

# Tenth District Economic Update

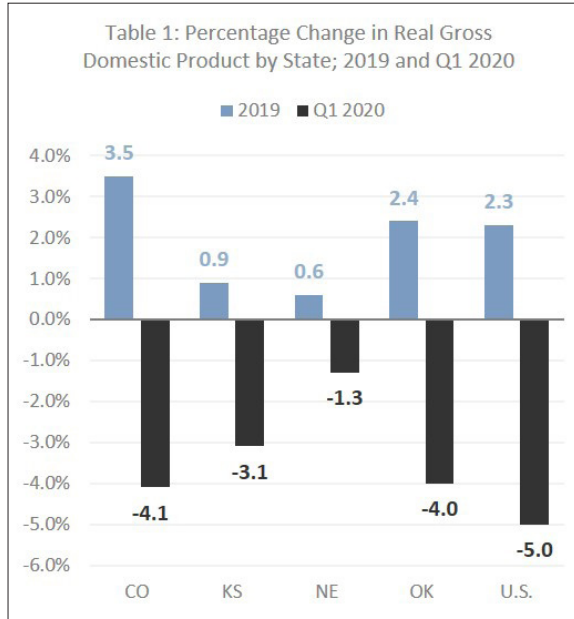
**Quarterly Report / Q2 2020**

**Prepared by:** Strategic Planning and Member Solutions

*Data as of Friday, July 17, 2020 — See footnotes for source and data release information*



# Second Quarter Economic Growth

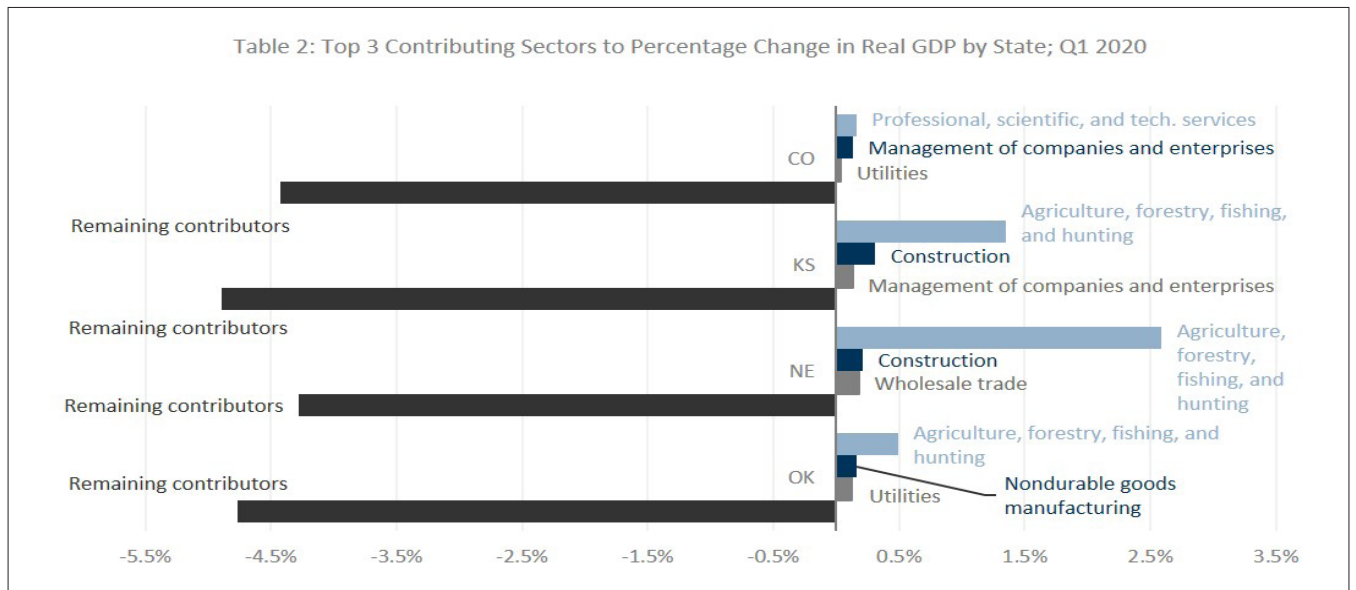


Real Gross Domestic Product (GDP) growth among Tenth District\* states was negative in Q1 2020. All four states were above to slightly above the national rate of -5.0%.

Colorado, once the fastest growing state in the district and fifth fastest in the U.S. (based on 2019 growth), has been hit hardest by the economic drag of the coronavirus. Without a strong recession-resistant sector like agriculture, forestry, fishing and hunting (see Table 2), Colorado was the slowest growing state by real GDP in the district at -4.1%.

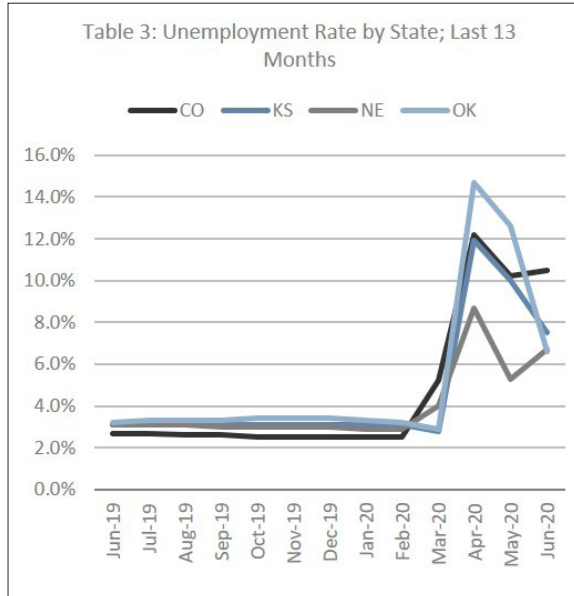
In contrast, driven by the ag and construction sectors, Kansas and Nebraska have weathered the storm with greater success. After slow growth in 2019, Kansas saw a 3.1% drop in real GDP in the 2020 Q1, while Nebraska dropped only 1.3%.

As for the fourth state in the Tenth District, typically as the oil and gas industry goes, so too goes Oklahoma. After an average year for oil in 2019, Oklahoma has plummeted to -4.0% real GDP growth in Q1 2020, the second biggest drop in the district.



\*Tenth District includes Colorado, Kansas, Nebraska and Oklahoma

# Second Quarter Employment & Labor



The state of Colorado, with the highest unemployment rate in the district throughout late 2018 and early 2019, had dropped precipitously throughout 2019.

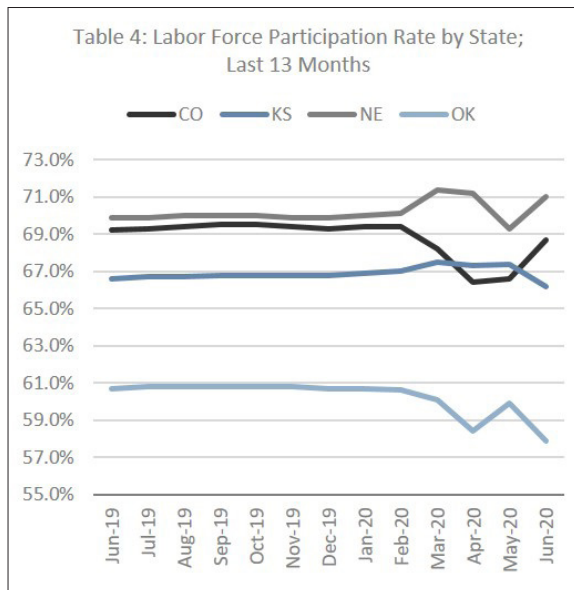
However, at 10.5%, Colorado's unemployment rate is now again the highest in the district, up 7.8% year-over-year (YoY) and 8.0% year-to-date (YTD).

The three other Tenth District states have done a better job keeping their unemployment figures in check. Kansas is up 4.4% YoY and YTD.

With a 6.7% unemployment rate, Nebraska is up 3.6% YoY and 3.8% YTD. Nebraska has the seventh lowest unemployment rate among all states in the country.

Oklahoma, after spiking to over 14% in April 2020, is down to a 6.6% unemployment rate, lowest among the four Tenth District states and fifth lowest in the United States on the whole.

All four Tenth District states, however, are below the national average of 11.1%.



In terms of the labor force participation rate (LFP), Colorado is down 0.7% YTD and 0.5% YoY but still remains one of the strongest states nationwide in LFP (fifth) at 68.7%.

Kansas is down YTD (0.7%) and YoY (0.4%), trailing the likes of Colorado and Nebraska. Kansas ranks tied for eighth in the United States at 66.2%.

The only state among those in the Tenth District up on a YTD and YoY basis, Nebraska's

strength in unemployment has also translated to a strong participation rate.

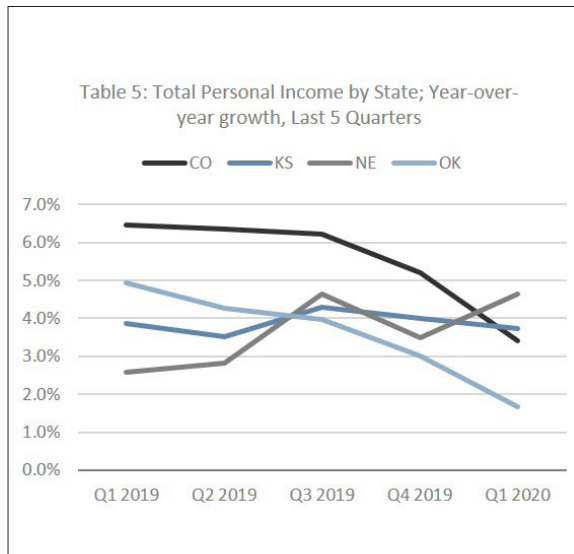
Up 1.0% YTD and 1.1% YoY, Nebraska is 1st in the Tenth District and the U.S. at 71.0%.

Despite a strong unemployment rate, Oklahoma trails the rest of the Tenth District in LFP by a wide margin at 57.9%.

The nationwide rate in June 2020 was 61.5% (down 1.9% YTD, down 1.5% YoY).

Source: U.S. Bureau of Labor Statistics (BLS) – Civilian Noninstitutional Population and Associated Rate and Ratio Measures for Model-Based Areas, June 2020  
 Next Release: August 21, 2020 – State Employment and Unemployment (July 2020 data)

# Second Quarter Wage Measure



Total personal income is defined by the U.S. BEA as the income people receive from wages, proprietors' income, dividends, interest, rents and government benefits.

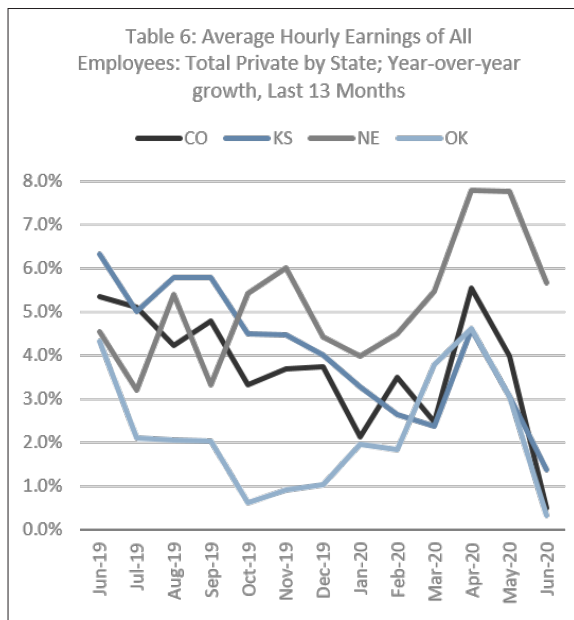
Knowing the Fed's target inflation rate is 2.0%, any personal income growth less than that level would be problematic for the workers in that state.

Fortunately for the Tenth District, three of the four states have continued to trend above 3.0%

annual growth over the last 5 quarters. However, all but Nebraska have dropped from their growth levels at this point one year ago.

Colorado and Oklahoma are down 2.9% and 3.2% YoY to 3.4% and 1.7%, respectively. Kansas is down 0.2% (to 3.7%) and Nebraska is up 2.1% (to 4.7%) over the same time period.

YoY growth for the U.S. in first quarter 2020 was 3.2%, below all Tenth District states but Oklahoma.



Average hourly earnings (AHE), as defined by the U.S. BLS, reflect not only changes in basic hourly and incentive wage rates, but also such factors as premium pay for overtime/late-shift work and changes in output of workers paid on an incentive plan.

They also reflect shifts in the number of employees between relatively high-paid and low-paid work and changes in workers' earnings in individual establishments.

Earnings differ from wage rates in that earnings are the actual return to the worker for a stated period, while wage rates are the amount stipulated for a given unit of work or time.

Earnings do not measure the

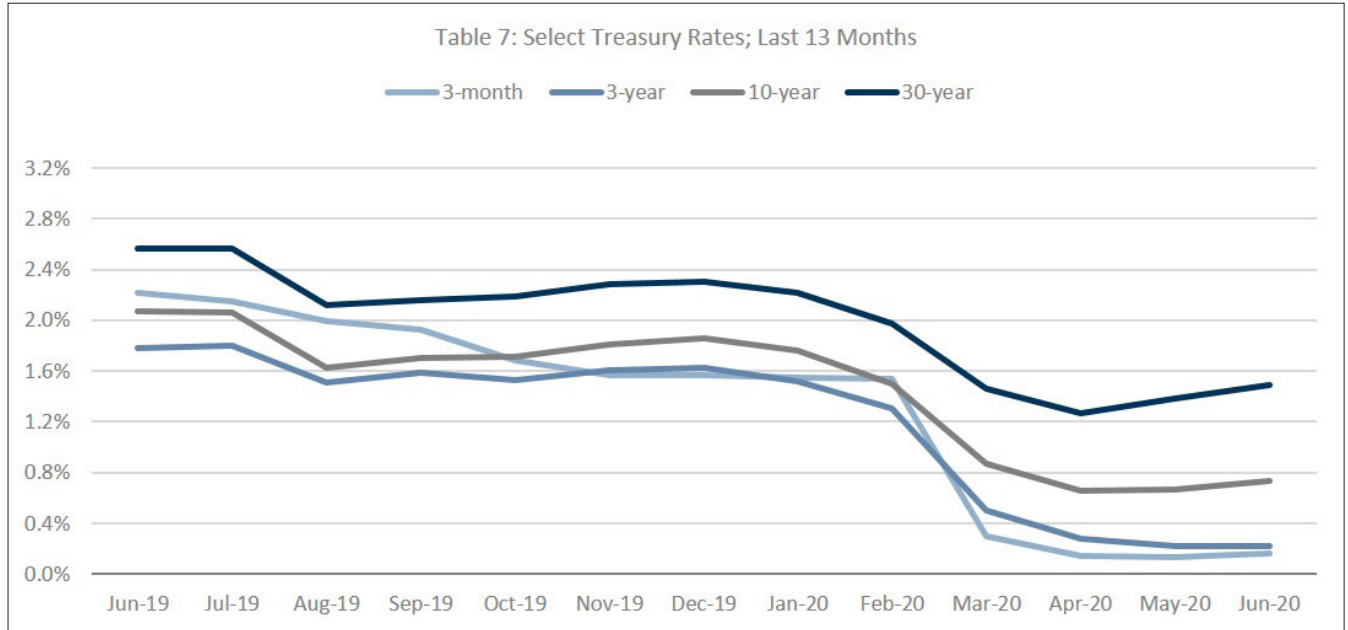
level of total labor costs on the part of the employer as the following are excluded: benefits, irregular bonuses, retroactive items and payroll taxes paid by employers.

Again, understanding that the Fed adjusts monetary policy based on a 2.0% inflation target, maintaining 2.0% growth or greater in respect to AHE is paramount.

After a strong start to 2019, three of four Tenth District states have tumbled to near 0.0% in June 2020. Colorado, Kansas and Oklahoma are down 5.2%, 3.2% and 4.3% from their April 2020 peaks, while Nebraska has maintained an above-5.0% level throughout the fiscal downturn.

Sources: U.S. Bureau of Economic Analysis (Personal Income) and U.S. Bureau of Labor Statistics (Average Hourly Earnings)  
 Next Releases: 7/31/20 (Personal Income); 8/7/2020 (Average Hourly Earnings)

# Interest Rates and FOMC Policy



Commonly seen as a precursor to a slowdown, the first post-Great Recession U.S. Treasury curve inversion occurred in late March 2019.

The curve's valley deepened with the 10-year rate dropping below the three-month rate in May 2019, an inversion that lasted until November 2019 (see Table 7). Though the market could not have predicted a pandemic a year in advance, the U.S. economy nonetheless has entered its first recession since 2009.

In an emergency response to the rapidly devolving economy, the Fed dropped the Federal Funds rate target range by 50 bps to 1.00-1.25% on March 4, 2020. On March 16, less than two weeks after

the first cut, a second emergency action was taken by the FOMC to reduce the target range by 100 bps to 0.00%-0.25%.

As states begin to roll back openings, the Fed continues to consider all options to help buoy the floundering economy.

In addition to forward guidance and quantitative easing, two monetary policy tools widely used during the Great Recession, the FOMC has considered implementing yield curve control (also known as interest rate pegs) to lessen the economic blow.

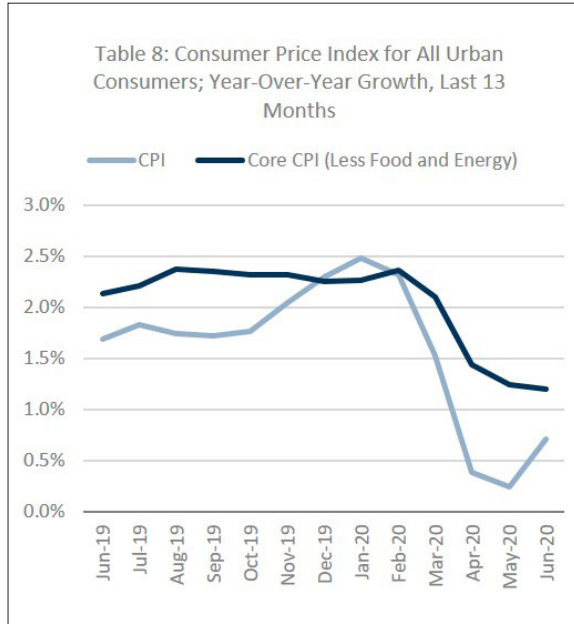
Yield curve control is similar to quantitative easing, but differs in one major aspect: rather than targeting

a specific dollar amount of bonds to purchase, the central bank sets a target price (above the prevailing market price) at which they are willing to purchase the bonds. Since bond price and yield are inversely related, by artificially boosting the bond price, the central bank effectively lowers the bond yield.

This passes through to debt instruments with similar maturities, such as home and vehicle loans, in hopes of inciting consumer activity. The effectiveness of such a strategy is being heavily debated by FOMC members, but "most" agree that we will remain in a low interest rate environment for the foreseeable future.

Source: Board of Governors of the Federal Reserve System – Interest Rates, June 2020  
 Next FOMC Summary of Economic Projections Release: September 16, 2020

# Prices: Consumer Inflationary Measure



In measuring the purchasing value of the U.S. dollar, two indices rise above the rest.

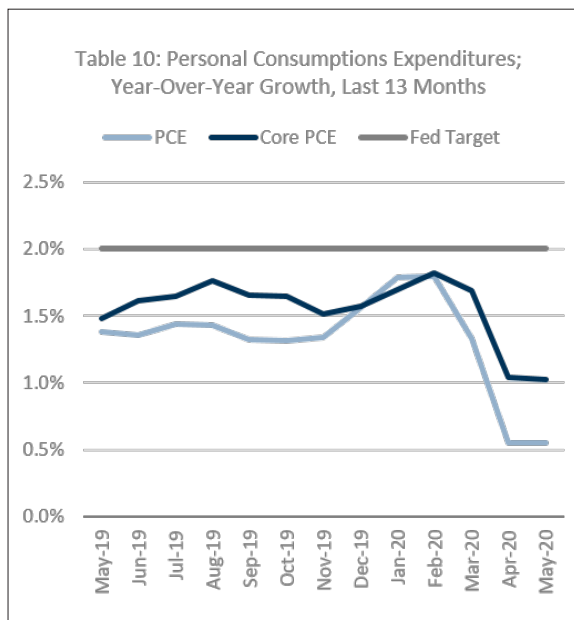
Both track the price level of a basket of goods, but differ in a myriad of ways, including the weights applied to different items in the basket, accounting for changes in the basket and simply what items are included in the basket.

Historically the higher of the two rates, the Consumer Price Index (CPI) attempts to capture the cost of what households are buying. Once the preferred measure of the FOMC, CPI is

tracked by the U.S. BLS.

During the past 13 months, "headline" CPI had been seeing bumpy improvement. This index differs from the "core" measure in that it includes the typically more volatile prices of food and energy, the latter of which has seen a major drop in prices of late.

When gauging the general direction of the economy, the core figure is more often used. However, milk and gasoline are essential purchases, so it's important to monitor both versions of the index.



The second and more often cited inflationary measure is the Personal Consumptions Expenditures index (PCE).

Based on surveys of business sales, the Fed targets 2.0% for the core measure when setting monetary policy.

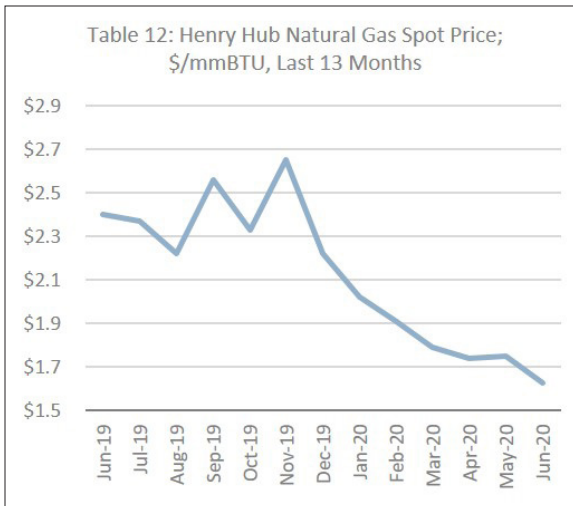
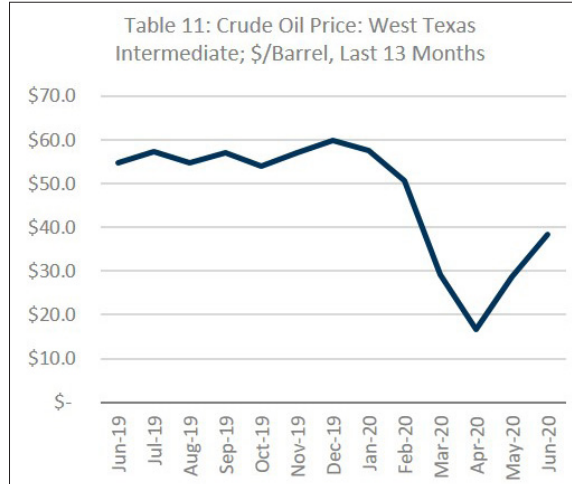
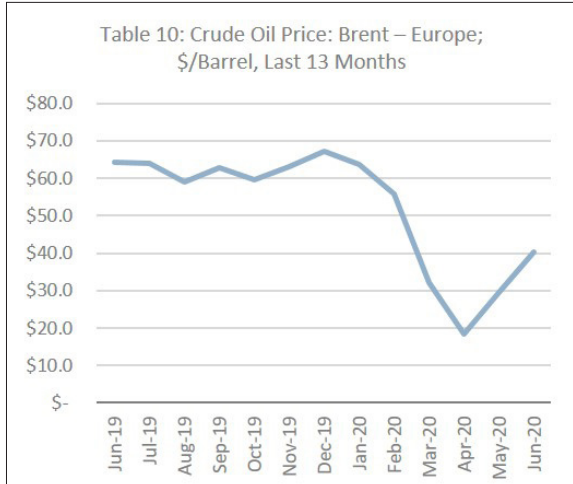
After trending between 1.5%

and 1.8% for most of 2019, core PCE dropped significantly in early 2020, down to 1.0% in April 2020.

Though flat in May 2020, the consistently low inflation level should be of major concern to an FOMC managing a zero interest rate policy.

Source: U.S. Bureau of Labor Statistics (BLS) – Civilian Noninstitutional Population and Associated Rate and Ratio Measures for Model-Based Areas, June 2020  
 Next Release: August 21, 2020 – State Employment and Unemployment (July 2020 data)

# Prices: Energy



Two different prices of crude oil are generally tracked by those monitoring the energy sector: Brent (European) and West Texas Intermediate (WTI).

A number of factors can contribute to differences between the prices, including extraction and production, shipping and storage costs, content quality, and politics such as trade tensions.

Thus, it is important to look at both figures rather than the global price of oil alone to get an accurate depiction of the energy landscape.

Currently, Brent and WTI are trading at a nearly identical price. Both have followed a similar trend, teetering in a tight \$10 range for most of 2019 before bottoming out in

April 2020. Some of that loss has been recouped in recent months but both still sit at about 70% of their 2019 peaks.

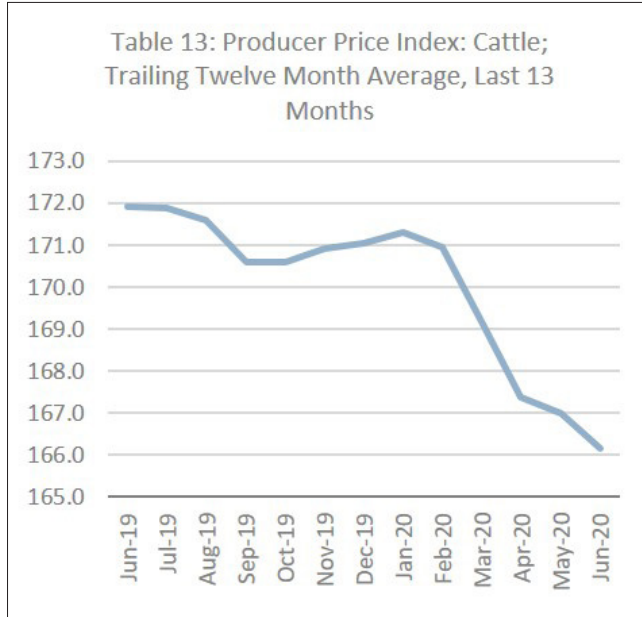
A product of simple supply and demand, the price of natural gas typically peaks in the winter months and idles in the summer.

The year 2019 was indicative of this trend with the spot price per million BTU's topping \$2.50 in November and December 2019 before dropping to under \$1.70 in June.

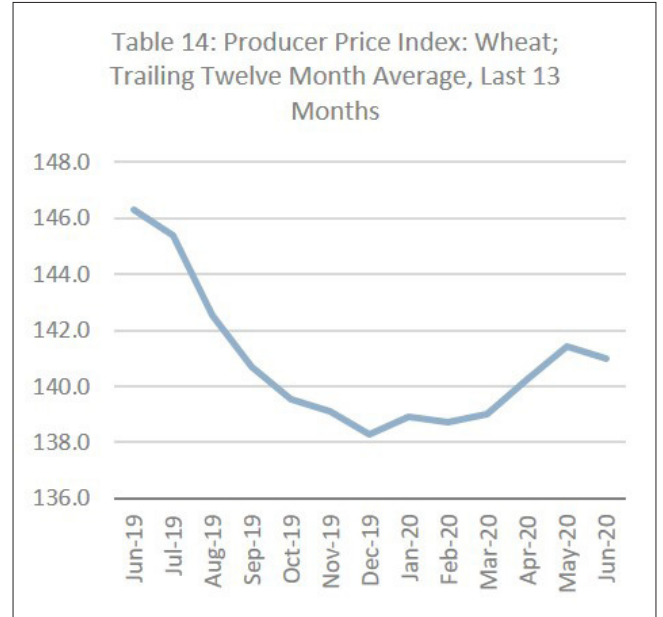
A major glut in inventories and a relatively mild winter kept prices in check this winter, and the absence of commercial demand during coronavirus quarantines has only exacerbated the excessive storage issue.

Source: U.S. Energy Information Administration – Spot Prices (available daily)

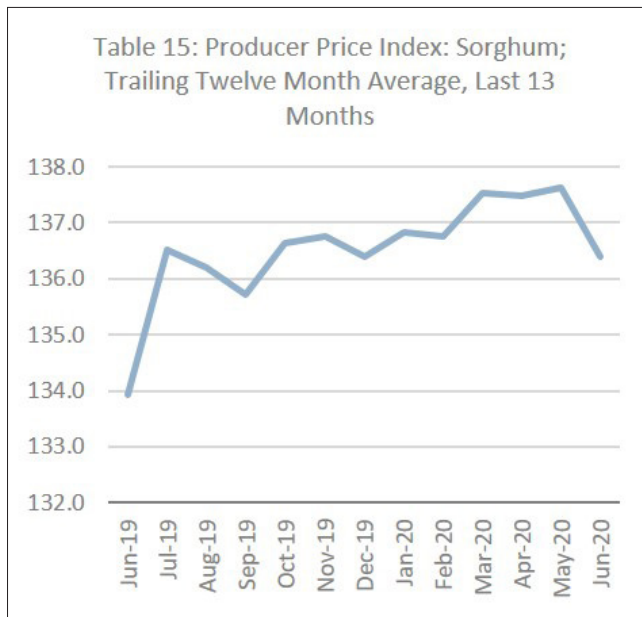
# Prices: Farm & Agriculture



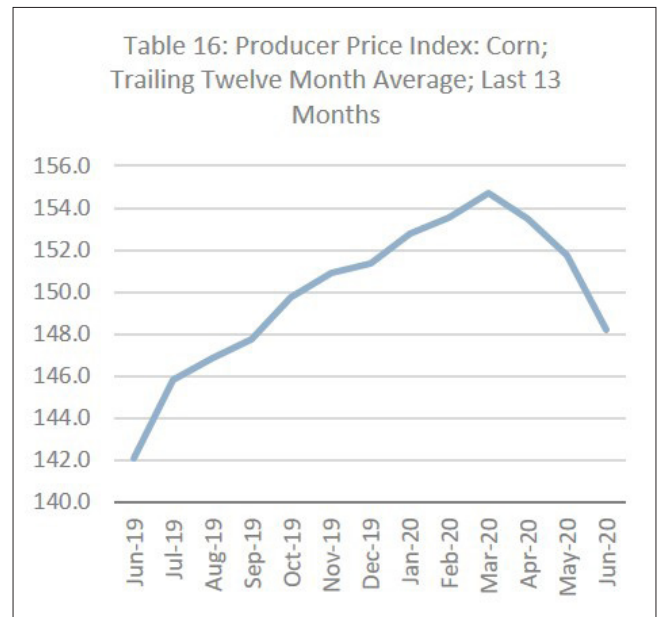
Tenth District state rankings in U.S. cattle production: 2nd Nebraska, 3rd Kansas, 4th Oklahoma, 10th Colorado



Tenth District state rankings in U.S. wheat production: 1st Kansas, 5th Oklahoma, 7th Colorado (Nebraska unavailable)



Tenth District state rankings in U.S. sorghum production: 1st Kansas, 4th Nebraska, 5th Colorado, 6th Oklahoma



Tenth District state rankings in U.S. corn production: 3rd Nebraska, 7th Kansas, 15th Colorado, 27th Oklahoma

Source: U.S. Bureau of Labor Statistics – Producer Price Indices, June 2020  
 Next Release: August 11, 2020 (July 2020 data)



# Prices: Housing

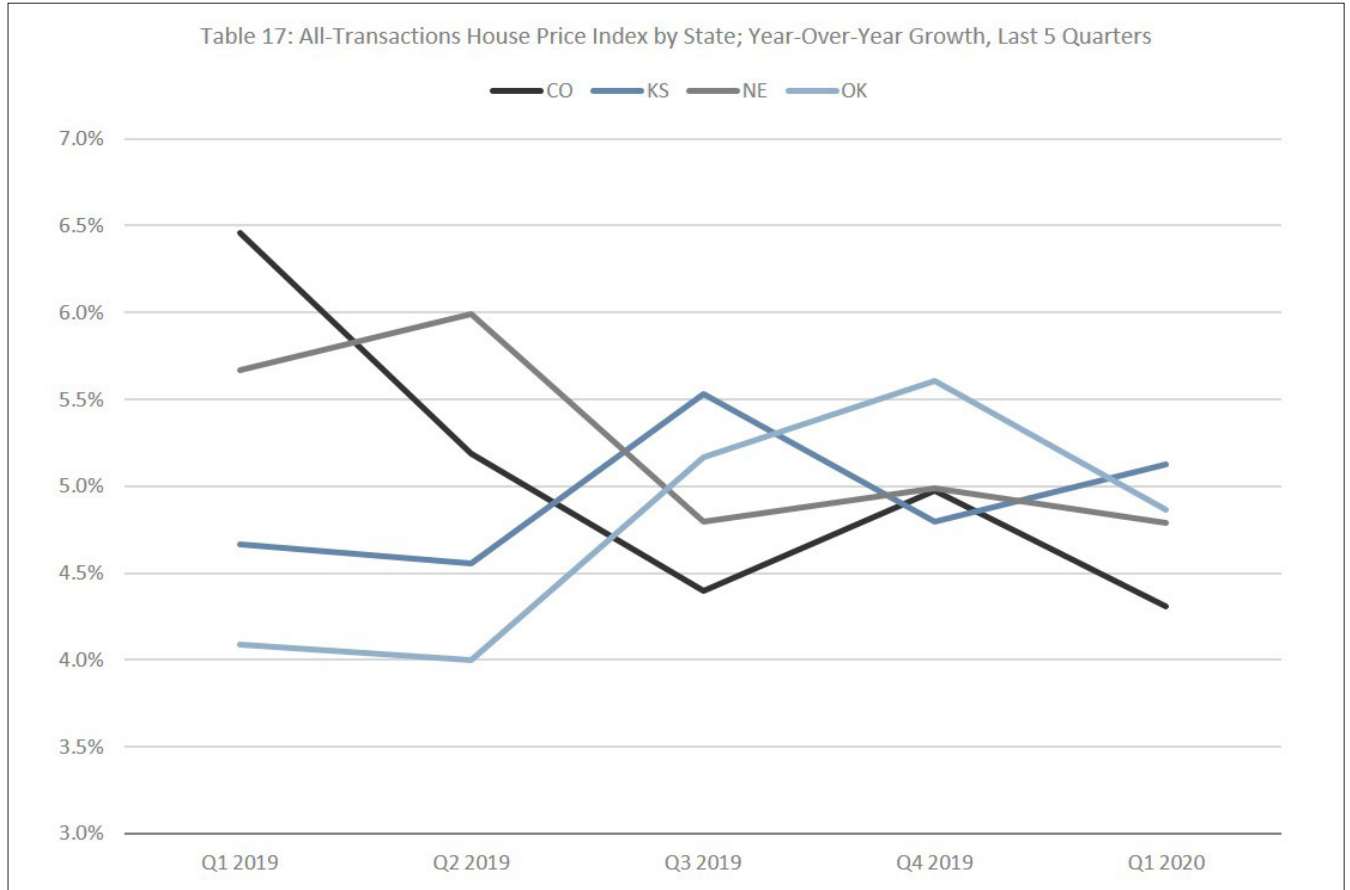


Table 17 depicts the All-Transactions House Price Index (HPI) by state for the Tenth District.

According to the FHFA, the HPI is a broad measure of the movement of single-family house prices. The HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or refinancings on the same properties.

Data is obtained by reviewing repeat

mortgage transactions on single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac since 1975.

Since the first quarter of 2019, Kansas and Oklahoma have seen slight improvement in YoY growth, while Nebraska has seen bumpy deterioration in housing price growth.

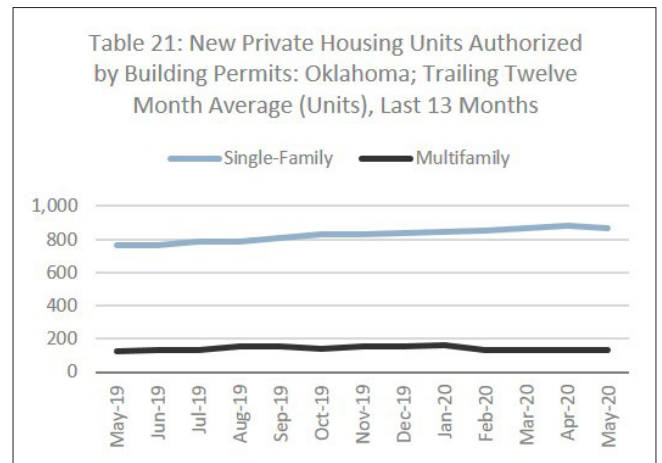
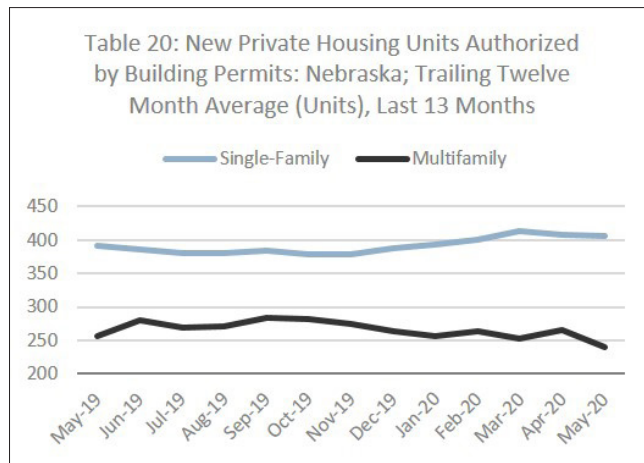
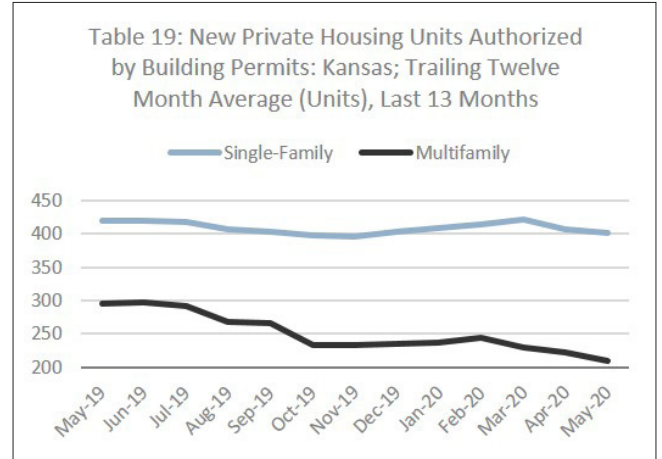
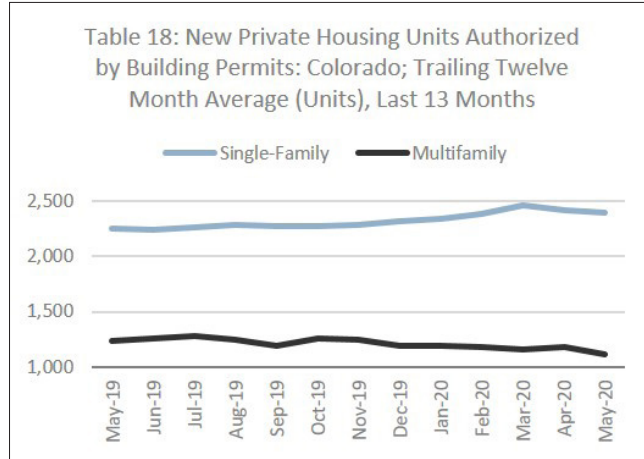
Colorado no longer remains the hottest housing market in the Tenth

District, with YoY housing price growth dropping below the other Tenth District states in Q3 2019 and again in Q1 2020. They've also seen the greatest percentage of price decline over the past year by a significant margin.

In the first quarter of 2020, the country on a whole saw 5.0% YoY growth, higher than Colorado, Nebraska, and Oklahoma but below Kansas.

Source: U.S. Federal Housing Finance Agency – House Price Indices, Q1 2020  
 Next Release: July 22, 2020 (Q2 2020 data)

# Second Quarter Housing Numbers



Tables 18-21 depict single-family and multifamily housing units authorized by building permits for each state.

According to the Census Bureau, these numbers provide a general indication of the amount of new housing stock that may have been added to the housing inventory. Since not all permits become actual housing starts and starts lag the permit stage of construction, these numbers do not represent total new construction but should provide

a general indicator on construction activity and the local real estate market.

Authorized permits can vary greatly from month to month, so a trailing twelve month average is used to provide a general trend.

Most notable in the Tenth District is Colorado, accounting for more than half of all building permit authorizations on both a single- and multifamily basis during the past year.

Kansas has seen the greatest drop in single-family permits. In addition, Colorado, Kansas and Nebraska have seen negative growth in multifamily permits. All other trends have been relatively flat.

The biggest disparity in percentage of total authorized permits between single- and multifamily exists in Oklahoma, where more than 80% of all permits comes from single-family construction.

Source: U.S. Census Bureau Building Permits Survey – May 2020  
 Next Release: July 24, 2020 (June 2020 data)

