

# Texas Weekly Leading Index

(Based on data through July 3, 2021)

**Luis B. Torres**

**Research Economist**



July 14, 2021

© 2021 Texas Real Estate Research Center. All rights reserved.

## Texas Weekly Leading Index (Based on data through July 3, 2021)

Luis B. Torres

The Texas Weekly Leading Index decreased during the week ending July 3 after increasing substantially the previous week (Figures 1 and 2). The index has been gathering impetus and is pointing toward higher future economic activity as the reopening of the economy continues and uncertainty regarding the pandemic dissipates due to increasing vaccination rates.

The index's decrease was mainly due to an increase in the number of people filing for unemployment insurance and a decrease in the number of new business applications. Even though the number of new business applications fell, the number remains high, signaling future business activity remains strong.

The week after Texas opted out of further federal unemployment assistance, initial jobless claims increased to 24,133 for the week ending July 3 as the labor market continued to gradually recover. In addition, continuing unemployment claims increased to 208,316 the week ending June 26, recording two straight weeks of increases. Transitions from unemployment to employment have likely been reduced by the effect of the pandemic on women. Women in the 25-to-34-year age group were more likely than men to leave their jobs to take care of children because of in-person school and daycare closures. This outcome should be reverted once schools and daycares return to in-person learning and caregiving in the fall.

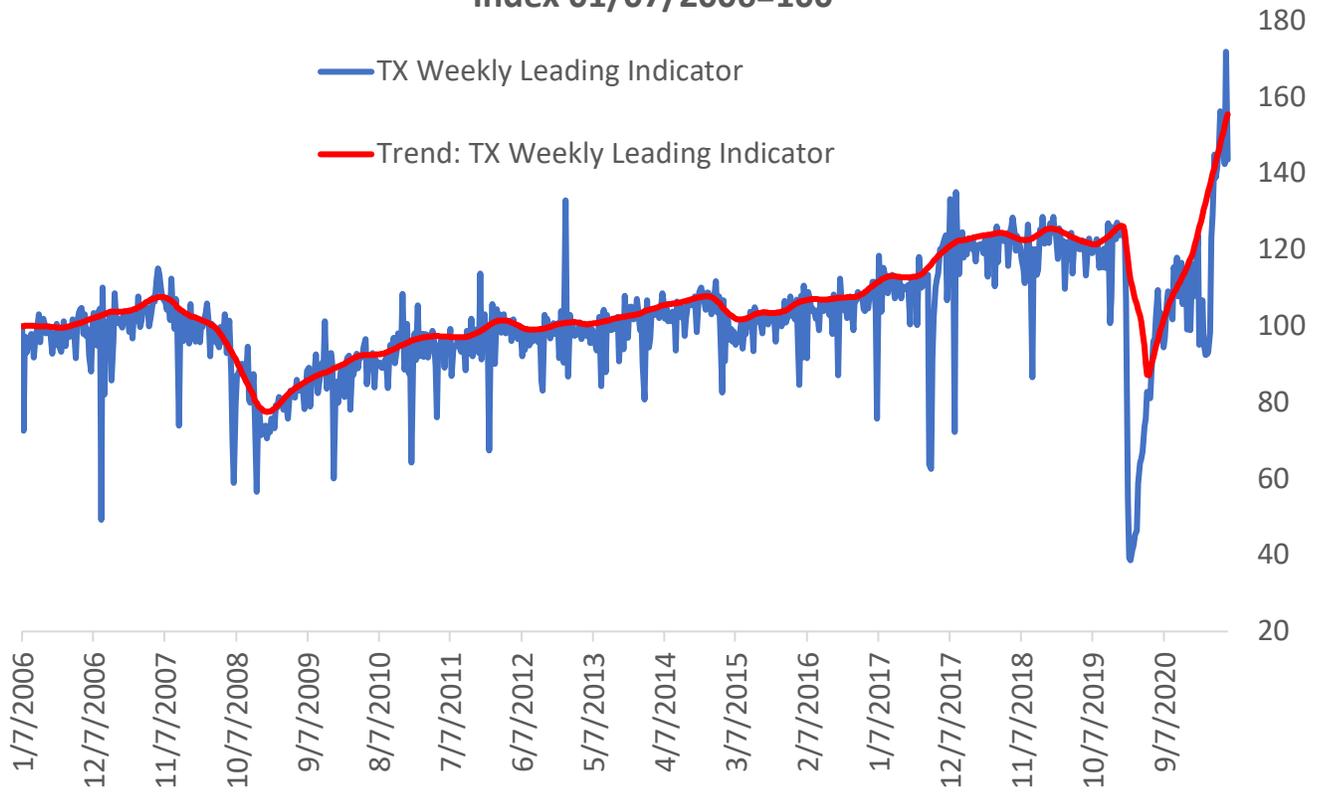
Texas job openings reached record highs in March at 712,000, resulting in a record-high job openings rate of 5.4 percent, according to the most recent official numbers from the Bureau of Labor Statistics. Based on Texas Real Estate Research Center projections, Texas job openings could have risen further in May to 751,000. Record job openings suggest that while the economy is still short of pre-COVID employment levels, it is not due to insufficient labor demand. In addition to childcare, other factors affecting the transition from unemployment to employment could be the lingering pandemic, early retirement, and the possibility that people are rethinking their career paths.

The outlook for the reopening and recovery of the state's economy improved as the number of new cases continued to fall up to the week ending July 3 (Figure 3). In addition, vaccination rates and herd immunity are increasing. This is benefiting consumer behavior, increasing business activity while reducing the number of layoffs going forward, and allowing people to return to the labor force.

In addition, a decrease in the real rate for the ten-year Treasury bill (which continues to exhibit a negative return in real terms) combined with an increase in the real price of West Texas Intermediate (WTI) oil countered the decrease in the weekly index.

Although this is becoming less likely, the rebound in Texas' economic activity could be hindered by possible upsurges in COVID-19 cases as economic and social activity increases. Further waves of infections can reverse increased mobility and spending, affecting the path to recovery.

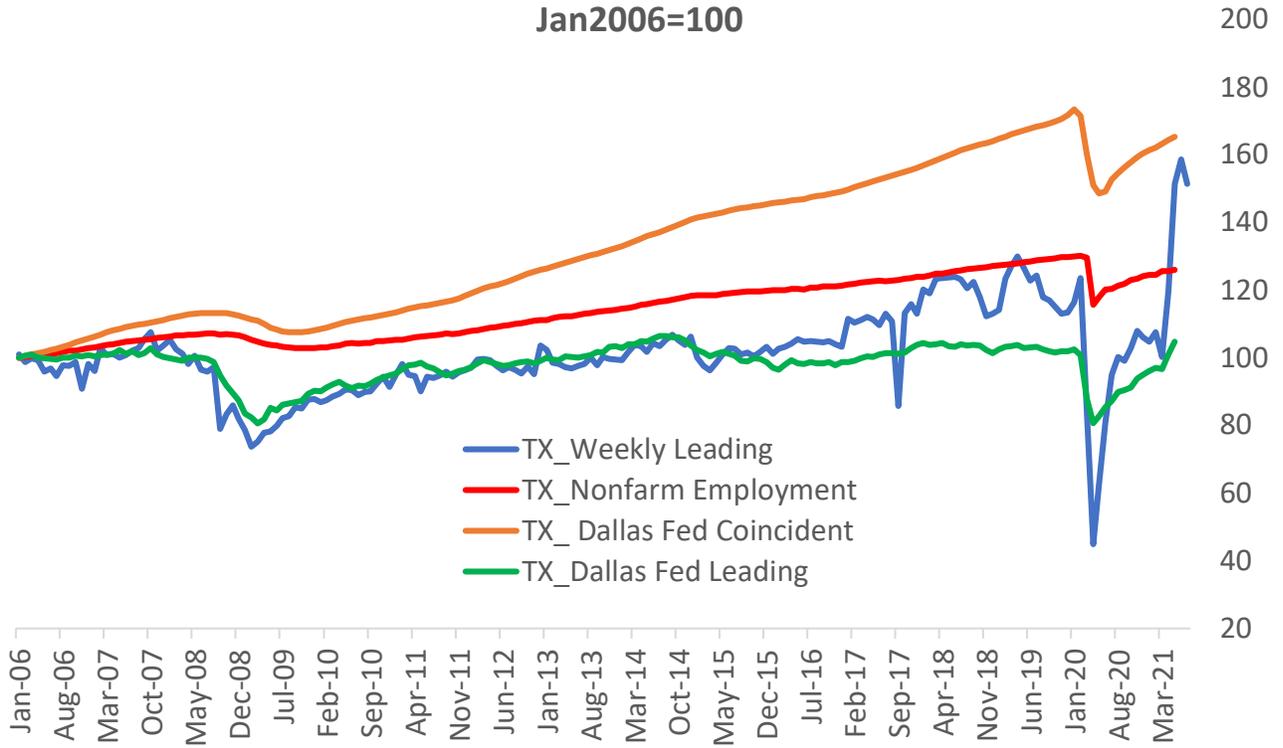
**Figure 1. Texas Weekly Leading Indicator  
Index 01/07/2006=100**



Note: Seasonally adjusted.

Source: Texas Real Estate Research Center at Texas A&M University

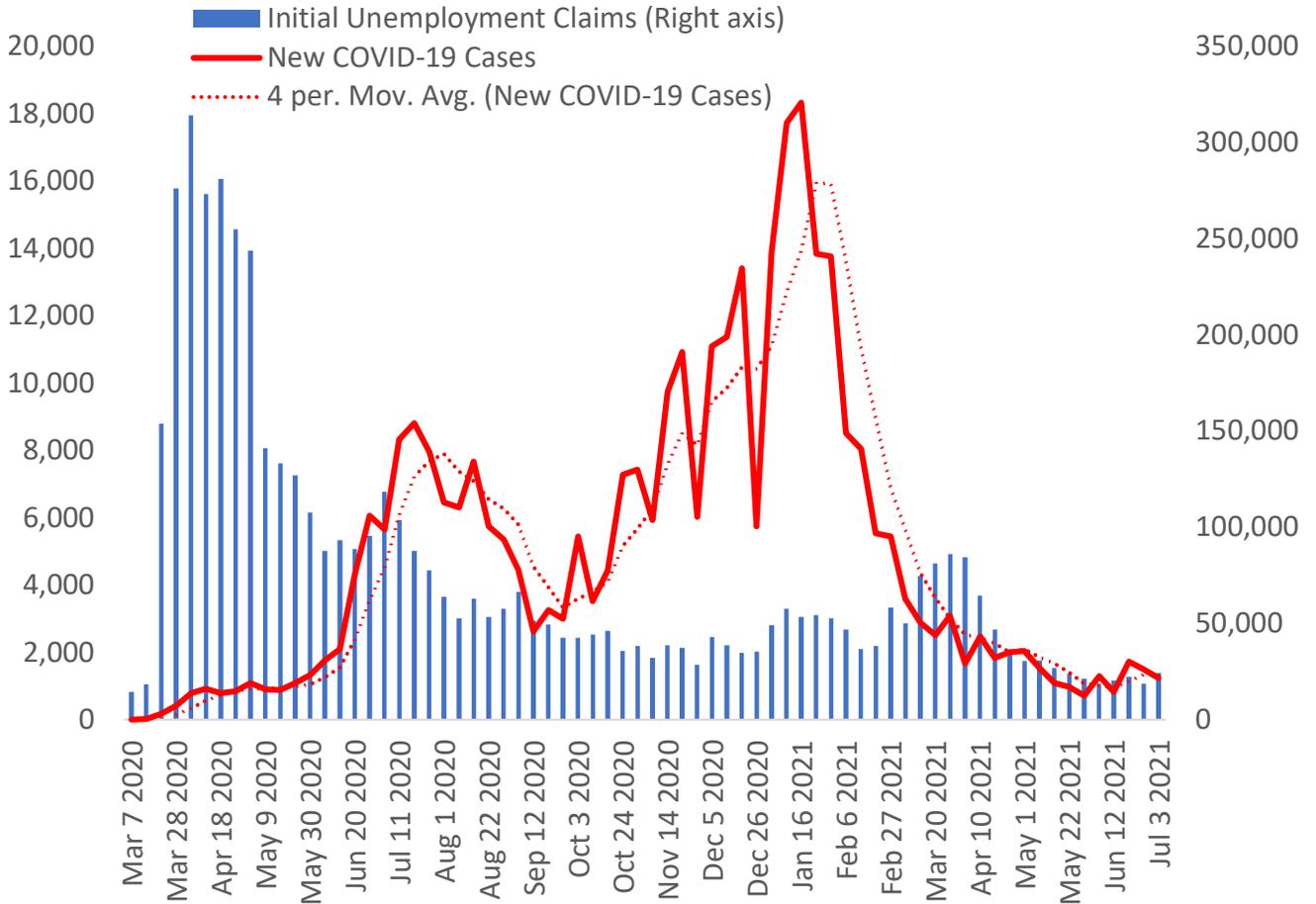
**Figure 2. Texas Weekly Leading Indicator**  
**Jan2006=100**



Note: Seasonally adjusted.

Sources: Bureau of Labor Statistics, Dallas Federal Reserve, and Texas Real Estate Research Center at Texas A&M University

**Figure 3. Texas Unemployment Initial Claims and New COVID-19 Cases**



Note: Unemployment initial claims are seasonally adjusted.

Sources: Department of Labor, Haver Analytics, and <https://github.com/nytimes/covid-19-data/blob/master/us-counties.csv>

## About This Report

The COVID-19 health crisis is unlike any crisis the economy has experienced before. The economy is currently going through a self-induced, sudden-stop to contain and stabilize the spread of the virus and save lives. The size of the economic shock will likely result in losses that overshadow losses from the 2008-09 financial crisis.

The Texas economy is not immune to the pandemic. In fact, the state's economy will be hit even harder than the world and the rest of the United States due to the simultaneous downturn in the oil industry.

This crisis has created a need for up-to-date economic indicators that can help forecast economic changes. The Texas Real Estate Research Center at Texas A&M University has constructed a high-frequency economic activity index for Texas that estimates the timing and length of future upswings and downturns on a weekly basis.

New weekly data series (also called high-frequency data) and new methodologies to seasonally adjust the data on a weekly basis have allowed for the development of weekly coincident and leading economic indicators. The Center has a successful track record in estimating monthly residential and nonresidential construction leading indexes for Texas. Both indexes have proven useful in signaling directional changes and forecasting key indicators like single family home sales, apartment vacancy rates, and commercial vacancy rates.

The Center evaluates economic data to determine:

- economic significance,
- statistical adequacy (in describing the economic process in question),
- timing at expansion and recessions,
- conformity to historical business cycles,
- smoothness, and
- currency or timeliness (how promptly the statistics are available).

However, the indexes do have some weaknesses. Underlying indicators are subject to revision, and while errors often cancel out across indicators, revisions impact the index and future monitoring of business cycles. In addition, although leading indicators often show the direction of a business cycle, they do not measure the magnitude of the change.

Even with these caveats, leading indicators are useful for measuring business cycles. Seven variables were evaluated for this report. Four (business applications, high-propensity business applications, business applications with planned wages, and business applications from corporations) are business market variables that are tied to state business activity. One variable, weekly initial unemployment insurance claims, is tied to state employment. Another, West Texas Intermediate (WTI) real oil price deflated by the all-urban consumer price index, is related to the oil industry. The last variable, the real ten-year Treasury bill estimated using same-period inflation expectations, represents the cost of credit in the economy.

Based on statistically reliable criteria, four variables were selected as economic activity leading indicators: business applications, initial unemployment insurance claims, real WTI oil price, and real ten-year Treasury bill. These variables demonstrated a significant leading relationship with Texas nonfarm employment. All other variables were found not to be statistically valuable or to perform below the business applications variable for the leading index.

Detecting turning points in any leading index on a month-to-month basis is difficult, because not all downturn (upturn) movements point toward recessions (expansions). It’s even more difficult to do on a weekly basis. The Center has converted the weekly leading economic activity index into a monthly leading index to evaluate its predictive usefulness.

Based on the National Bureau of Economic Research methodology, Texas nonfarm employment and the Dallas Federal Reserve Texas coincident indicator are used as references of peaks and troughs to measure the state’s business cycle (see table). This makes it possible to see if the weekly economic leading indicator can predict changes in Texas business cycles.

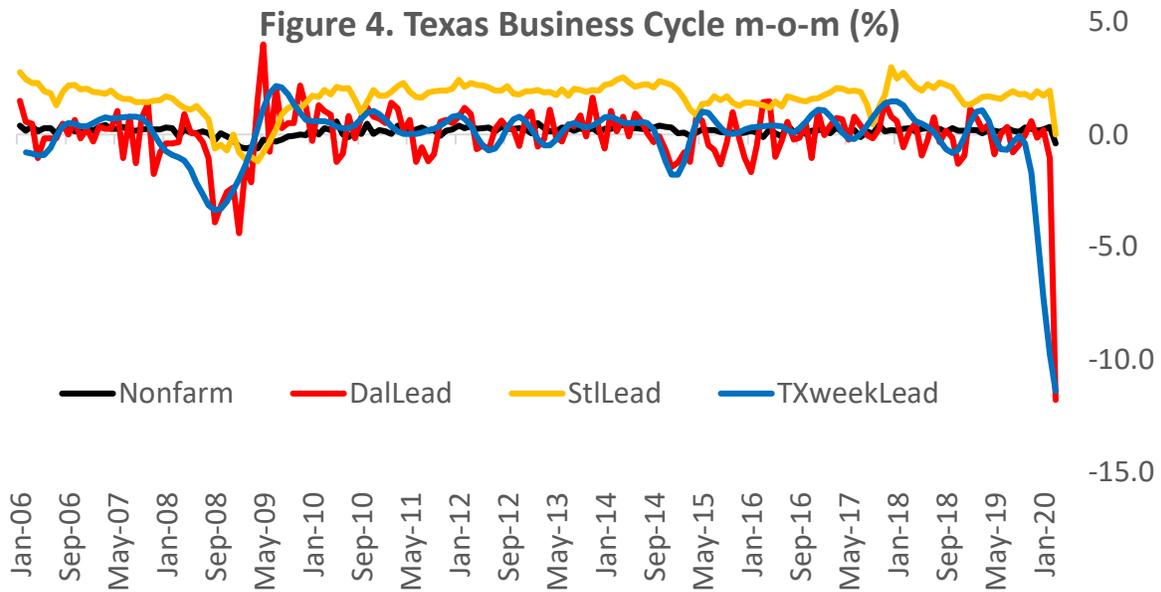
**Chronology of Texas Business Cycle**

|                              | Peak Date                     | Trough Date   | Months Contraction<br>Peak to Trough | Months Expansion<br>Trough to Peak |
|------------------------------|-------------------------------|---------------|--------------------------------------|------------------------------------|
| <b>Nonfarm Employment</b>    | August 2008<br>February 2020  | December 2009 | 17                                   | 123                                |
| <b>Dallas Fed Coincident</b> | August 2008                   | October 2009  | 15                                   | 126                                |
| <b>Dallas Fed Leading</b>    | October 2007<br>January 2020  | March 2009    | 18                                   | 131                                |
| <b>Texas Weekly Leading</b>  | October 2007<br>February 2020 | February 2009 | 17                                   | 133                                |

Source: Bureau of Labor Statistics, Dallas Federal Reserve and Texas Real Estate Research Center at Texas A&M University

The Texas weekly leading index signaled a directional change in October 2007, 11 months before the prolonged downturn in employment that started in August 2008. Similarly, it signaled a recovery turning point in February 2009, 11 months before employment turned toward recovery in December 2009.

In addition, it predicted turning points and duration of expansion and contraction more accurately than another institution’s leading indicator—the one produced by the St. Louis Federal Reserve (Figure 4).



Note: Seasonally adjusted.

Sources: Bureau of Labor Statistics, Dallas Federal Reserve, St. Louis Federal Reserve, and Texas Real Estate Research Center at Texas A&M University

Overall, the leading index is regarded as a good indicator to predict turning points in Texas employment, even leading both the Dallas Federal Reserve’s coincident and leading indicators for the state’s economy.

One major problem in evaluating the index was the short time period. For a more accurate evaluation of business cycle relationships, it’s best to study the relationships over many business cycles. Because the predictive ability of the leading index was evaluated over a short time, it’s possible that the relationship might not hold in the future. Thus, the leading index for economic activity will be best evaluated based on its ability to lead Texas employment in the future. ✦

---

Dr. Torres ([ltorres@recenter.tamu.edu](mailto:ltorres@recenter.tamu.edu)) is a research economist with the Texas Real Estate Research Center at Texas A&M University.