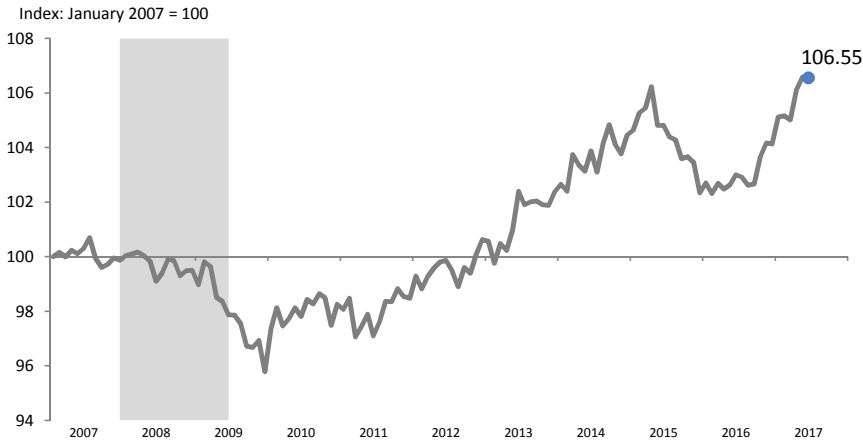


► Chart 1: Cheyenne Business-Cycle Index as of June 2017



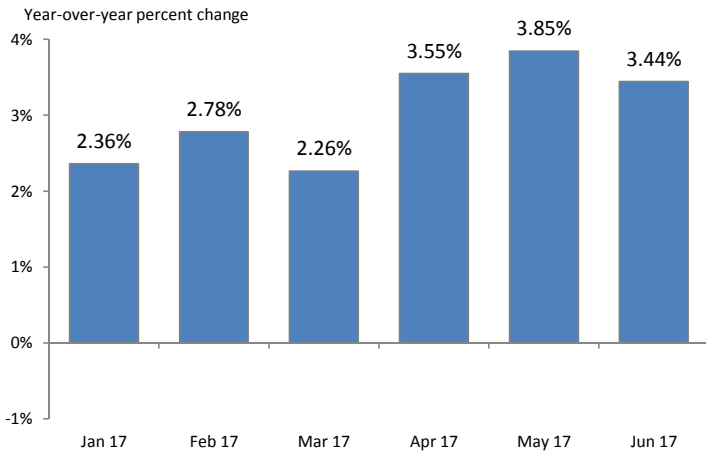
Note: Shaded area represents U.S. recession.

►► **SUMMARY:** The Cheyenne Business-Cycle Index (ChBCI) registered an index value of 106.55 in June of 2017 (see Chart 1), a slight decrease compared to the May 2017 value of 106.58 but an increase in comparison to the June 2016 value of 103.00.

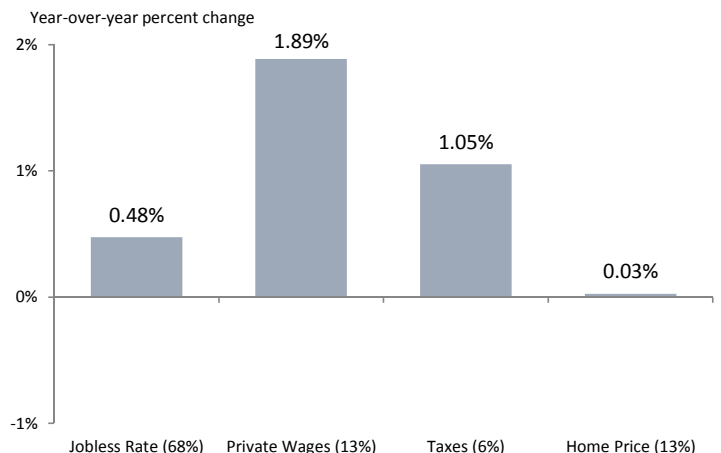
As displayed in Chart 2, the January through June period indicated that the ChBCI had recorded year-over-year increases each month peaking at 3.85 percent in May. The June 2017 index value had increased by 3.44 percent over the previous year.

As Chart 3 demonstrates, each of the four components of the ChBCI were positive in June. The unemployment rate had improved compared to the rate from a year ago while private wages and the collection of the 4 percent sales and use tax attributed to taxable sales in Laramie County each provided a sizeable boost to the June index value. The last component, median home price, showed a minor increase in its contribution to the ChBCI.

► Chart 2: Change in Business-Cycle Index — Last 6 Months

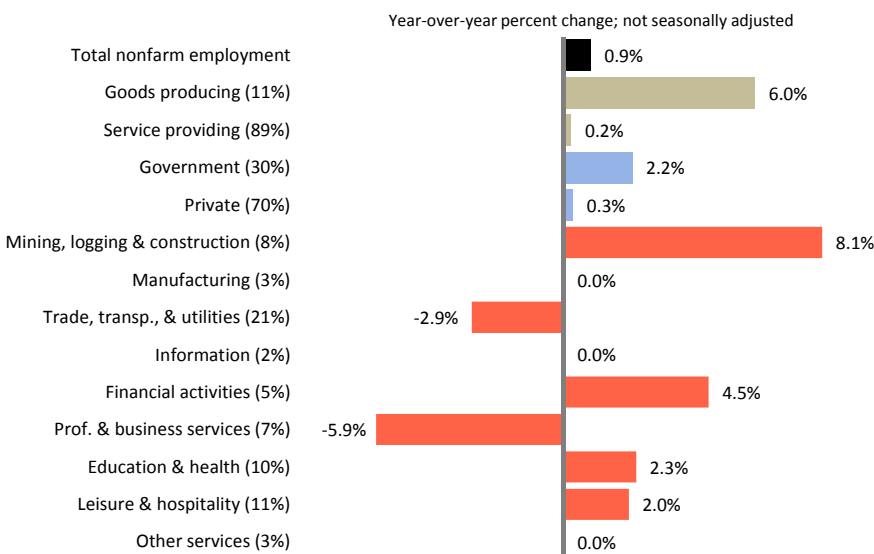


► Chart 3: Component Changes in the Index — June 2017



Note: Values in parentheses are the respective weights of each component.

► Chart 4: June 2017 Employment Growth



Note: Values in parentheses represent share of total employment.

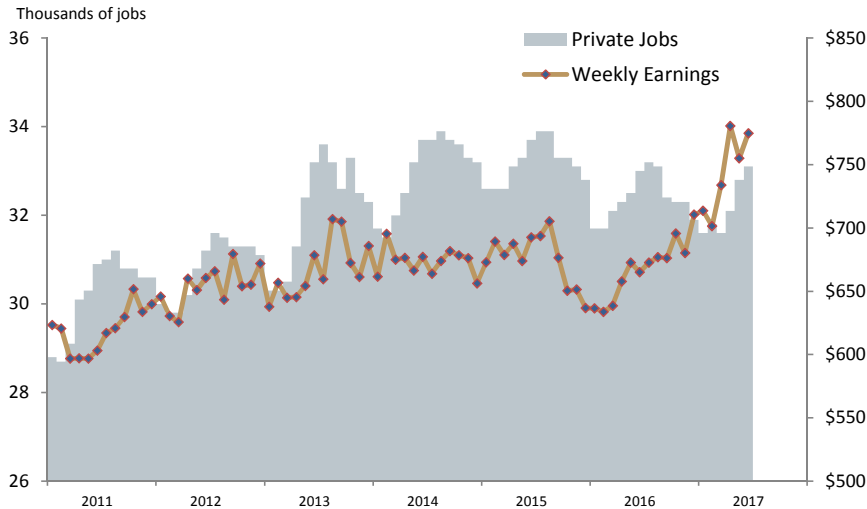
►► The total number of nonfarm payroll jobs in Cheyenne increased at a 0.9 percent pace in June in a year ago comparison as seen in Chart 4. The June job count was 47,300, higher than the June 2016 level by 400 jobs.

In the private sector, mining, logging, & construction, added the largest number of jobs (+300) in June. Trade, transportation, & utilities incurred the largest decline (-300 jobs).

►► **NOTE:** The Cheyenne Business-Cycle Index unites four city/county-level indicators to sum up current economic conditions in a single number. The indicators consist of (1) **Laramie County's monthly unemployment rate**, (2) **private sector wages**, estimated by multiplying the total number of private sector jobs in Cheyenne each month by the average hours worked per week and by the average hourly wage, (3) **monthly sales and use tax collections which reflect taxable sales in Laramie County**, and (4) **monthly median sold price for Cheyenne single family homes**. All data is seasonally adjusted; all dollar amounts are inflation adjusted.

**SOURCES:** **Business-cycle index:** Economic Analysis Division; **private sector wages and unemployment rate:** U.S. Bureau of Labor Statistics; **sales and use taxes:** WY Dept. of Revenue; **median home price:** Cheyenne Board of REALTORS.

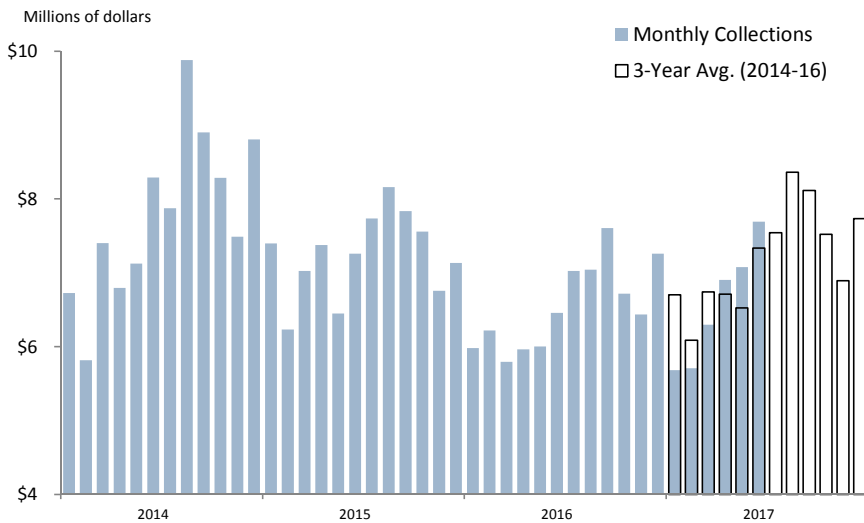
▶ Chart 5: Cheyenne Labor Market as of June 2017



▶▶ Jobs associated with Cheyenne's private sector increased in June by 300 compared to May (see Chart 5). The June 2017 private job count was 33,100, higher than the June 2016 level by 100.

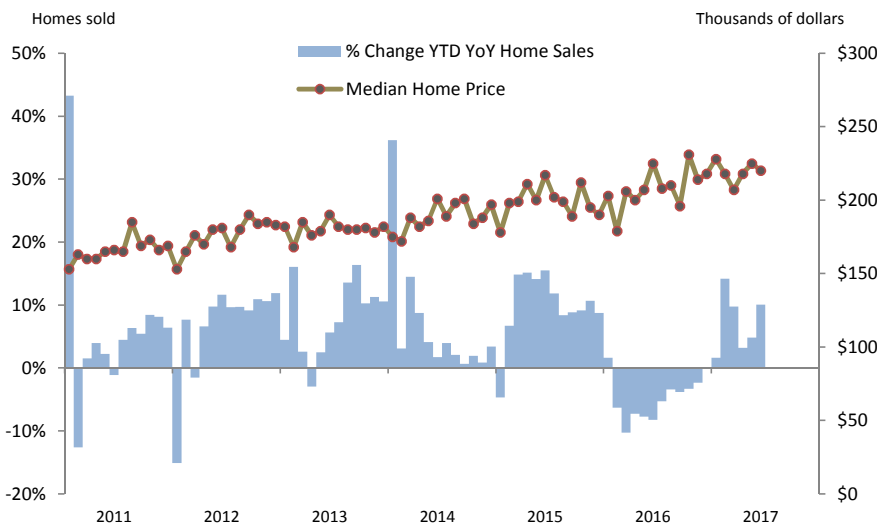
Cheyenne's weekly earnings rose in June to \$774.75 compared to May's \$754.97 and also higher than the level attained in June 2016 of \$665.00. The weekly earnings indicator is a product of average weekly hours multiplied by average hourly earnings. Weekly hours rose to 35.2 in June 2017 from 33.3 in a year ago comparison. In addition, hourly earnings improved, reaching \$22.01, better than the \$19.97 achieved in June 2016.

▶ Chart 6: Laramie County 4% Sales and Use Tax Collections



▶▶ Laramie County's collection of the 4 percent sales and use tax rose to \$7.7 million in June of 2017 (these are actually July 2017 collections that mostly represent sales that took place in June), \$1.2 million higher than June collections from a year ago. After six months into calendar year 2017, total collections were lagging the 3-year average over the same number of months by \$0.7 million or 1.8 percent.

▶ Chart 7: Cheyenne Home Sales and Median Home Prices



▶▶ For the Cheyenne housing market, home sales volume continued to outpace 2016 while home prices trended nearly flat for the first half of 2017.

The number of homes sold increased to 147 in June 2017 compared to sales of 112 a year ago. In addition, total sales of homes for the first six months of calendar year 2017 were 10.1 percent ahead of last year's sales for the same number of months.

The median home price was \$220,000 in June of 2017, slightly lower than May's price of \$225,000. The home price for June 2016 was also \$225,000.

▶▶ NOTE: The data used in the construction of charts 5, 6, and 7 are not seasonally adjusted and all dollar amounts are not inflation adjusted.

Cheyenne Business-Cycle Index Values			
			YOY
Year	Month	Index	Change
2007	Jan	100.00	
2007	Feb	100.16	
2007	Mar	99.99	
2007	Apr	100.24	
2007	May	100.11	
2007	Jun	100.30	
2007	Jul	100.70	
2007	Aug	99.94	
2007	Sep	99.61	
2007	Oct	99.72	
2007	Nov	99.96	
2007	Dec	99.86	
2008	Jan	100.04	0.04%
2008	Feb	100.10	-0.06%
2008	Mar	100.17	0.18%
2008	Apr	100.04	-0.20%
2008	May	99.84	-0.27%
2008	Jun	99.10	-1.19%
2008	Jul	99.41	-1.28%
2008	Aug	99.92	-0.01%
2008	Sep	99.86	0.25%
2008	Oct	99.30	-0.43%
2008	Nov	99.49	-0.46%
2008	Dec	99.50	-0.37%
2009	Jan	98.97	-1.07%
2009	Feb	99.82	-0.28%
2009	Mar	99.64	-0.53%
2009	Apr	98.50	-1.54%
2009	May	98.36	-1.49%
2009	Jun	97.87	-1.25%
2009	Jul	97.86	-1.56%
2009	Aug	97.56	-2.37%
2009	Sep	96.72	-3.14%
2009	Oct	96.68	-2.64%
2009	Nov	96.94	-2.57%
2009	Dec	95.79	-3.73%
2010	Jan	97.37	-1.62%
2010	Feb	98.13	-1.69%
2010	Mar	97.46	-2.19%
2010	Apr	97.73	-0.78%
2010	May	98.12	-0.24%
2010	Jun	97.81	-0.06%
2010	Jul	98.43	0.58%
2010	Aug	98.26	0.73%
2010	Sep	98.64	1.99%
2010	Oct	98.49	1.88%
2010	Nov	97.49	0.57%
2010	Dec	98.25	2.57%
2011	Jan	98.07	0.72%
2011	Feb	98.48	0.36%
2011	Mar	97.06	-0.40%
2011	Apr	97.45	-0.28%
2011	May	97.89	-0.24%
2011	Jun	97.10	-0.72%
2011	Jul	97.61	-0.84%
2011	Aug	98.37	0.10%
2011	Sep	98.35	-0.29%
2011	Oct	98.83	0.34%
2011	Nov	98.53	1.08%
2011	Dec	98.48	0.23%
2012	Jan	99.29	1.24%
2012	Feb	98.81	0.34%
2012	Mar	99.27	2.27%
2012	Apr	99.58	2.19%
2012	May	99.80	1.95%
2012	Jun	99.87	2.85%
2012	Jul	99.49	1.93%
2012	Aug	98.90	0.55%
2012	Sep	99.61	1.28%
2012	Oct	99.40	0.57%
2012	Nov	100.08	1.57%
2012	Dec	100.63	2.19%

Cheyenne Business-Cycle Index Values			
			YOY
Year	Month	Index	Change
2013	Jan	100.56	1.29%
2013	Feb	99.76	0.96%
2013	Mar	100.49	1.23%
2013	Apr	100.23	0.65%
2013	May	100.98	1.17%
2013	Jun	102.39	2.53%
2013	Jul	101.90	2.43%
2013	Aug	102.01	3.14%
2013	Sep	102.04	2.44%
2013	Oct	101.90	2.52%
2013	Nov	101.88	1.80%
2013	Dec	102.38	1.74%
2014	Jan	102.65	2.08%
2014	Feb	102.40	2.65%
2014	Mar	103.75	3.24%
2014	Apr	103.35	3.12%
2014	May	103.14	2.14%
2014	Jun	103.88	1.45%
2014	Jul	103.10	1.17%
2014	Aug	104.15	2.10%
2014	Sep	104.84	2.74%
2014	Oct	104.11	2.16%
2014	Nov	103.77	1.85%
2014	Dec	104.46	2.03%
2015	Jan	104.64	1.93%
2015	Feb	105.27	2.80%
2015	Mar	105.45	1.64%
2015	Apr	106.23	2.78%
2015	May	104.81	1.62%
2015	Jun	104.81	0.90%
2015	Jul	104.39	1.26%
2015	Aug	104.29	0.13%
2015	Sep	103.59	-1.19%
2015	Oct	103.66	-0.43%
2015	Nov	103.45	-0.31%
2015	Dec	102.34	-2.03%
2016	Jan	102.70	-1.85%
2016	Feb	102.31	-2.81%
2016	Mar	102.69	-2.62%
2016	Apr	102.48	-3.53%
2016	May	102.63	-2.08%
2016	Jun	103.00	-1.72%
2016	Jul	102.92	-1.41%
2016	Aug	102.62	-1.60%
2016	Sep	102.67	-0.88%
2016	Oct	103.65	-0.01%
2016	Nov	104.16	0.69%
2016	Dec	104.13	1.76%
2017	Jan	105.12	2.36%
2017	Feb	105.16	2.78%
2017	Mar	105.01	2.26%
2017	Apr	106.11	3.55%
2017	May	106.58	3.85%
2017	Jun	106.55	3.44%
2017	Jul		
2017	Aug		
2017	Sep		
2017	Oct		
2017	Nov		
2017	Dec		



## Cheyenne Business-Cycle Index Addendum

The Cheyenne Business-Cycle Index (ChBCI) is a coincident economic indicator and is designed to provide a current assessment of Cheyenne's economy. There are four main components of the ChBCI. Two of these components, unemployment rate and private sector weekly wages, are included to capture labor market activity for Cheyenne. The third component, sales and use tax collections, gauges economic activity related to taxable sales in the Laramie County while the fourth component, median home prices, serves as a proxy for the housing market.

**Unemployment Rate:** The first component of the ChBCI is the unemployment rate. This statistic measures the percentage of people in Laramie County who want to work but don't have jobs. Within the ChBCI model, the employment rate statistic (1.00 or 100% minus the unemployment rate) is indexed rather than the unemployment rate because an increase in the employment rate, similar to increases in private wages, sales and use tax collections, and median home prices, is considered to be a positive impact on the economy. This statistic is available monthly from the U.S. Bureau of Labor Statistics (not seasonally adjusted). The data are then seasonally adjusted. It is included as a component because it provides an assessment of the Laramie County's labor market.

**Private Sector Weekly Wages:** The second component of the ChBCI is total private sector weekly wages. This component is estimated by multiplying the number of private sector jobs in Cheyenne each month by the average weekly hours and then multiplying this product by the average hourly earnings to achieve a dollar value of private sector jobs in Cheyenne. These statistics are available monthly from the U.S. Bureau of Labor Statistics (not seasonally adjusted). All dollar amounts have been converted to constant dollars using the Consumer Price Index – All Urban Consumers database and then the data are seasonally adjusted. This indicator is included because it is another measure of the Laramie County's labor market health.

**Sales and Use Taxes:** The third component of the ChBCI is Laramie County's sales and use tax collections associated with the state's 4 percent tax rate. Because sales and use tax collections received by the county for a given month represent transactions that took place 4 to 6 weeks prior, the data is lagged one month for use in the ChBCI model. This statistic is available monthly from the State of Wyoming's Department of Revenue (not seasonally adjusted). All dollar amounts have been converted to constant dollars using the Consumer Price Index – All Urban Consumers database and then the data are seasonally adjusted. This indicator is included because it represents taxable sales activity in Laramie County.

**Median Home Prices:** The fourth component of the ChBCI is the Cheyenne median home price. This statistic is compiled by the Cheyenne Board of REALTORS and is available monthly (not seasonally adjusted). The home price statistic is defined as the median sales price for a single family, non-rural residence. All dollar amounts have been converted to constant dollars using the Consumer Price Index – All Urban Consumers database and then the data are seasonally adjusted. Median home prices are included because they capture another critical part of Cheyenne's economy – housing.

**Methodology:** After the data for each component have been adjusted as noted above, each series is then standardized starting in January 2007 resulting in a value of 100.00 for each component and the ChBCI in that month. As the components change from month to month, so does the value of the ChBCI. Monthly index values for each of the components not including the unemployment rate are then smoothed using a weighted moving average. The unemployment rate is excluded from this treatment because the data are relatively stable to begin with. Next, the standard deviation of each component's monthly standardized values is determined followed by the calculation of the inverse of each component's standard deviation. Finally, the individual inverse standard deviations are standardized resulting in weights that sum to 1.00. The rationale for this weighting approach is the same used by the U.S. Conference Board implying that those components that are more stable over time will generate a smaller standard deviation but a larger inverse standard deviation, and thus, a larger weight. A substantial shift in a traditionally stable data series would provide a more compelling signal of economic change than a large shift in a series that commonly has large shifts.

