.0%	0.0%	0.1%
Tennessee	3.0%	0.6%	0.7%	0.4%	0.5%	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
North Carolina	2.7%	0.6%	0.6%	0.1%	0.4%	0.3%	0.0%	0.3%	0.1%	0.2%	0.1%
Delaware	2.6%	0.5%	0.1%	0.7%	0.5%	0.3%	0.0%	0.2%	-0.1%	0.4%	0.0%
Texas	2.6%	0.8%	0.5%	0.6%	0.6%	-0.1%	-0.4%	0.3%	0.0%	0.2%	0.1%
Arkansas	2.3%	0.8%	0.5%	0.3%	0.4%	0.1%	-0.1%	0.3%	0.0%	0.0%	0.0%
Virginia	2.1%	0.4%	0.6%	0.4%	0.4%	0.0%	0.0%	0.2%	0.0%	0.1%	0.1%
Kentucky	2.1%	0.6%	0.4%	0.3%	0.3%	0.4%	-0.2%	0.2%	-0.1%	0.2%	0.0%
Indiana	2.1%	0.4%	0.3%	0.5%	0.3%	0.4%	0.0%	0.2%	-0.1%	0.1%	0.0%
Massachusetts	2.0%	0.2%	0.5%	0.7%	0.2%	0.0%	0.0%	0.3%	0.0%	0.1%	0.1%
Montana	2.0%	0.5%	0.3%	0.4%	0.4%	0.1%	-0.3%	0.4%	0.0%	0.1%	0.1%
New York	2.0%	0.2%	0.5%	0.5%	0.3%	0.0%	0.0%	0.2%	0.0%	0.1%	0.1%
New Hampshire	1.9%	0.2%	0.5%	0.4%	0.2%	0.1%	0.0%	0.2%	0.0%	0.1%	0.1%
Missouri	1.9%	0.3%	0.6%	0.5%	0.2%	0.2%	0.0%	0.2%	-0.1%	0.1%	0.0%
Maryland	1.9%	0.4%	0.3%	0.4%	0.4%	0.0%	0.0%	0.2%	0.0%	0.1%	0.1%
Hawaii	1.9%	0.3%	0.2%	0.4%	0.2%	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%
New Jersey	1.8%	0.5%	0.4%	0.5%	0.1%	0.0%	0.0%	0.2%	0.0%	0.1%	0.0%
Michigan	1.8%	0.4%	0.4%	0.2%	0.2%	0.4%	0.0%	0.2%	0.0%	0.1%	0.0%
Minnesota	1.7%	0.3%	0.2%	0.4%	0.2%	0.2%	0.0%	0.3%	0.0%	0.1%	0.1%
Ohio	1.7%	0.4%	0.1%	0.3%	0.3%	0.3%	0.0%	0.1%	0.0%	0.1%	0.1%
Alabama	1.6%	0.3%	0.3%	0.3%	0.4%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%
Wisconsin	1.6%	0.3%	0.2%	0.2%	0.2%	0.2%	0.0%	0.2%	0.0%	0.0%	0.2%
Illinois	1.5%	0.4%	0.2%	0.3%	0.3%	0.0%	0.0%	0.2%	0.0%	0.1%	0.0%
Mississippi	1.5%	0.5%	0.4%	0.3%	0.3%	0.3%	-0.1%	-0.3%	0.0%	0.0%	0.1%
Nebraska	1.5%	0.3%	0.5%	0.2%	0.2%	0.0%	0.0%	0.3%	0.1%	0.0%	0.0%
Rhode Island	1.4%	0.3%	0.6%	0.0%	0.3%	0.1%	0.0%	0.1%	-0.1%	0.1%	0.0%
South Dakota	1.3%	0.5%	0.1%	0.2%	0.2%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%
Iowa	1.2%	0.3%	0.2%	0.2%	0.1%	-0.1%	0.0%	0.3%	-0.1%	0.1%	0.1%
New Mexico	1.2%	0.2%	0.1%	0.8%	0.3%	-0.1%	-0.4%	0.1%	0.0%	0.0%	0.0%
Pennsylvania	1.1%	0.3%	0.3%	0.3%	0.2%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.1%
Vermont	1.0%	-0.1%	0.3%	0.4%	0.4%	-0.2%	0.0%	0.2%	-0.1%	0.0%	0.0%
Maine	1.0%	0.1%	0.2%	0.3%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
Connecticut	1.0%	0.1%	0.3%	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%
Alaska	0.8%	0.5%	0.0%	0.2%	0.3%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Kansas	0.8%	0.3%	0.0%	0.4%	0.3%	-0.1%	-0.2%	0.1%	-0.1%	0.1%	-0.1%
Oklahoma	0.7%	0.4%	0.0%	0.2%	0.4%	-0.2%	-0.6%	0.2%	0.0%	0.0%	0.1%
Louisiana	0.5%	0.2%	0.1%	0.3%	0.4%	-0.2%	-0.4%	0.1%	0.0%	-0.1%	0.1%
West Virginia	-0.7%	-0.1%	0.0%	0.3%	0.0%	0.0%	-0.7%	-0.2%	0.0%	-0.1%	0.0%
Wyoming	-1.2%	0.4%	-0.1%	0.0%	0.2%	0.0%	-1.5%	-0.2%	0.0%	-0.1%	0.0%
North Dakota	-2.2%	-0.5%	0.1%	0.4%	0.0%	-0.1%	-1.7%	-0.1%	-0.1%	0.0%	0.0%

Sources: US Bureau of Labor Statistics, Moody's Analytics

Table 4 shows employment changes by sector during 2016. The story is similar to what we saw for 2015. Large declines are continuing in Natural Resources and Mining, while significant gains—particularly for states in the top quartiles—are continuing for Construction. In 2016, however, more states are posting declines in Construction than for 2015. The magnitude of growth in Trade, Transportation, and Utilities has fallen somewhat relative to other sectors. The other three large service sectors (Professional and Business Services, Education and Health Services, and Leisure and Hospitality) continue to be strong performers. Again, states are listed in descending order by the change in private nonfarm employment in the first column. The quartiles are based on 2016 changes and are separated by the dashed lines.

**Table 4—Actual Changes in Employment, 2015 to 2016**  
*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport. & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	1.9%	1.6%	2.8%	2.9%	2.6%	-0.3%	-14.7%	3.4%	0.9%	2.0%	1.3%
District Of Columbia	1.4%	4.8%	1.4%	0.8%	2.6%	9.8%	-0.3%	-0.3%	-0.6%	1.4%	0.2%
Utah	3.4%	3.0%	1.8%	4.8%	4.5%	2.7%	-10.7%	5.7%	2.1%	6.3%	0.6%
Florida	3.4%	2.3%	4.2%	3.7%	4.0%	3.3%	-0.5%	6.2%	-1.6%	3.4%	2.0%
Oregon	3.4%	2.0%	6.3%	4.3%	2.8%	0.0%	-2.5%	6.3%	5.7%	3.4%	3.6%
Idaho	3.3%	2.3%	3.9%	2.8%	4.2%	2.1%	-6.5%	7.6%	1.7%	3.2%	4.3%
Washington	3.2%	3.8%	3.6%	2.8%	2.5%	-1.3%	-5.8%	6.9%	6.2%	3.6%	4.1%
Arizona	3.1%	2.2%	2.9%	4.2%	2.6%	0.6%	-5.6%	7.4%	5.0%	5.4%	-0.5%
Delaware	3.0%	1.1%	6.8%	3.2%	4.8%	0.7%	1.0%	1.3%	3.8%	1.5%	3.2%
Georgia	3.0%	2.9%	4.2%	2.4%	4.6%	1.6%	-4.0%	6.8%	-2.0%	2.2%	0.5%
Nevada	2.9%	4.0%	2.6%	4.1%	1.8%	1.1%	-5.5%	9.1%	-5.4%	2.1%	1.0%
Tennessee	2.8%	2.3%	2.9%	4.1%	1.8%	2.7%	-1.9%	5.9%	2.0%	2.3%	2.6%
Hawaii	2.8%	0.2%	1.1%	4.1%	3.7%	0.3%	13.0%	13.1%	2.3%	1.3%	1.1%
South Carolina	2.7%	1.6%	5.4%	4.0%	1.4%	1.4%	5.1%	6.0%	-1.5%	2.8%	1.0%
Colorado	2.7%	1.1%	2.2%	3.5%	4.9%	1.6%	-15.7%	8.7%	1.7%	2.2%	1.6%
California	2.6%	2.0%	3.2%	3.8%	3.6%	-0.6%	-12.0%	5.1%	2.9%	1.5%	1.3%
North Carolina	2.3%	2.8%	4.4%	1.5%	2.4%	0.0%	-0.9%	4.5%	-0.7%	0.4%	3.3%
Virginia	2.3%	2.8%	3.4%	3.3%	2.0%	-1.4%	-7.6%	1.3%	-1.4%	1.4%	2.6%
Michigan	2.2%	0.6%	3.6%	2.2%	2.5%	2.1%	-7.5%	2.5%	2.4%	4.1%	1.9%
New Hampshire	2.2%	2.8%	2.0%	1.9%	2.2%	-1.3%	-0.8%	4.5%	3.1%	3.7%	5.1%
Maryland	2.1%	1.3%	2.1%	1.9%	4.0%	2.0%	-1.6%	3.8%	-0.4%	0.9%	2.0%
Massachusetts	2.1%	0.9%	2.9%	2.6%	2.3%	-0.1%	-1.5%	8.3%	0.5%	1.4%	0.6%
South Dakota	2.1%	3.6%	2.4%	2.1%	2.3%	-1.8%	-0.8%	5.5%	0.6%	2.0%	-1.9%
Arkansas	1.9%	1.8%	3.5%	3.6%	3.2%	0.7%	-16.9%	0.5%	3.2%	0.5%	1.5%
Vermont	1.7%	1.1%	2.1%	3.4%	2.4%	-1.5%	-4.9%	4.3%	-3.6%	0.9%	0.7%
Kentucky	1.7%	2.7%	1.4%	3.6%	1.2%	0.9%	-18.4%	-1.0%	-4.3%	3.3%	-0.2%
New Jersey	1.6%	2.1%	0.6%	1.4%	2.0%	1.1%	-7.0%	3.6%	0.4%	2.1%	1.3%
Minnesota	1.6%	1.0%	0.6%	3.7%	1.9%	0.1%	-17.1%	5.2%	-2.4%	1.3%	0.9%
Wisconsin	1.5%	2.3%	1.4%	1.1%	1.2%	0.6%	-7.8%	5.7%	-0.5%	1.7%	1.4%
Texas	1.5%	1.9%	1.7%	4.1%	4.3%	-3.5%	-15.9%	1.3%	0.6%	2.5%	1.8%
Iowa	1.5%	0.7%	-1.4%	2.3%	2.6%	-2.3%	-4.0%	13.3%	-5.0%	2.9%	5.0%
Indiana	1.4%	2.6%	-1.4%	4.0%	2.0%	-0.4%	-9.5%	3.9%	-5.4%	1.4%	0.5%
New York	1.4%	0.5%	1.0%	2.7%	2.2%	-0.6%	-4.4%	2.0%	1.6%	0.5%	2.0%
Ohio	1.4%	1.1%	0.2%	2.2%	2.8%	-0.2%	-19.2%	3.4%	0.2%	2.1%	2.8%
Alabama	1.3%	1.1%	1.7%	2.0%	1.4%	1.4%	-6.5%	-2.2%	-0.8%	3.2%	1.8%
Missouri	1.2%	0.2%	3.4%	1.1%	1.9%	-0.6%	-2.8%	2.5%	-2.9%	3.2%	0.4%
Rhode Island	1.2%	-0.3%	3.6%	-0.1%	2.8%	1.4%	4.2%	4.0%	-1.2%	0.2%	1.4%
Nebraska	1.1%	-0.5%	1.8%	2.9%	3.9%	-0.1%	-6.0%	1.0%	-0.4%	1.0%	-0.8%
Maine	1.1%	0.9%	1.0%	1.6%	2.0%	1.1%	-4.1%	-3.0%	-1.8%	3.5%	0.8%
Connecticut	1.0%	0.4%	1.0%	0.7%	1.8%	0.5%	-4.3%	0.5%	3.6%	1.7%	2.8%
Illinois	1.0%	0.7%	1.9%	1.4%	3.5%	-1.5%	-4.3%	1.4%	-2.8%	-0.3%	1.5%
Pennsylvania	1.0%	1.0%	1.5%	1.8%	2.1%	-0.4%	-24.6%	0.5%	0.9%	0.3%	1.0%
Mississippi	0.8%	1.9%	-3.0%	1.8%	2.7%	1.2%	-9.3%	2.2%	-1.3%	-2.2%	-0.8%
Montana	0.6%	0.3%	1.1%	3.8%	0.4%	2.8%	-13.8%	-3.2%	-2.3%	1.5%	-1.2%
New Mexico	0.2%	-1.8%	1.7%	5.3%	2.3%	-4.0%	-26.0%	1.0%	-0.6%	-0.4%	0.8%
Kansas	-0.1%	0.1%	0.7%	0.9%	1.4%	-0.5%	-12.9%	-6.2%	-5.3%	1.4%	-0.1%
Oklahoma	-0.5%	-0.4%	-1.9%	1.9%	4.6%	-7.3%	-17.5%	6.3%	2.2%	0.7%	0.3%
Alaska	-0.5%	1.3%	-5.8%	4.3%	1.9%	-1.6%	-11.4%	-4.7%	-2.9%	1.7%	-0.6%
Louisiana	-0.6%	-0.1%	-1.7%	2.5%	-0.2%	-4.7%	-17.6%	1.7%	0.2%	-1.5%	0.7%
West Virginia	-0.6%	-0.4%	-0.7%	2.3%	1.9%	-0.9%	-19.2%	-3.4%	-4.6%	0.2%	-0.8%
Wyoming	-4.1%	-4.0%	0.2%	2.2%	-1.8%	-0.5%	-19.1%	-6.8%	-2.4%	-4.0%	0.9%
North Dakota	-4.3%	-6.6%	-0.5%	2.6%	0.9%	-3.6%	-29.0%	-9.4%	-1.2%	-3.8%	6.6%

Sources: US Bureau of Labor Statistics, Moody's Analytics

Table 5 is similar to Table 3, showing the contribution to private employment growth of each sector for each state in 2016. Generally, the story is similar to what we found in 2015.

- The large service sectors continue to drive growth in most states. However, for some states in the slower growth quartiles, Trade, Transportation, and Utilities, and Professional and Business services are no longer primary drivers and even have negative contributions in some cases.
- The Manufacturing sector is continuing to contribute positively to growth in some states and negatively in others, although the number of states with negative contributions to overall growth from Manufacturing has increased.



- Again, most states with overall projected employment declines are significantly driven by decreases in Natural Resources and Mining, although employment in other sectors such as Construction, Manufacturing, and Trade, Transportation, and Utilities is also impacted. Of the states with declines in overall employment, all but Kansas have a significant exposure to Natural Resources and Mining. Other states with significant exposure to energy (defined by a greater than 1% share in Natural Resources and Mining) are Colorado, Montana, Nevada, New Mexico, and Texas. They each experienced negative contributions to growth from energy-related employment, but were sufficiently diversified and experienced enough growth elsewhere to post overall employment increases.
- Construction is not the primary driver of overall employment growth for most states, but is the top contributor in Hawaii and Iowa. Its contribution continues to be correlated with overall growth by state.

**Table 5—Share-Weighted Changes in Employment, 2015 to 2016**  
*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport., & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	1.9%	0.4%	0.5%	0.5%	0.3%	0.0%	-0.1%	0.2%	0.0%	0.1%	0.1%
District Of Columbia	1.4%	0.3%	0.4%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Utah	3.4%	0.7%	0.3%	0.8%	0.5%	0.3%	-0.1%	0.4%	0.1%	0.4%	0.0%
Florida	3.4%	0.5%	0.7%	0.6%	0.6%	0.2%	0.0%	0.4%	0.0%	0.3%	0.1%
Oregon	3.4%	0.4%	1.0%	0.8%	0.4%	0.0%	0.0%	0.3%	0.1%	0.2%	0.1%
Idaho	3.3%	0.6%	0.6%	0.5%	0.5%	0.2%	0.0%	0.5%	0.0%	0.2%	0.2%
Washington	3.2%	0.9%	0.5%	0.5%	0.3%	-0.1%	0.0%	0.5%	0.3%	0.2%	0.2%
Arizona	3.1%	0.5%	0.5%	0.7%	0.3%	0.0%	0.0%	0.4%	0.1%	0.5%	0.0%
Delaware	3.0%	0.2%	1.1%	0.6%	0.6%	0.1%	0.0%	0.1%	0.0%	0.2%	0.2%
Georgia	3.0%	0.7%	0.8%	0.4%	0.6%	0.2%	0.0%	0.3%	-0.1%	0.1%	0.0%
Nevada	2.9%	0.9%	0.4%	0.5%	0.6%	0.0%	-0.1%	0.6%	-0.1%	0.1%	0.0%
Tennessee	2.8%	0.6%	0.5%	0.7%	0.2%	0.4%	0.0%	0.3%	0.0%	0.1%	0.1%
Hawaii	2.8%	0.0%	0.2%	0.7%	0.8%	0.0%	0.0%	0.9%	0.0%	0.1%	0.1%
South Carolina	2.7%	0.4%	0.9%	0.6%	0.2%	0.2%	0.0%	0.3%	0.0%	0.2%	0.0%
Colorado	2.7%	0.2%	0.4%	0.5%	0.7%	0.1%	-0.2%	0.6%	0.1%	0.2%	0.1%
California	2.6%	0.4%	0.6%	0.7%	0.5%	-0.1%	0.0%	0.3%	0.1%	0.1%	0.1%
North Carolina	2.3%	0.6%	0.7%	0.2%	0.3%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%
Virginia	2.3%	0.6%	0.8%	0.5%	0.2%	-0.1%	0.0%	0.1%	0.0%	0.1%	0.2%
Michigan	2.2%	0.1%	0.6%	0.4%	0.3%	0.3%	0.0%	0.1%	0.0%	0.2%	0.1%
New Hampshire	2.2%	0.7%	0.3%	0.4%	0.3%	-0.2%	0.0%	0.2%	0.1%	0.2%	0.2%
Maryland	2.1%	0.3%	0.4%	0.4%	0.5%	0.1%	0.0%	0.3%	0.0%	0.1%	0.1%
Massachusetts	2.1%	0.2%	0.5%	0.6%	0.3%	0.0%	0.0%	0.4%	0.0%	0.1%	0.0%
South Dakota	2.1%	0.9%	0.2%	0.4%	0.3%	-0.2%	0.0%	0.3%	0.0%	0.2%	-0.1%
Arkansas	1.9%	0.5%	0.5%	0.6%	0.4%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%
Vermont	1.7%	0.2%	0.2%	0.8%	0.3%	-0.2%	0.0%	0.3%	-0.1%	0.0%	0.0%
Kentucky	1.7%	0.7%	0.2%	0.6%	0.1%	0.1%	-0.2%	0.0%	-0.1%	0.2%	0.0%
New Jersey	1.6%	0.5%	0.1%	0.3%	0.2%	0.1%	0.0%	0.2%	0.0%	0.2%	0.1%
Minnesota	1.6%	0.2%	0.1%	0.8%	0.2%	0.0%	0.0%	0.2%	-0.1%	0.1%	0.0%
Wisconsin	1.5%	0.5%	0.2%	0.2%	0.1%	0.1%	0.0%	0.3%	0.0%	0.1%	0.1%
Texas	1.5%	0.4%	0.3%	0.6%	0.5%	-0.3%	-0.4%	0.1%	0.0%	0.2%	0.1%
Iowa	1.5%	0.2%	-0.2%	0.4%	0.3%	-0.4%	0.0%	0.8%	-0.1%	0.2%	0.2%
Indiana	1.4%	0.6%	-0.2%	0.7%	0.2%	-0.1%	0.0%	0.2%	-0.1%	0.1%	0.0%
New York	1.4%	0.1%	0.2%	0.7%	0.3%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%
Ohio	1.4%	0.2%	0.0%	0.4%	0.3%	0.0%	-0.1%	0.1%	0.0%	0.1%	0.1%
Alabama	1.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.0%	-0.1%	0.0%	0.2%	0.1%
Missouri	1.2%	0.1%	0.5%	0.2%	0.2%	-0.1%	0.0%	0.1%	-0.1%	0.2%	0.0%
Rhode Island	1.2%	-0.1%	0.5%	0.0%	0.4%	0.1%	0.0%	0.2%	0.0%	0.0%	0.1%
Nebraska	1.1%	-0.1%	0.3%	0.5%	0.4%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%
Maine	1.1%	0.2%	0.1%	0.4%	0.3%	0.1%	0.0%	-0.2%	0.0%	0.2%	0.0%
Connecticut	1.0%	0.1%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.1%	0.2%	0.1%
Illinois	1.0%	0.2%	0.3%	0.2%	0.4%	-0.2%	0.0%	0.1%	-0.1%	0.0%	0.1%
Pennsylvania	1.0%	0.2%	0.2%	0.4%	0.2%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%
Mississippi	0.8%	0.5%	-0.4%	0.3%	0.4%	0.2%	-0.1%	0.1%	0.0%	-0.1%	0.0%
Montana	0.6%	0.1%	0.1%	0.7%	0.1%	0.1%	-0.3%	-0.2%	0.0%	0.1%	-0.1%
New Mexico	0.2%	-0.4%	0.3%	1.1%	0.3%	-0.2%	-1.0%	0.1%	0.0%	0.0%	0.0%
Kansas	-0.1%	0.0%	0.1%	0.2%	0.2%	-0.1%	-0.1%	-0.3%	-0.1%	0.1%	0.0%
Oklahoma	-0.5%	-0.1%	-0.3%	0.3%	0.6%	-0.8%	-0.7%	0.4%	0.0%	0.0%	0.0%
Alaska	-0.5%	0.3%	-0.7%	0.8%	0.3%	-0.1%	-0.8%	-0.3%	-0.1%	0.1%	0.0%
Louisiana	-0.6%	0.0%	-0.2%	0.5%	0.0%	-0.4%	-0.5%	0.1%	0.0%	-0.1%	0.0%
West Virginia	-0.6%	-0.1%	-0.1%	0.5%	0.2%	-0.1%	-0.8%	-0.2%	-0.1%	0.0%	-0.1%
Wyoming	-4.1%	-1.0%	0.0%	0.3%	-0.3%	0.0%	-2.1%	-0.7%	0.0%	-0.2%	0.0%
North Dakota	-4.3%	-1.8%	0.0%	0.4%	0.1%	-0.2%	-1.8%	-0.9%	0.0%	-0.2%	0.3%

Sources: US Bureau of Labor Statistics, Moody's Analytics

Table 6 shows the change in employment growth rates from 2015 to 2016 (a negative number indicates the amount by which employment growth declined from 2015 to 2016). For the United States as a whole, private employment growth slowed from 2.4% in 2015 to an estimated 1.9% in 2016. As such, all but 15 states are also expected to post slower growth

this year. Hawaii, South Dakota, and Vermont are the three states with the largest acceleration in private employment—0.9%, 0.8%, and 0.7%, respectively. Based on Tables 3 and 5, the acceleration in Hawaii is primarily driven by significantly larger contributions to employment growth from Construction and Leisure and Hospitality. In both South Dakota and Vermont, the acceleration is driven by larger contributions from Trade, Transportation, and Utilities, and Education and Health Services.

At the sector and state levels, there are some standouts where growth is significantly accelerating or decelerating this year. For example, Construction employment has significantly accelerated by more than 4 percentage points in Arizona, Hawaii, Iowa, and Mississippi. On the other hand, a number of states have experienced significant deceleration in Natural Resources and Mining.

**Table 6—Difference in Employment Growth, 2016 versus 2015**  
Color based on comparison across both states and economic sectors

State	Total Private	Trade, Transport., & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	-0.5%	-0.4%	-0.3%	0.0%	-0.3%	-1.4%	-6.8%	-1.4%	0.0%	0.1%	0.3%
District Of Columbia	-0.5%	-0.4%	-1.3%	0.2%	-1.5%	3.3%	-0.3%	-0.3%	0.6%	0.9%	-0.5%
Utah	-0.9%	-1.2%	-3.0%	0.2%	-0.2%	0.3%	3.1%	-1.7%	-1.1%	0.6%	-1.8%
Florida	-0.5%	-1.2%	-0.8%	0.2%	-0.2%	0.1%	-2.5%	-1.7%	-1.3%	0.8%	-0.5%
Oregon	-0.1%	-1.0%	2.5%	0.4%	-2.0%	-3.7%	-2.0%	3.2%	2.2%	0.7%	1.4%
Idaho	0.0%	-0.9%	1.6%	-0.4%	-0.4%	-0.9%	-5.8%	0.3%	2.0%	1.2%	0.9%
Washington	0.1%	0.4%	-0.9%	1.7%	-1.5%	-2.0%	-5.7%	-1.5%	2.0%	1.9%	2.6%
Arizona	-0.1%	-0.6%	-1.0%	0.0%	-1.8%	-0.4%	-0.7%	5.5%	1.1%	2.8%	-1.5%
Delaware	0.4%	-1.0%	5.9%	-0.3%	0.7%	-3.4%	-1.8%	-1.5%	7.7%	-2.1%	3.1%
Georgia	-0.5%	-0.3%	0.1%	-0.7%	-0.3%	-1.6%	-4.9%	0.6%	-3.8%	0.5%	-1.3%
Nevada	-0.7%	0.4%	-3.6%	-0.7%	0.4%	-0.1%	-4.5%	-1.0%	-6.3%	-2.0%	-0.5%
Tennessee	-0.2%	0.0%	-1.8%	2.0%	-2.1%	0.3%	-3.5%	-0.2%	1.9%	-0.3%	1.5%
Hawaii	0.9%	-1.1%	-0.2%	1.3%	2.8%	-0.6%	4.3%	4.4%	2.0%	-0.5%	0.7%
South Carolina	-0.4%	-1.4%	2.0%	0.6%	-2.5%	-1.0%	1.9%	1.0%	-3.1%	2.1%	-1.3%
Colorado	-0.6%	-1.9%	-0.8%	-1.2%	0.6%	-1.8%	-7.2%	3.6%	1.1%	-1.4%	-0.7%
California	-0.6%	-0.6%	0.2%	0.0%	-0.3%	-2.0%	-3.7%	-2.6%	-1.3%	-0.6%	-0.3%
North Carolina	-0.4%	0.1%	0.8%	0.6%	-0.9%	-2.4%	-1.5%	-1.0%	-4.9%	-2.6%	1.6%
Virginia	0.2%	1.0%	0.9%	0.7%	-1.5%	-2.0%	-2.1%	-1.8%	0.7%	-0.5%	1.1%
Michigan	0.4%	-1.1%	1.3%	0.9%	0.6%	-0.5%	-0.7%	-1.9%	3.6%	2.8%	2.8%
New Hampshire	0.3%	1.8%	-2.1%	0.1%	0.2%	-2.2%	1.7%	-0.6%	1.0%	2.3%	3.5%
Maryland	0.2%	-0.4%	0.6%	-0.1%	0.9%	1.2%	-6.8%	0.8%	1.2%	-0.4%	0.0%
Massachusetts	0.1%	-0.1%	0.2%	-0.1%	0.7%	-0.2%	-5.6%	1.2%	-1.1%	0.1%	-0.6%
South Dakota	0.8%	1.5%	1.2%	1.1%	1.0%	-2.3%	-1.5%	1.5%	2.5%	2.4%	-2.2%
Arkansas	-0.4%	-1.2%	-0.1%	1.7%	-0.6%	-1.1%	-7.1%	-6.0%	4.7%	0.6%	1.2%
Vermont	0.7%	1.6%	-0.5%	1.7%	-0.8%	-0.2%	-10.1%	1.4%	-0.3%	1.2%	-0.1%
Kentucky	-0.4%	0.1%	-1.3%	2.0%	-1.7%	-1.6%	-4.2%	-5.3%	-1.2%	0.6%	0.2%
New Jersey	-0.2%	0.0%	-1.7%	-1.0%	1.2%	1.4%	-4.7%	-0.8%	1.4%	0.4%	0.6%
Minnesota	-0.1%	-0.4%	-0.4%	1.6%	0.3%	-1.4%	-14.1%	-1.3%	-1.0%	-0.4%	-0.5%
Wisconsin	-0.1%	0.9%	0.1%	-0.2%	-0.8%	-0.3%	-9.0%	0.0%	-2.5%	1.1%	-1.7%
Texas	-1.1%	-1.5%	-1.2%	0.2%	-0.3%	-2.5%	-4.8%	-3.6%	1.2%	-0.4%	-0.2%
Iowa	0.3%	-0.5%	-3.3%	1.4%	1.3%	-1.9%	-6.2%	7.5%	-1.1%	1.3%	3.3%
Indiana	-0.7%	1.0%	-3.7%	1.0%	-0.5%	-2.6%	-4.7%	0.7%	-0.9%	-0.7%	-0.5%
New York	-0.6%	-0.4%	-1.9%	0.4%	-0.5%	-0.9%	-5.4%	-3.1%	1.3%	-1.1%	0.3%
Ohio	-0.3%	-0.7%	-0.8%	0.4%	0.2%	-2.1%	-14.0%	1.0%	1.4%	0.7%	1.2%
Alabama	-0.3%	-0.3%	-0.2%	0.1%	-1.7%	-0.3%	-1.2%	-3.7%	1.5%	2.5%	1.1%
Missouri	-0.7%	-1.3%	-0.2%	-1.3%	0.7%	-2.5%	-3.8%	-0.9%	0.8%	2.2%	-0.5%
Rhode Island	-0.2%	-1.9%	-0.4%	0.0%	0.5%	0.4%	-0.1%	0.9%	1.4%	-1.1%	0.7%
Nebraska	-0.4%	-1.8%	-1.6%	1.9%	2.4%	0.0%	0.3%	-4.4%	-3.0%	1.2%	-1.5%
Maine	0.1%	0.5%	-0.6%	0.2%	0.7%	0.5%	-3.1%	-4.7%	-3.4%	3.0%	-0.2%
Connecticut	0.0%	0.0%	-1.0%	0.0%	0.8%	0.8%	-4.3%	-3.0%	2.4%	0.7%	1.1%
Illinois	-0.5%	-1.0%	0.9%	-0.1%	0.4%	-1.7%	0.1%	-4.3%	-4.4%	-1.2%	1.2%
Pennsylvania	-0.1%	-0.2%	-0.3%	0.7%	0.3%	-0.5%	-15.0%	-1.6%	1.3%	0.0%	-0.1%
Mississippi	-0.7%	-0.2%	-6.1%	-0.3%	0.3%	-0.5%	3.0%	8.0%	-3.1%	-2.6%	-2.8%
Montana	-1.4%	-1.7%	-1.4%	1.9%	-2.3%	1.6%	-3.6%	-9.3%	-2.0%	0.0%	-3.2%
New Mexico	-1.0%	-2.6%	1.2%	1.1%	-0.1%	-2.6%	-17.6%	-0.7%	-2.9%	-0.4%	0.7%
Kansas	-0.9%	-1.4%	0.7%	-1.2%	-1.0%	0.1%	4.6%	-7.8%	-0.7%	-0.7%	1.3%
Oklahoma	-1.2%	-2.2%	-1.9%	0.6%	1.1%	-5.4%	-5.4%	3.0%	3.7%	0.1%	-2.8%
Alaska	-1.3%	-0.8%	-5.5%	3.2%	-0.5%	1.0%	-11.7%	-3.6%	-3.3%	1.2%	0.3%
Louisiana	-1.1%	-0.9%	-2.3%	0.6%	-3.4%	-2.4%	-4.2%	0.4%	2.3%	-0.1%	-0.6%
West Virginia	0.1%	-0.1%	-0.9%	1.0%	1.6%	-0.4%	-5.3%	0.4%	-3.1%	1.1%	-0.5%
Wyoming	-2.9%	-5.8%	0.9%	2.0%	-3.1%	-0.2%	-6.7%	-4.5%	-2.6%	-2.7%	0.7%
North Dakota	-2.1%	-4.7%	-1.1%	0.3%	1.0%	-1.5%	-6.9%	-7.8%	1.9%	-4.4%	6.2%

Sources: US Bureau of Labor Statistics, Moody's Analytics



## PRIVATE AVERAGE WEEKLY WAGE GROWTH

Now we will look at private nonfarm average weekly wage growth in 2015 (Figure 3) and 2016 (Figure 4). As with employment, the states with declines in wages are primarily energy-dependent states. The geographical patterns are fairly similar to what we saw for employment with strong growth in the West and South. The one difference is that states with slower wage growth are in the lower section of the country in addition to the Midwest and Rust Belt.

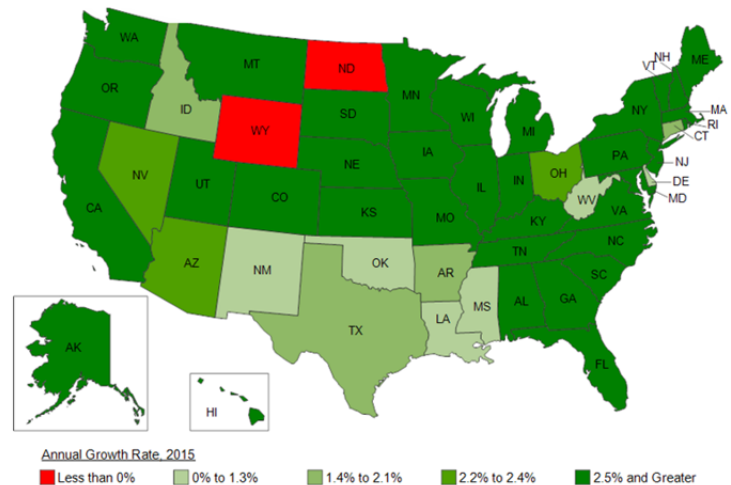
Colors in these maps are defined similarly to Figures 1 and 2. States with declining average weekly wages are in red, and those with average weekly wage growth are grouped by quartiles, with the slowest-growth states shaded the darkest green, up to the fastest-growth states shaded the darkest green. Both figures use consistent quartiles established using wage changes in 2016.

As with employment, the District of Columbia is not included in the quartiles because it depends on federal government employment, which is outside the scope of our analysis. Average weekly wages in this section are calculated from data series compiled by Moody's Analytics based on data from the Bureau of Labor Statistics and the Bureau of Economic Analysis. Changes in 2015 are based completely on historical data while changes in 2016 are based on historical data through the 2<sup>nd</sup> quarter (for wages) or 3<sup>rd</sup> quarter (for employment) and Moody's projections thereafter.

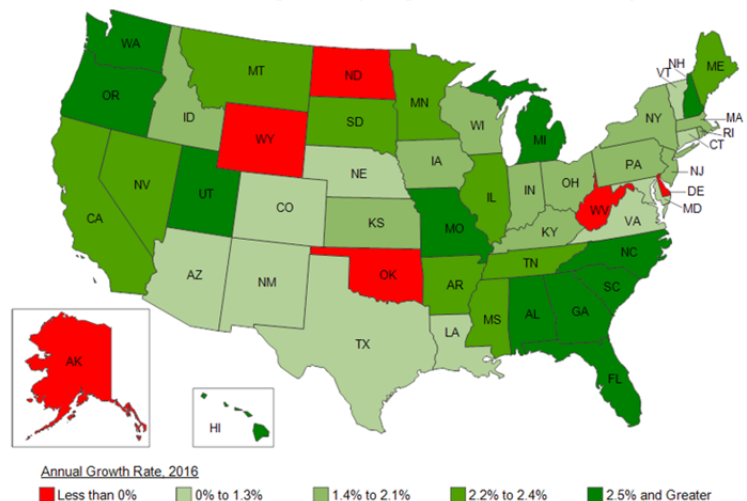
Average weekly wages countrywide grew by 3.0%<sup>3</sup> in 2015, but on a state-by-state basis, average weekly wage growth ranged from a decline of 1.1% in North Dakota, up to an increase of 4.6% in California. Since wage growth is stronger in 2015 than in 2016, and because the quartiles are determined using 2016 data, most states are shaded dark green in Figure 3. The states exhibiting slower growth in 2015 were concentrated in the lower half of the country spanning from Mississippi to New Mexico. Idaho, West Virginia, Delaware, and Connecticut are the exceptions. This is different from what we saw for employment where the slowest growing states were in the Midwest and Rust Belt.

In 2016, average weekly wage growth is expected to decelerate to 2.1% countrywide with a range from -4.9% in North Dakota to 4.7% in Washington. As with employment, states with average weekly wage declines are primarily energy-dependent states. Also similar to employment, the concentration of the faster growing states is in the South and West. The slowest growing states are still concentrated in the Southwest, but those in the second slowest growing quartile are now concentrated in the Midwest and Rust Belt, which is similar to what we saw with employment.

**Figure 3**  
2015 Annual Growth in Average Weekly Wages-Total Private Industry



**Figure 4**  
2016 Annual Growth in Average Weekly Wages-Total Private Industry



Sources: US Bureau of Labor Statistics, Moody's Analytics

<sup>3</sup> The data used here is slightly different from that used in the Wage Growth section at the beginning of the *QEB* contributing to the changes differing by one-tenth of a percentage point.

Analysis and charts prepared in November and December 2016.

## QUARTERLY ECONOMICS BRIEFING

The following tables contain detailed average weekly wage changes by state and economic sector to see which sectors are experiencing the strongest growth. Table 7 contains the actual changes in average weekly wages for 2015; Table 8 contains the actual changes for 2016; and Table 9 shows the change in wage growth from 2015 to 2016 (a negative number indicates the amount by which the rate of wage growth declined from 2015 to 2016).

**Table 7—Actual Changes in Average Weekly Wage, 2014 to 2015**

*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport, & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	3.0%	3.1%	3.4%	2.8%	4.3%	2.3%	-1.9%	3.7%	4.5%	3.3%	3.4%
District Of Columbia	3.4%	-0.2%	2.9%	5.9%	4.5%	0.9%	0.0%	-0.6%	1.5%	4.7%	4.3%
California	4.6%	4.2%	5.9%	3.1%	4.6%	3.4%	-0.2%	5.2%	8.3%	4.5%	3.1%
Hawaii	4.3%	3.8%	3.1%	3.1%	4.6%	4.1%	5.3%	6.2%	5.0%	4.6%	3.6%
Massachusetts	4.2%	3.4%	6.0%	2.1%	5.8%	2.7%	6.3%	3.9%	5.2%	5.0%	2.3%
Oregon	4.1%	2.7%	6.8%	4.9%	4.8%	2.6%	9.2%	1.0%	3.3%	4.8%	3.9%
South Dakota	4.1%	2.5%	5.5%	4.4%	7.4%	2.1%	5.3%	5.0%	1.2%	6.4%	4.5%
Nebraska	4.0%	1.9%	5.2%	5.5%	5.6%	2.3%	3.2%	3.6%	4.4%	5.5%	2.6%
Illinois	3.9%	3.0%	4.1%	3.0%	6.0%	3.8%	0.7%	4.4%	4.0%	7.2%	2.7%
Minnesota	3.9%	2.9%	4.1%	4.2%	7.2%	3.7%	-5.5%	4.5%	3.4%	4.6%	2.9%
Michigan	3.8%	3.0%	4.1%	4.0%	5.6%	3.0%	-2.4%	3.0%	2.9%	4.5%	5.3%
Iowa	3.6%	1.8%	4.5%	4.6%	4.3%	2.9%	4.9%	5.1%	5.3%	4.4%	3.7%
Tennessee	3.6%	2.8%	5.6%	4.2%	6.5%	1.7%	0.1%	5.3%	1.9%	1.7%	3.2%
Wisconsin	3.5%	3.5%	5.7%	3.4%	4.0%	1.8%	-3.4%	3.2%	6.4%	5.5%	1.5%
Maine	3.5%	3.7%	3.7%	3.5%	4.9%	2.9%	5.7%	1.8%	4.3%	3.2%	3.4%
North Carolina	3.4%	2.3%	3.6%	3.5%	3.9%	2.8%	6.5%	4.6%	3.9%	5.1%	3.1%
Florida	3.3%	3.3%	2.5%	3.3%	4.1%	3.4%	1.0%	5.1%	3.9%	4.1%	3.3%
Montana	3.3%	2.6%	4.2%	5.1%	5.2%	3.2%	-0.8%	3.4%	5.5%	4.8%	3.3%
Kentucky	3.3%	3.5%	3.1%	4.8%	3.6%	3.3%	-1.8%	2.8%	-1.0%	3.7%	3.6%
Missouri	3.1%	2.6%	1.9%	3.2%	5.5%	2.6%	-0.3%	3.8%	4.5%	4.4%	3.8%
Indiana	3.1%	3.3%	4.2%	3.0%	4.3%	2.5%	-0.9%	2.1%	1.4%	3.7%	3.5%
Maryland	3.0%	4.1%	2.2%	3.9%	4.1%	3.5%	-3.3%	3.1%	1.3%	3.7%	1.7%
Kansas	3.0%	0.0%	15.5%	3.6%	4.0%	2.8%	-6.9%	2.6%	-32.4%	3.9%	3.7%
Pennsylvania	3.0%	2.8%	4.3%	3.4%	3.6%	1.7%	-2.8%	1.8%	4.2%	3.5%	3.2%
New Jersey	3.0%	3.0%	5.1%	2.4%	1.6%	-5.0%	9.3%	4.1%	3.6%	5.2%	3.1%
Utah	3.0%	3.2%	2.0%	1.8%	4.7%	3.2%	-0.1%	3.5%	6.6%	5.9%	2.2%
Rhode Island	2.9%	2.4%	2.6%	4.0%	5.6%	1.8%	-2.2%	2.6%	1.9%	1.1%	3.7%
South Carolina	2.9%	3.0%	2.0%	3.3%	4.3%	2.4%	8.6%	3.4%	2.3%	5.1%	2.8%
Virginia	2.8%	2.2%	2.8%	2.1%	4.0%	2.4%	-1.1%	3.3%	4.6%	4.8%	3.0%
Vermont	2.7%	4.0%	2.2%	2.9%	3.3%	1.7%	4.5%	1.0%	5.2%	4.1%	4.5%
Georgia	2.7%	3.8%	3.4%	3.2%	-0.9%	1.4%	4.0%	3.5%	-2.9%	5.0%	3.5%
Alaska	2.6%	1.0%	1.7%	4.7%	3.6%	11.9%	-0.8%	7.0%	4.2%	3.2%	2.8%
Washington	2.6%	5.3%	0.4%	5.1%	3.5%	-0.5%	6.8%	3.6%	0.5%	3.9%	3.1%
Colorado	2.6%	2.9%	3.6%	2.7%	5.0%	1.9%	0.4%	2.3%	-1.6%	5.0%	3.3%
New Hampshire	2.6%	4.8%	2.3%	3.3%	4.5%	1.2%	7.2%	4.7%	-9.8%	1.3%	2.5%
Alabama	2.6%	3.0%	2.3%	2.9%	4.0%	1.5%	-1.7%	2.5%	3.9%	5.1%	3.3%
New York	2.5%	3.5%	3.9%	2.7%	3.5%	5.7%	0.3%	3.4%	4.1%	-0.9%	3.7%
Ohio	2.4%	3.2%	1.5%	3.3%	3.8%	1.2%	-1.5%	3.2%	3.2%	3.8%	2.7%
Nevada	2.4%	2.4%	0.1%	2.3%	1.7%	1.8%	3.5%	1.9%	3.7%	7.3%	2.8%
Arizona	2.2%	2.2%	1.5%	1.5%	2.9%	1.8%	3.2%	1.4%	1.8%	5.8%	2.5%
Arkansas	2.1%	1.8%	1.8%	3.0%	3.8%	1.9%	-1.0%	4.0%	-4.9%	4.6%	3.1%
Connecticut	2.1%	3.3%	1.7%	1.1%	4.7%	-1.2%	2.7%	5.1%	6.6%	2.6%	1.6%
Texas	1.8%	2.1%	2.8%	3.2%	3.6%	2.3%	0.3%	3.1%	3.5%	3.3%	1.8%
Idaho	1.6%	3.6%	4.5%	2.9%	2.9%	-5.3%	-4.6%	1.1%	1.1%	4.4%	2.6%
Louisiana	1.3%	0.0%	2.3%	3.4%	3.4%	2.9%	2.4%	2.9%	6.1%	0.3%	2.8%
Delaware	1.3%	0.5%	-0.9%	2.0%	2.7%	8.7%	2.9%	1.1%	2.4%	0.8%	3.8%
New Mexico	1.2%	1.8%	2.2%	1.5%	2.8%	0.9%	-1.5%	1.4%	4.3%	4.3%	2.2%
West Virginia	1.1%	2.7%	1.5%	3.9%	4.5%	1.7%	-2.9%	-0.7%	6.1%	1.8%	1.0%
Mississippi	1.1%	2.8%	0.8%	1.0%	0.9%	1.3%	-1.8%	-0.7%	-2.4%	2.7%	0.7%
Oklahoma	1.0%	-0.8%	4.2%	3.8%	3.4%	0.8%	5.7%	2.1%	-0.7%	0.8%	2.2%
Wyoming	-0.8%	-1.0%	1.0%	3.1%	3.6%	3.4%	-0.2%	-1.1%	2.1%	1.7%	0.6%
North Dakota	-1.1%	-1.1%	-0.1%	5.8%	2.1%	3.0%	-2.9%	-0.5%	2.3%	3.0%	2.1%

Sources: US Bureau of Labor Statistics, Moody's Analytics

In 2015, wages increased for most state/sector pairs with a few exceptions. As with employment, Natural Resources and Mining posted large declines in average weekly wages in a number of states across all quartiles. In addition, a few states experienced large declines in the Manufacturing and Information<sup>4</sup> sectors. Sectors with strong wage growth for most states

<sup>4</sup> The very large decline in the Information sector in Kansas is concentrated in telecommunications in Johnson County. This could be due in large part to layoffs at Sprint Corporation located in Overland Park.



include the large service sectors as well as Construction, but with moderating degrees of intensity going from the fastest to the slowest quartiles.

**Table 8—Actual Changes in Average Weekly Wage, 2015 to 2016**  
*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport, & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	2.1%	1.4%	1.5%	2.0%	3.9%	2.5%	1.2%	4.7%	6.9%	0.9%	2.6%
District Of Columbia	2.3%	-0.8%	4.1%	-1.3%	1.0%	0.0%	0.0%	5.2%	5.0%	1.6%	2.8%
Washington	4.7%	3.6%	4.4%	3.6%	5.9%	4.2%	19.9%	3.7%	9.6%	1.9%	2.9%
Georgia	3.4%	3.0%	1.7%	4.6%	2.4%	4.8%	8.5%	3.3%	13.2%	2.4%	3.6%
Oregon	3.3%	3.2%	2.9%	1.2%	4.1%	3.1%	10.1%	7.7%	-0.2%	5.0%	3.5%
New Hampshire	3.2%	0.3%	2.1%	4.7%	1.4%	7.5%	8.0%	4.4%	8.3%	2.3%	-0.2%
Utah	3.1%	4.0%	5.0%	1.5%	1.4%	2.2%	-1.3%	6.9%	16.3%	-3.4%	2.8%
Michigan	3.1%	3.2%	3.3%	1.6%	3.3%	2.6%	1.2%	5.6%	6.3%	3.9%	2.1%
South Carolina	3.0%	2.5%	2.5%	0.8%	7.7%	2.9%	0.8%	4.0%	9.3%	1.8%	2.7%
Florida	2.9%	2.0%	4.4%	1.9%	3.0%	2.6%	2.1%	4.6%	10.7%	1.3%	3.0%
North Carolina	2.6%	0.9%	1.9%	3.3%	3.9%	2.8%	4.4%	5.7%	8.6%	3.4%	1.4%
Missouri	2.6%	3.0%	1.1%	1.6%	3.7%	2.5%	-1.7%	4.9%	5.6%	2.8%	3.7%
Alabama	2.5%	1.2%	4.9%	1.1%	4.6%	3.1%	-12.0%	14.5%	1.1%	-3.3%	0.9%
Hawaii	2.5%	4.9%	1.2%	1.1%	1.7%	5.9%	-3.3%	0.3%	-1.9%	2.1%	3.4%
Nevada	2.4%	0.8%	4.9%	3.7%	1.5%	-0.1%	4.1%	1.8%	18.4%	1.2%	1.8%
Mississippi	2.4%	-0.1%	8.2%	1.5%	2.8%	3.2%	-2.9%	3.8%	0.3%	4.8%	2.8%
Illinois	2.4%	1.7%	2.1%	3.1%	1.8%	3.2%	-7.2%	7.9%	5.8%	3.0%	-0.9%
South Dakota	2.4%	-0.2%	3.2%	3.2%	3.5%	6.3%	-33.3%	-1.5%	6.2%	2.8%	5.8%
California	2.3%	1.2%	-1.4%	2.3%	4.5%	5.3%	1.6%	3.9%	9.4%	3.2%	3.7%
Maine	2.3%	0.8%	4.3%	2.9%	2.6%	-0.4%	3.7%	8.8%	7.7%	-0.6%	2.0%
Minnesota	2.2%	2.6%	11.6%	2.2%	3.4%	0.0%	-4.4%	2.1%	1.0%	-9.2%	1.0%
Tennessee	2.2%	1.9%	4.3%	-0.9%	4.8%	1.5%	-0.4%	1.1%	5.2%	2.8%	2.5%
Arkansas	2.2%	-0.1%	1.3%	1.8%	2.8%	3.5%	-2.5%	6.5%	4.6%	7.4%	4.6%
Montana	2.2%	0.5%	2.1%	-0.4%	6.7%	3.4%	2.9%	9.9%	6.5%	1.6%	4.7%
New Jersey	2.1%	0.9%	1.4%	4.2%	4.2%	4.5%	4.1%	4.2%	1.5%	0.4%	3.5%
Indiana	2.1%	0.3%	7.5%	0.0%	2.1%	3.4%	-0.2%	1.9%	6.0%	-0.4%	2.6%
New York	2.0%	2.7%	1.4%	2.8%	3.2%	-1.2%	2.0%	9.4%	4.6%	1.0%	2.5%
Idaho	1.9%	2.0%	0.7%	2.9%	4.0%	-1.9%	10.3%	7.5%	9.7%	1.8%	2.0%
Massachusetts	1.9%	4.0%	2.2%	2.2%	4.0%	-1.0%	7.5%	1.8%	4.0%	-0.9%	3.0%
Ohio	1.8%	0.7%	3.2%	1.5%	2.5%	1.9%	1.5%	5.1%	3.9%	1.4%	2.2%
Wisconsin	1.8%	-0.7%	5.7%	1.7%	4.0%	0.7%	-6.0%	2.5%	6.4%	0.8%	1.0%
Kentucky	1.6%	2.4%	4.4%	-1.0%	4.1%	2.0%	-13.6%	4.8%	2.7%	-1.8%	2.4%
Iowa	1.6%	-0.3%	7.8%	0.5%	5.5%	3.2%	1.7%	0.2%	2.5%	-1.7%	0.7%
Kansas	1.5%	2.8%	-3.6%	2.1%	2.7%	2.8%	-7.5%	11.4%	4.1%	1.3%	2.7%
Pennsylvania	1.4%	0.8%	1.8%	1.5%	2.7%	1.1%	-0.8%	6.3%	2.6%	0.6%	1.4%
Rhode Island	1.4%	3.9%	0.4%	1.2%	3.7%	2.3%	0.3%	2.4%	-4.8%	-0.9%	1.1%
Maryland	1.2%	1.3%	2.3%	0.5%	1.0%	-0.7%	-8.6%	3.4%	-0.8%	1.0%	0.6%
Vermont	1.1%	0.3%	3.2%	2.7%	-2.1%	-1.8%	1.8%	2.4%	11.0%	0.3%	3.5%
Virginia	1.0%	0.2%	0.8%	1.7%	2.9%	-0.5%	-6.4%	3.2%	0.4%	1.9%	1.2%
Connecticut	1.0%	0.7%	-0.4%	2.1%	2.3%	-3.5%	4.9%	10.5%	-0.2%	2.6%	-0.5%
Arizona	0.8%	2.0%	0.4%	3.3%	0.9%	2.3%	-13.6%	-1.9%	-3.4%	-3.2%	2.5%
Nebraska	0.8%	0.7%	-2.8%	0.6%	2.9%	0.7%	-28.7%	5.7%	11.4%	1.2%	6.2%
Colorado	0.7%	2.3%	1.2%	2.6%	-0.5%	1.1%	-13.0%	0.5%	-0.5%	1.8%	3.1%
Louisiana	0.6%	-1.7%	0.9%	0.1%	3.4%	4.4%	2.2%	2.5%	1.6%	2.9%	3.3%
New Mexico	0.2%	2.3%	3.5%	-1.2%	1.7%	-6.6%	2.4%	1.7%	2.1%	2.5%	0.9%
Texas	0.0%	-1.6%	2.6%	0.2%	0.4%	1.1%	7.3%	1.7%	3.6%	0.2%	0.2%
West Virginia	-0.5%	0.1%	0.4%	2.0%	1.1%	2.4%	-7.8%	1.7%	6.1%	-1.2%	-0.5%
Oklahoma	-0.8%	-1.9%	1.9%	1.5%	0.4%	2.4%	-0.6%	-0.1%	0.3%	1.0%	3.5%
Alaska	-1.2%	1.0%	0.5%	-1.1%	1.1%	9.9%	1.1%	-3.4%	-0.1%	-2.1%	1.3%
Delaware	-1.7%	1.4%	-8.9%	0.6%	1.4%	-11.0%	5.5%	8.6%	0.2%	1.0%	3.1%
Wyoming	-2.1%	0.0%	-3.0%	2.8%	4.6%	3.4%	-5.7%	0.9%	5.3%	-0.6%	-5.0%
North Dakota	-4.9%	-4.0%	-5.6%	0.0%	-2.6%	2.2%	-7.3%	-5.9%	15.9%	2.0%	-9.1%

Sources: US Bureau of Labor Statistics, Moody's Analytics

Average wage growth is projected to slow to 2.1% for the US in 2016 (Table 8), a decline of 0.9 percentage points (Table 9). Average wages are projected to slow for all but eight states. Most state/sector pairs are continuing to post wage gains, but at a slower pace than in 2015. In 2016, Construction and Information are the two sectors with the fastest wage growth in many states and have accelerated in some states. Again, Natural Resources and Mining is experiencing wage declines in numerous states.

**Table 9—Difference in Average Weekly Wage Growth, 2016 versus 2015**  
*Color based on comparison across both states and economic sectors*

State	Total Private	Trade, Transport., & Utilities	Prof. & Business Services	Education & Health Services	Leisure & Hospitality	Manufacturing	Natural Resources & Mining	Construction	Information	Financial Activities	Other Services
United States	-0.9%	-1.7%	-1.9%	-0.8%	-0.4%	0.2%	3.1%	1.0%	2.4%	-2.4%	-0.8%
District Of Columbia	-1.1%	-0.6%	1.2%	-7.2%	-3.5%	-0.9%	0.0%	5.8%	3.5%	-3.1%	-1.5%
Washington	2.1%	-1.7%	4.0%	-1.5%	2.4%	4.7%	13.1%	0.1%	9.1%	-2.0%	-0.2%
Georgia	0.7%	-0.8%	-1.7%	1.4%	3.3%	3.4%	4.5%	-0.2%	16.1%	-2.6%	0.1%
Oregon	-0.8%	0.5%	-3.9%	-3.7%	-0.7%	0.5%	0.9%	6.7%	-3.5%	0.2%	-0.4%
New Hampshire	0.6%	-4.5%	-0.2%	1.4%	-3.1%	6.3%	0.8%	-0.3%	18.1%	1.0%	-2.7%
Utah	0.1%	0.8%	3.0%	-0.3%	-3.3%	-1.0%	-1.2%	3.4%	9.7%	-9.3%	0.6%
Michigan	-0.7%	0.2%	-0.8%	-2.4%	-2.3%	-0.4%	3.6%	2.6%	3.4%	-0.6%	-3.2%
South Carolina	0.1%	-0.5%	0.5%	-2.5%	3.4%	0.5%	-7.8%	0.6%	7.0%	-3.3%	-0.1%
Florida	-0.4%	-1.3%	1.9%	-1.4%	-1.1%	-0.8%	1.1%	-0.5%	6.8%	-2.8%	-0.3%
North Carolina	-0.8%	-1.4%	-1.7%	-0.2%	0.0%	0.0%	-2.1%	1.1%	4.7%	-1.7%	-1.7%
Missouri	-0.5%	0.4%	-0.8%	-1.6%	-1.8%	-0.1%	-1.4%	1.1%	1.1%	-1.6%	-0.1%
Alabama	-0.1%	-1.8%	2.6%	-1.8%	0.6%	1.6%	-10.3%	12.0%	-2.8%	-8.4%	-2.4%
Hawaii	-1.8%	1.1%	-1.9%	-2.0%	-2.9%	1.8%	-8.6%	-5.9%	-6.9%	-2.5%	-0.2%
Nevada	0.0%	-1.6%	4.8%	1.4%	-0.2%	-1.9%	0.6%	-0.1%	14.7%	-6.1%	-1.0%
Mississippi	1.3%	-2.9%	7.4%	0.5%	1.9%	1.9%	-1.1%	4.5%	2.7%	2.1%	2.1%
Illinois	-1.5%	-1.3%	-2.0%	0.1%	-4.2%	-0.6%	-7.9%	3.5%	1.8%	-4.2%	-3.6%
South Dakota	-1.7%	-2.7%	-2.3%	-1.2%	-3.9%	4.2%	-38.6%	-6.5%	5.0%	-3.6%	1.3%
California	-2.3%	-3.0%	-7.3%	-0.8%	-0.1%	1.9%	1.8%	-1.3%	1.1%	-1.3%	0.6%
Maine	-1.2%	-2.9%	0.6%	-0.6%	-2.3%	-3.3%	-2.0%	7.0%	3.4%	-3.8%	-1.4%
Minnesota	-1.7%	-0.3%	7.5%	-2.0%	-3.8%	-3.7%	1.1%	-2.4%	-2.4%	-13.8%	-1.9%
Tennessee	-1.4%	-0.9%	-1.3%	-5.1%	-1.7%	-0.2%	-0.5%	-4.2%	3.3%	1.1%	-0.7%
Arkansas	0.1%	-1.9%	-0.5%	-1.2%	-1.0%	1.6%	-1.5%	2.5%	9.5%	2.8%	1.5%
Montana	-1.1%	-2.1%	-2.1%	-5.5%	1.5%	0.2%	3.7%	6.5%	1.0%	-3.2%	1.4%
New Jersey	-0.9%	-2.1%	-3.7%	1.8%	2.6%	9.5%	-5.2%	0.1%	-2.1%	-4.8%	0.4%
Indiana	-1.0%	-3.0%	3.3%	-3.0%	-2.2%	0.9%	0.7%	-0.2%	4.6%	-4.1%	-0.9%
New York	-0.5%	-0.8%	-2.5%	0.1%	-0.3%	-6.9%	1.7%	6.0%	0.5%	1.9%	-1.2%
Idaho	0.3%	-1.6%	-3.8%	0.0%	1.1%	3.4%	14.9%	6.4%	8.6%	-2.6%	-0.6%
Massachusetts	-2.3%	0.6%	-3.8%	0.1%	-1.8%	-3.7%	1.2%	-2.1%	-1.2%	-5.9%	0.7%
Ohio	-0.6%	-2.5%	1.7%	-1.8%	-1.3%	0.7%	3.0%	1.9%	0.7%	-2.4%	-0.5%
Wisconsin	-1.7%	-4.2%	0.0%	-1.7%	0.0%	-1.1%	-2.6%	-0.7%	0.0%	-4.7%	-0.5%
Kentucky	-1.7%	-1.1%	1.3%	-5.8%	0.5%	-1.3%	-11.8%	2.0%	3.7%	-5.5%	-1.2%
Iowa	-2.0%	-2.1%	3.3%	-4.1%	1.2%	0.3%	-3.2%	-4.9%	-2.8%	-6.1%	-3.0%
Kansas	-1.5%	2.8%	-19.1%	-1.5%	-1.3%	0.0%	-0.6%	8.8%	36.5%	-2.6%	-1.0%
Pennsylvania	-1.6%	-2.0%	-2.5%	-1.9%	-0.9%	-0.6%	2.0%	4.5%	-1.6%	-2.9%	-1.8%
Rhode Island	-1.5%	1.5%	-2.2%	-2.8%	-1.9%	0.5%	2.5%	-0.2%	-6.7%	-2.0%	-2.6%
Maryland	-1.8%	-2.8%	0.1%	-3.4%	-3.1%	-4.2%	-5.3%	0.3%	-2.1%	-2.7%	-1.1%
Vermont	-1.6%	-3.7%	1.0%	-0.2%	-5.4%	-3.5%	-2.7%	1.4%	5.8%	-3.8%	-1.0%
Virginia	-1.8%	-2.0%	-2.0%	-0.4%	-1.1%	-2.9%	-5.3%	-0.1%	-4.2%	-2.9%	-1.8%
Connecticut	-1.1%	-2.6%	-2.1%	1.0%	-2.4%	-2.3%	2.2%	5.4%	-6.8%	0.0%	-2.1%
Arizona	-1.4%	-0.2%	-1.1%	1.8%	-2.0%	0.5%	-16.8%	-3.3%	-5.2%	-9.0%	0.0%
Nebraska	-3.2%	-1.2%	-8.0%	-4.9%	-2.7%	-1.6%	-31.9%	2.1%	7.0%	-4.3%	3.6%
Colorado	-1.9%	-0.6%	-2.4%	-0.1%	-5.5%	-0.8%	-13.4%	-1.8%	1.1%	-3.2%	-0.2%
Louisiana	-0.7%	-1.7%	-1.4%	-3.3%	0.0%	1.5%	-0.2%	-0.4%	-4.5%	2.6%	0.5%
New Mexico	-1.0%	0.5%	1.3%	-2.7%	-1.1%	-7.5%	3.9%	0.3%	-2.2%	-1.8%	-1.3%
Texas	-1.8%	-3.7%	-0.2%	-3.0%	-3.2%	-1.2%	7.0%	-1.4%	0.1%	-3.1%	-1.6%
West Virginia	-1.6%	-2.6%	-1.1%	-1.9%	-3.4%	0.7%	-4.9%	2.4%	0.0%	-3.0%	-1.5%
Oklahoma	-1.8%	-1.1%	-2.3%	-2.3%	-3.0%	1.6%	-6.3%	-2.2%	1.0%	0.2%	3.3%
Alaska	-3.8%	0.0%	-1.2%	-5.8%	-2.5%	-2.0%	1.9%	-10.4%	-4.3%	-5.3%	-1.5%
Delaware	-3.0%	0.9%	-8.0%	-1.4%	-1.3%	-19.7%	2.6%	7.5%	-2.2%	0.2%	-0.7%
Wyoming	-1.3%	1.0%	-4.0%	-0.3%	1.0%	0.0%	-5.5%	2.0%	3.2%	-2.3%	-5.6%
North Dakota	-3.8%	-2.9%	-5.5%	-5.8%	-4.7%	-0.8%	-4.4%	-5.4%	13.6%	-1.0%	-11.2%

Sources: US Bureau of Labor Statistics, Moody's Analytics

## LOOKING FORWARD

Countrywide, both employment and average weekly wages are expected to slow in 2016 from the growth rates posted in 2015. This observation applies to almost all states, but with a few exceptions. Hawaii, South Dakota, and Vermont are the three states where employment growth is accelerating the fastest, driven by larger contributions to growth in Construction and the Large Service sectors. Washington, Mississippi, and Georgia are the three states with the fastest acceleration in average weekly wage growth, resulting from increased growth in the Natural Resources and Mining, Information, and Professional and Business Services sectors. Looking forward to 2017, Moody's expects that employment growth will continue at even slower rates than in previous years, while wage growth accelerates. Moody's also expects higher rates of inflation, including medical price inflation, and higher nominal interest rates in 2017 and beyond.



## KEY TAKEAWAYS

- In 2016, both employment and wage growth have decelerated in comparison with 2015.
- For both employment and wages, stronger-performing states are concentrated in the West and South; and the slower-growing states are primarily in the Midwest and Rust Belt. Some Southwestern states also show slower wage growth.
- The Large Service sectors are the primary drivers of overall growth in most states.
- Manufacturing is not a primary driver, but makes small positive contributions to overall growth in some states and small negative contributions in others.
- States with overall declines are primarily driven by declines in the Energy sector.
- The Construction sector's contribution is generally correlated with the state's overall growth.

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