



Southwest Economy



COVID-19 Fuels Sudden, Surging Demand for Suburban Housing

PLUS

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President's Perspective

Rob Kaplan, president and CEO of the Dallas Fed, regularly speaks and writes on the factors that affect economic growth in the nation and Eleventh District. Here are some of his recent thoughts on key issues:

On the Outlook for Economic Growth

"[The U.S. economy] is still growing, but this growth is probably stalling. And the reason it is decelerating is primarily due to a resurgence in COVID-19 around the country. ... It is our view that the last part of the fourth quarter and certainly the first quarter [of 2021] are going to be very challenging in the United States, and growth is going to be decelerating and the rebound is going to be much more muted. The good news is that due to prospects for a vaccine, it is also our view that as we get into 2021, we are going to see GDP [gross domestic product] growth at or greater than 3.5 percent, well above trend growth."

2020 System Energy Conference Hosted by the Federal Reserve Banks of Dallas and Kansas City—Nov. 20, 2020

On the Appropriate Fed Response to the Resurgence of the Virus

"I do think it is critical that the 13.3 programs—these public market backstop programs and programs that support the Main Street Lending Program and PPP [Paycheck Protection Program]—continue beyond year-end. I think that is very important. I would continue our bond buying at the same pace. If we needed to, if this got bad enough, we could extend maturities, but I would not increase the size. I think there are tools that we have, and we are going to have to watch this [resurgence of the virus] very carefully."

Interview with David Westin on Bloomberg TV—Nov. 19, 2020

On the Future of the Energy Industry

"Scale is more important. Companies will be bigger. They will be more consolidated. They will be able to operate with lower costs. They are also going to incorporate environmental considerations, like sequestration, to produce in a way that emits less greenhouse gas. The industry will be alive and well, but there will be fewer players, and they will be bigger."

Council on Foreign Relations—Nov. 10, 2020

On the Need for Additional Fiscal Stimulus

"It wouldn't surprise me to see some extension of this fiscal stimulus sooner rather than later, because in this [COVID-19] resurgence, we have millions of people who are making ends meet based on the extension of this fiscal stimulus. If [this aid] isn't renewed, it won't just hurt them, it will hurt the entire economy."

Bloomberg's Future of Finance Event with Mike McKee—Nov. 10, 2020



COVID-19 Fuels Sudden, Surging Demand for Suburban Housing

By Laila Assanie and Yichen Su

ABSTRACT: Business interruption and social distancing mandates because of COVID-19 have disrupted what had been a period of sustained growth within city centers nationally and in Texas. The pandemic-related actions have helped propel a sudden, large shift from renting to homeownership and a concurrent movement to the suburbs and larger homes.

Before the COVID-19 pandemic began, large metro areas across the country experienced sustained robust growth, with their city centers increasingly popular among college-educated and high-income households.¹

The pandemic paused this long-term trend. As the health crisis took hold in March and intensified in April, stay-at-home orders and social distancing measures restricted homebuyers' mobility, prompting many sellers to step back. U.S. home sales subsequently dropped precipitously.

The sales decline was uneven, occurring disproportionately around big cities but less so in suburbs and smaller metros. This may have been partly driven by stricter and lengthier lockdowns in urban centers that closed businesses and prevented home showings. Even as the national housing market robustly rebounded beginning in June, sales near major metro centers continued underperforming the suburbs.

New listings simultaneously began soaring, indicating an increasing number of city-center homeowners looking to sell. Consistent with the spatially divergent trends in sales and listings, suburban housing inventory fell rapidly. This depletion of available units was indicative of surging demand and stood in contrast to the less-robust activity in city centers.

Months later, a steady level of inventory near city centers signals an ongoing demand shift from large urban centers toward the suburbs in the wake of the pandemic.

Texas Housing Demand Shift

This sudden demand shift from urban centers has been a nationwide phenomenon and the subject of a

recent paper by Sitian Liu and Yichen Su, which examined the impact of COVID-19 on decreased demand for housing in densely populated areas.²

The trend is particularly prominent in cities and states where the pandemic hit initially and where home prices were the least affordable. Though the virus did not initially surge in Texas until mid-June and home prices here are in line with the national average, the state also experienced a shift from urban centers.

In the first two months of 2020—just before the pandemic hit the U.S.—Texas home sales grew near city centers and in the suburbs (*Chart 1A*).³ When the pandemic arrived in March and April, sales dropped precipitously everywhere in the state due to stay-at-home orders and heightened uncertainty but fell disproportionately more near the city centers than the suburbs and urban outskirts.

The uneven decline was not solely driven by more stringent lockdown policies in city centers; new listings fell by a roughly similar magnitude in the urban centers as in the suburbs during the early months.

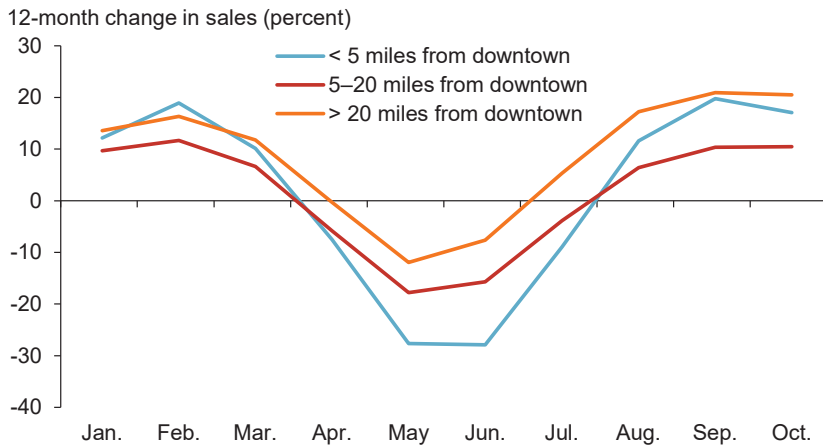
As lockdown policies eased and home sales partially recovered in June and July, new listings in city centers soared compared with the suburbs in Texas (*Chart 1B*). About that time, many Dallas Fed business contacts began reporting robust growth in new home sales activity in previously less-popular, far-flung locations.

The mounting new listings in urban centers likely reflected a growing number of residents looking to sell their homes. In August, new listings in urban centers were 16 percent higher than in August 2019, while those in the suburbs were flat to down.

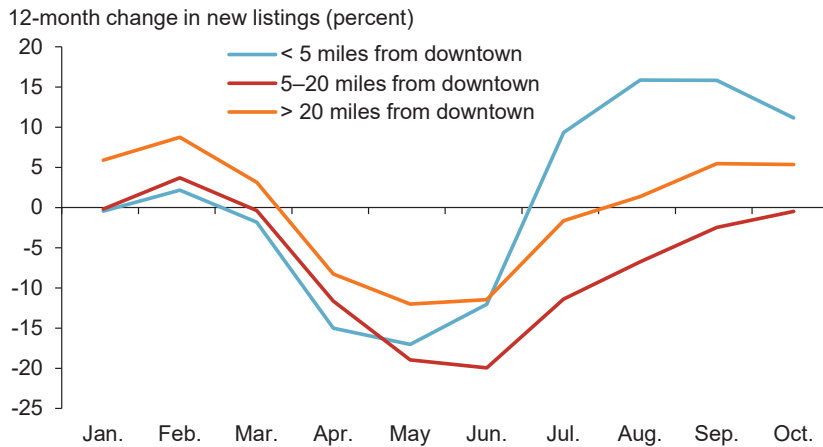
CHART
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**Home Sales Slow, Listings Rise in Texas City Centers;
Inventory Tumbles in Suburbs**

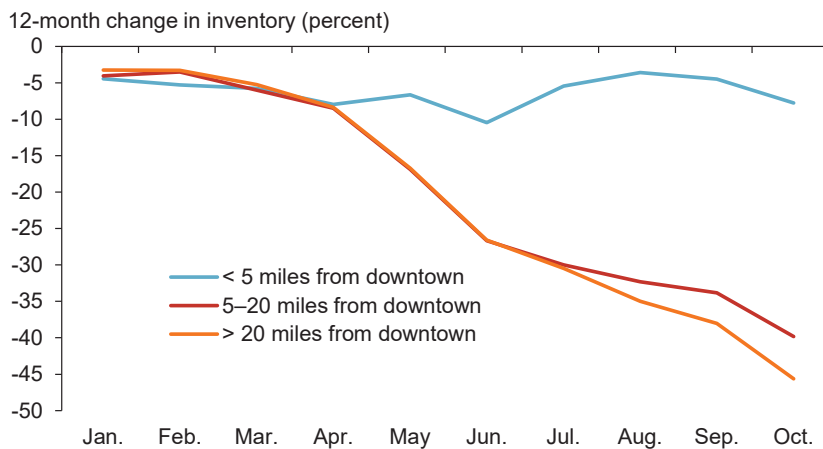
A. Sales Growth



B. New Listings Growth



C. Inventory Growth



NOTES: Chart 1A presents the average 12-month growth rate of home sales (2019–20) by three types of neighborhoods (as defined by ZIP code). ZIP-code-level reported monthly sales are calculated as the sum of sales during the referenced month and the two months prior. Chart 1B presents the average 12-month growth rate of new listings (2019–20) by three types of neighborhoods (as defined by ZIP code). Chart 1C presents the average 12-month growth rate of inventory (2019–20) by three types of neighborhoods (as defined by ZIP code). The sample in panels A–C includes the Houston, Dallas–Fort Worth, San Antonio, Austin and El Paso metro areas.

SOURCES: Redfin Data Center; Multiple Listing Service.

Home inventories evolved in a pattern consistent with sales and new listings (*Chart 1C*). In January and February, overall inventories modestly trailed prior-year levels, likely due to strong housing demand. In March and April, owing to a pandemic-driven pause in home sales and lack of new listings, inventories remained relatively steady. As lockdowns were lifted and new listings soared in late spring and early summer, inventory dropped quickly in the suburbs while falling more slowly in city centers.

Greater Suburban Attractiveness

Living in dense, centrally located neighborhoods typically provides residents with the convenience of short commutes and plentiful amenities—easy access to shopping, dining, entertainment and other social activities. This attraction is closely tied to working in downtown offices and accessing restaurants, cafes, and arts and recreational venues.

Pandemic-related physical distancing measures that closed or restricted capacity at nonessential businesses signaled a sudden shift toward working from home. While most nonessential businesses are currently operational in Texas, surveys suggest that the nation is seeing a long-term change in teleworking patterns.⁴

Some large technology firms have allowed employees to work from home permanently, and many others are considering allowing telework for a greater share of their employees than before COVID-19, thereby lessening ties to central locations.

This shift to working from home motivated more homebuyers to seek the larger spaces found in more suburban locations.

The Transition to Remote Working

Technology has enabled a large segment of the workforce to undertake remote operations. As a result, commuting to central workplaces in major metro business centers isn't required.^{5,6,7} With remote working rates expected to remain well above prepan-

demographic levels, demand for housing near these urban centers has declined.

Geolocation data from a large sample of mobile devices provided by SafeGraph Inc., a data aggregation firm, show total visits to business establishments by distance from city centers in Texas' five major metros.⁸ The data are normalized by establishing the January 2020 number of visits as a baseline.

Trips to business establishments dropped everywhere following the outbreak of COVID-19 in March. However, the decline was more pronounced in the city centers. Although overall traffic staged a recovery in June, traffic at establishments in city centers remained relatively depressed compared with the suburbs.

This partially reflected a large reduction of commuting trips to the central business districts of the major Texas metros coinciding with greater teleworking from home. Moreover, because of the prevalence of telework-compatible jobs in city center locations, trips there declined more than those to suburban destinations (*Chart 2*).⁹

Amenity Access Less Attractive

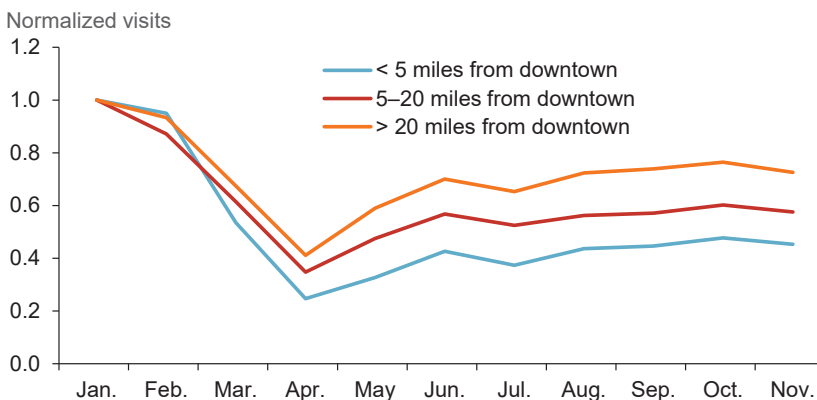
Another perk of living in central city neighborhoods is easy access to a great selection of restaurants, bars and other leisure amenities. Traffic to these amenities plummeted from mid-March through April with the lockdown and capacity restrictions.

Chart 3 shows the visiting trends of restaurants by distance to city centers. All amenity types—restaurants, gyms, grocery stores and parks—suffered a large drop in traffic, particularly those near city centers that only partially recovered as the pandemic continued.

The disproportionate drop in traffic to amenities in the city centers was partly the result of stringent lockdown policies and differing definitions of essential businesses in urban versus suburban counties. It also reflected elevated levels of pedestrian traffic in urban locations before the outbreak.

For instance, the Dallas and Houston mayors ordered the closure of various social establishments, and

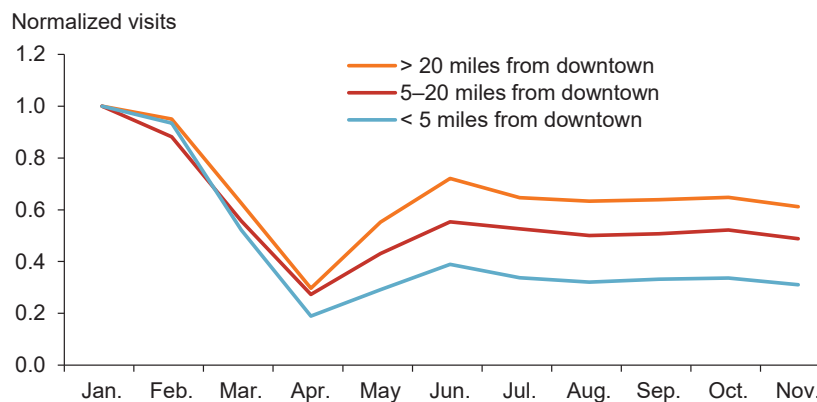
CHART 2 Visits to Offices Drop More Drastically Near City Centers



NOTES: The chart presents the number of visits to office establishments, defined as NAICS industry codes 51 (information), 52 (finance and insurance) and 54 (professional, scientific and technical services). The sample includes the Houston, Dallas–Fort Worth, San Antonio, Austin and El Paso metro areas. The chart is normalized to January levels.

SOURCE: SafeGraph point-of-interest data.

CHART 3 Visits to Restaurants Plunge in Pandemic; Recovery Sluggish in Urban Centers



NOTES: The chart presents the average number of visits to restaurants (NAICS code 722511) within 5 miles from downtown, 5–20 miles from downtown and more than 20 miles from downtown in each month of 2020, normalized by the number of visits in January 2020. The sample includes the Houston, Dallas–Fort Worth, San Antonio, Austin and El Paso metro areas.

SOURCE: SafeGraph point-of-interest data.

restaurants in Dallas and Harris counties were limited to drive-up service ahead of the statewide orders imposing similar restrictions.

While statewide shelter-in-place orders expired at the end of April, Austin and Travis County extended their stay-at-home orders beyond that date. Some of the largest urban counties in Texas also required residents to wear face coverings when in public in advance of a statewide directive.

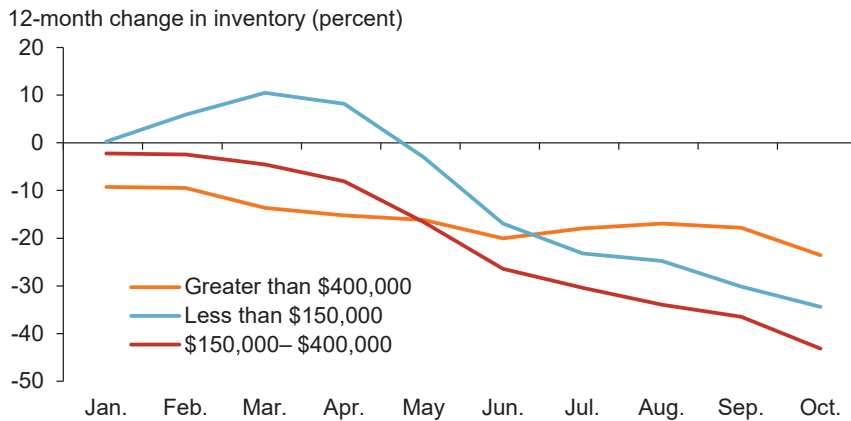
Additionally, more rigorous definitions of essential businesses in urban

locations meant that certain businesses such as car dealerships had to close in Dallas County but could remain open in other, mostly outlying areas of Dallas–Fort Worth.

The disproportionate decline in traffic to city locations also mirrored the absence of daily commuters who normally would have visited these establishments for dining and shopping. The recovery in visits to grocery stores and recreational establishments in city centers also lagged that of suburban locations, another indicator

**CHART
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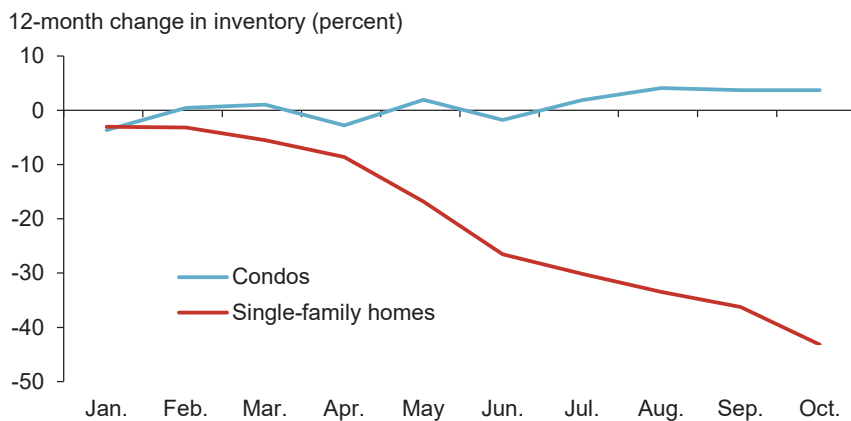
Inventory Declines the Most in More-Affordable Neighborhoods



NOTES: The chart shows the average 12-month growth rate of inventory (2019–20) by three types of neighborhoods as defined by ZIP code. The lines represent ZIP codes in which the pre-COVID median sales values are greater than \$400,000, \$150,000–400,000 or less than \$150,000. The sample includes the Houston, Dallas–Fort Worth, San Antonio, Austin and El Paso metro areas.
SOURCES: Redfin Data Center; Multiple Listing Service.

**CHART
5**

Supply of Condos Grows; Single-Family Home Inventory Falls



NOTE: The chart shows the average 12-month growth rate of inventory (number of homes on the market) in Texas reported in the Redfin Data Center in 2020.
SOURCES: Redfin Data Center; Multiple Listing Service.

of more cautious reopening policies in urban centers.

Neighborhoods endowed with a large number of amenities generally tend to command higher rents and home prices.¹⁰ As consumers hunkered down due to fear of infection amid commercial restrictions, high-priced homes with convenient access became less attractive and greater residential space became more appealing. These developments likely boosted demand

for housing in suburban locations where amenities may be fewer but homes are larger and more affordable.

Indeed, demand for homes across the U.S. sharply declined in places with a large concentration of amenities such as restaurants.¹¹

Single-Family Home Demand

With a record number of people working from home and students studying from home, the need for flex

space increased. Many builders note that buyers are looking for dedicated office and virtual school spaces in particular. This has increased demand for homes with more square footage in cheaper locations. Chart 4 shows inventory growth by neighborhoods’ pre-COVID home value. Inventory declines are more pronounced in areas with more-affordable homes.

Not only is housing demand shifting toward more affordable neighborhoods, but demand for single-family homes has surged relative to condominiums which, like apartments, generally have more communal spaces such as elevators. This is illustrated in a dramatic inventory decline for single-family homes versus condos (*Chart 5*).

Rental Market, Homeownership

A sudden, large shift from renting to homeownership has accompanied the movement to suburbs and larger homes. Historically low mortgage rates have likely accelerated the shift, particularly among millennials—a sizable share of whom are in their early to mid-30s or turned 30 this year, a time of family formation.

The current era of low rates, unlike previous periods, is characterized by lagging demand for condominiums, indicating that low mortgage rates alone aren’t driving surging homeownership.

Net absorption of apartment units in second quarter 2020 was weak, though demand recovered in the third quarter. This recovery was more pronounced in suburban locations than the urban core. Still, occupancy remained below year-ago levels and rents were flat to down in most major Texas markets in the third quarter (*Chart 6A*).

Meanwhile, Texas home prices rose 6.7 percent in third quarter 2020 from year-earlier levels, while U.S. prices increased 7.8 percent. Homeownership rates in Texas and the nation rose notably in second quarter 2020 (*Chart 6B*). The national two-quarter increase from the first to third quarter—2.1 percentage points—roughly equaled the four years of gains in the homeownership rate from 1997 to 2000. Rarely has an increase of major magnitude occurred

this rapidly during instances of declining and low mortgage rates.¹² The two-quarter gain was even larger for Texas, 6.2 percentage points.

Future of City Centers

The pace at which housing demand in city centers recovers depends on the trajectory of the pandemic and the public's willingness to visit crowded venues, including workplaces. If the pandemic drags on for an extended period, the city center housing market may continue underperforming relative to the suburbs.

The longer-term impact of the pandemic on the future of cities is more uncertain. The pandemic has introduced teleworking to professions that typically had not adopted it. As employers and employees adapt to distance-compatible formats of work, such arrangements could become a permanent option for many in the post-pandemic era.

Employers anticipate that 21 percent of their employees will work remotely after the pandemic, compared with 8.3 percent pre-COVID-19, according to the Dallas Fed's Texas Business Outlook Survey in August. If commuting to the office becomes a thing of the past for a sizable proportion of workers, it could depress housing demand near central business districts in the long run.

Still, the demand for leisure and consumption amenities will likely recover once the pandemic ends. Numerous research papers have shown that the prosperity of urban centers has increasingly been driven by the value of amenities there. As long as consumers' appetite for food, entertainment and services returns—which is likely to happen following the adoption of a safe and effective COVID-19 vaccine—activity and demand for housing in city centers will be poised for a recovery.

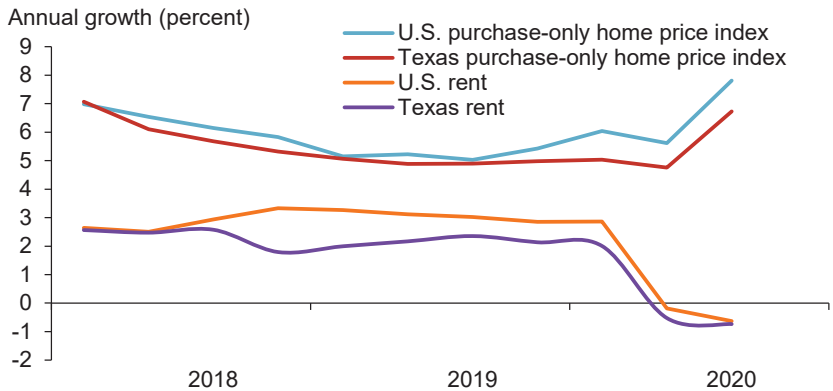
Assanie is a senior business economist in the Research Department at the Federal Reserve Bank of Dallas.

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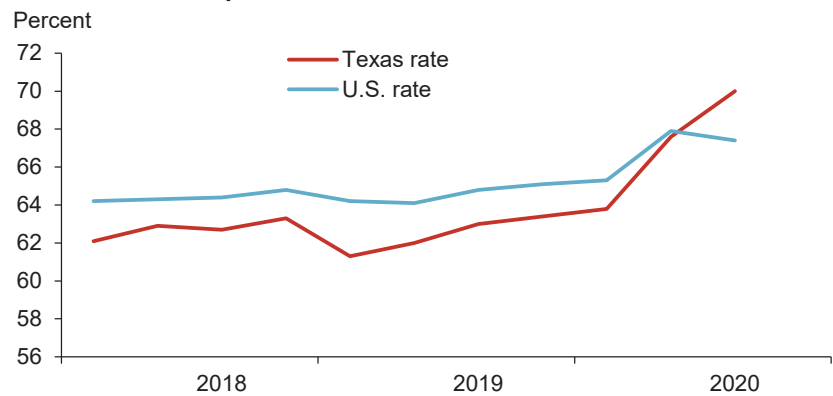
CHART 6

Consumers Shift from Renting to Homeownership

A. Home Price Growth and Rent Growth



B. Homeownership Rates



NOTE: Data are through third quarter 2020.

SOURCES: RealPage Inc.; Federal Housing Finance Agency; Census Bureau.

Notes

¹ See "Gentrification Transforming Neighborhoods in Big Texas Cities," by Yichen Su, Federal Reserve Bank of Dallas *Southwest Economy*, Fourth Quarter 2019.

² See "The Impact of the COVID-19 Pandemic on the Demand for Density: Evidence from the U.S. Housing Market," by Sitian Liu and Yichen Su, Federal Reserve Bank of Dallas Working Paper no. 2024, August 2020, www.dallasfed.org/-/media/documents/research/papers/2020/wp2024.pdf.

³ The metros included are Austin, Dallas–Fort Worth, El Paso, Houston and San Antonio. The home sales, new listings and inventory data are obtained from Redfin Data Center. Sales and new listings data for each month at ZIP code level is the three-month sum ended with the reported month. For example, the number of sales reported for January 2020 is the total sales ranging from Nov. 1, 2019, to Jan. 31, 2020.

⁴ See "What 12,000 Employees Have to Say About the Future of Remote Work," Boston Consulting Group,

Aug. 11, 2020, www.bcg.com/en-us/publications/2020/valuable-productivity-gains-covid-19, accessed Oct. 29, 2020, and "From Immediate Responses to Planning for the Reimagined Workplace," Conference Board, June 2020, <https://conference-board.org/pdf/download.cfm?masterProductID=20874>, accessed Oct. 29, 2020.

⁵ See "Work from Home After the COVID-19 Outbreak," by Alexander Bick, Adam Blandin and Karel Mertens, Federal Reserve Bank of Dallas, Working Paper no. 2017, July 2020, www.dallasfed.org/-/media/documents/research/papers/2020/wp2017r1.pdf.

⁶ See "Working from Home During a Pandemic: It's Not for Everyone," by Yichen Su, *Dallas Fed Economics* (blog), April 7, 2020, www.dallasfed.org/research/economics/2020/0407.

⁷ For information on how telework-compatible jobs are defined, see "How Many Jobs Can Be Done at Home?"

(Continued on the back page)

A Conversation with Bill Gilmer

Energy Woes to Weigh on Houston Recovery, Local Economist Says

Bill Gilmer is director of the Institute for Regional Forecasting at the University of Houston's Bauer College of Business. The institute monitors the Houston and Gulf Coast business cycle, analyzing the impact of oil markets, the national economy and global expansion. Gilmer was appointed as an inaugural energy fellow of the University of Houston in 2015 after serving 23 years at the Federal Reserve Bank of Dallas, where he retired as a senior economist and vice president.

Q. What's your assessment of the Houston economy?

Like everyplace else, Houston is in COVID shock. With COVID-19 hitting the Houston economy early in the year, the graph of economic activity looks like an upward-leaning fishing pole with the line hanging straight down. Houston lost 300,000 jobs in April, as much of the service sector went into lockdown. While the decline was broad based across industries, there are about nine sectors that are very sensitive to social distancing. These high-contact industries represent 45 percent of the Houston economy and 70 percent of the job loss.

The recovery of lost jobs has been pretty slow. Through September, about 45 percent of total jobs lost in the economy have come back, with the high-contact industries recovering about 55 percent of their job losses. Most of this recovery occurred in May and June. With the surge in COVID-19 during the summer, job growth has slowed, and I am a little afraid we will see a slow slog of growth going forward.

Q. Are you surprised Houston has not declined more, given that both upstream and downstream energy have performed so poorly?

First, let's talk about the downstream—which includes industries such as refining and petrochemicals. These plants are super-highly automated, and there are simply not many jobs in these plants. In 2015 and 2016, there was a collapse in the price of natural gas. All of a sudden, Texas was a cheap place for hydrocarbons, which is what is used to make plastics.

We had \$180 billion in U.S. plastics-related construction projects—and perhaps \$50 billion in Houston—which created lots of construction jobs on the east side of Houston. That building boom ended by 2018. But all of that time, while the boom in construction was going on, jobs in petrochemicals and refining were pretty stable.

In upstream oil and gas, we have been hit hard again. If you go back to 2014 and 2015, that was Houston's 1980s [energy collapse] moment. The fracking bust cost Houston 77,000 jobs in the upstream

energy sector. In 2014, Houston jobs in oil and gas peaked at almost the same number of jobs as in 1982.

Jobs collapsed at about the same pace in both periods. By 2018, only about 20,000 of the jobs lost had come back, and then we entered 2019 with many energy companies struggling to attract capital.

The credit crunch within the energy sector renewed the downward pressure on jobs, so by the time COVID-19 hit, the upstream energy sector in Houston was already very lean. We have lost 28,000 upstream energy jobs in Houston since the pandemic began, which is a lot but not near the hit as in 2015–16.

I am somewhat surprised that the Houston economy has not been hit harder than the current data show, but for the reasons just outlined, it is still a reasonable outcome. While Houston is a global center for oil and gas, it also has many industries tied to growth in the national economy.

By my estimates since the 1990s, about 60 percent of the growth in Houston has been driven by the national economy, about 30 percent by the oil industry and about 10 percent by longer-term factors that drive the Texas economy as a whole. These shares have generally been stable over this time.

Q. What is the outlook for commercial real estate in Houston?

It's pretty dreary. There was a lot of commercial building during the boom, from 2010 to 2014, on the premise of continued strong energy markets. In 2014, Houston added about 8 million square feet of space. When the boom ended, despite the job loss in energy, Houston added an additional 12.9 million square feet in 2015 and 6 million more in 2016.

The office vacancy rate was 10.3 percent in 2014 and rose to 20.2 percent by 2017 and basically has been stuck at around 20 percent until this year when COVID and the weakness in energy hit. Now, it is near 23 percent. I have no idea how we are going to fill that office space, and it's certainly not going to happen



► *By my estimates since the 1990s, about 60 percent of the growth in Houston has been driven by the national economy, about 30 percent by the oil industry and about 10 percent by longer-term factors that drive the Texas economy as a whole.*

in a short amount of time. It's 20 years of overhang. We had a similar overhang in the 1980s; eventually space became so cheap companies bought it up and moved into Houston.

Moving to retail space, brick-and-mortar retail in Houston has been incredibly cautious over the past few years with all of the online growth. Almost all of the retail development has been in the Grand Parkway [a ring, running from west to north suburban Houston] following new residential expansion in this area. It's a safe bet.

Industrial has an east-west split. The east side has seen a boom due to the petrochemical expansion from 2015 to 2017—essentially making plastic pellets that are later used by firms to make plastic products. Warehouses were built where these pellets were bagged, stored and put in containers to be shipped off around the world.

On the west side of town, the history of moving goods from China to the Houston area is that they are shipped through [the ports of] LA/Long Beach then moved by train to Fort Worth, where they are broken down for distribution throughout this entire region, including Houston.

Over the last several years, there has been a lot of focus by e-commerce on the breakdown and distribution of these goods once they arrive in Houston. Lots of warehouses have been built at major highway intersections to speed distribution within the metro area. Industrial occupancy and rents held up until about a year ago.

The problem is that we have continued building even as demand has

dropped off. This year, about 21 million square feet of industrial space was brought onto the market, and only about 8 million square feet was absorbed. There is still about 16 million square feet in the pipeline.

Q. The Port of Houston is a major feature of Houston's economic profile. How does the more-pessimistic outlook for U.S. oil and gas production affect the trade through the port?

It is the second-largest seaport in the U.S. based on tonnage—almost all of that tonnage has been either imports or exports of oil and gas or exports of oil and gas products. Beginning around 2016, petrochemical exports were the main source of growth. The expansion phase wound down recently; the growth shifted to oil exports after the [President Jimmy] Carter-era ban on oil exports was lifted in 2015.

One area that is apart from the energy sector is the containerized cargo business. The Port of Houston is No. 6 in container traffic. LA/Long Beach is by far the leader, with about one-third of all the container traffic, versus Houston, with 6.3 percent of national volume.

With the winding down of the boom in petrochemical exports and a recent decline in oil demand due to COVID, the short-term outlook for the port is not good. On the container side, however, labor issues and strikes at the ports of LA/Long Beach have pushed some shipments to Houston. For example, Walmart put in a huge facility in the Port

of Houston strictly as a hedge against problems in LA/Long Beach.

Q. What is your outlook for the Houston economy for 2021?

COVID has caused a very mixed bag of economic indicators, with many service industries hit hard, but overall consumer spending is holding up. The situation is due to large government support payments that don't directly impact GDP (gross domestic product) growth but do impact personal income, which has continued to grow this year.

If I assume that the COVID crisis will essentially be over by the middle of 2021, with widespread vaccination available by mid-year, we will be recovering like we have done in the past following a moderate recession.

Overall, relief from social distancing and public health orders should allow the net decline [in jobs] from February 2020 to June 2021 to be on pace with most recessions since World War II.

In the middle of 2021, Houston jobs will likely be down about 3 percent from pre-COVID, and we will progress forward in recovery over the next five quarters. Not a great spot to be in, but we can deal with it. Houston will initially grow slowly in the post-COVID period because the energy sector will not likely come back until a year after the recovery begins. Then, 2022 should be a big year for job gains in Houston, slowly moving back to trend after that.

Pandemic Unemployment Benefits Provided Much-Needed Fiscal Support

By Anil Kumar

ABSTRACT: Recent analysis suggests that enhanced unemployment insurance benefits implemented in response to the COVID-19 pandemic have helped buttress spending among the unemployed and supported state and local economies. Their economic impact in Texas relative to the nation has been constrained by lower levels of participation in the unemployment aid programs and more modest per-capita payments from them.

Notable among the unprecedented federal stimulus measures implemented in response to COVID-19 was an additional \$600 per week in jobless benefits for furloughed and laid-off workers.

The supplemental payment came on top of existing unemployment payments, with the total amount per recipient varying widely across states, according to U.S. Department of Labor data.

The additional funds were contained in the Coronavirus Aid, Relief and Economic Security (CARES) Act and its Federal Pandemic Unemployment Compensation (FPUC) program.

In per-capita terms, Texas disbursed a smaller amount than the national average through July, reflecting both the state's lower unemployment rate and a smaller share of the labor force filing unemployment insurance claims. Consequently, Texas received relatively less fiscal stimulus from the FPUC program than many other states.

Unprecedented Fiscal Stimulus

As state and local governments across the U.S. issued stay-at-home orders in response to the COVID-19 pandemic, the resulting shutdown and associated plunge in mobility led to a historic contraction in economic activity; this contributed to unprecedented job losses and soaring unemployment.

Texas lost 1.3 million jobs in April, as payroll employment contracted at a historic pace of nearly 11.0 percent, and the unemployment rate reached 13.5 percent. Contraction at the national level was even more pronounced; U.S. employment plunged 13.8 percent in April and the unemployment rate rose to 14.7 percent.

To limit the economic fallout, Congress passed the CARES Act, a package of unprecedented relief measures. In addition to providing loans to struggling businesses and funding for public health measures to contain the pandemic, the \$2 trillion CARES Act economic package included \$290 billion in stimulus checks sent directly to taxpayers and an additional \$260 billion in federal funding to expand unemployment insurance benefits.

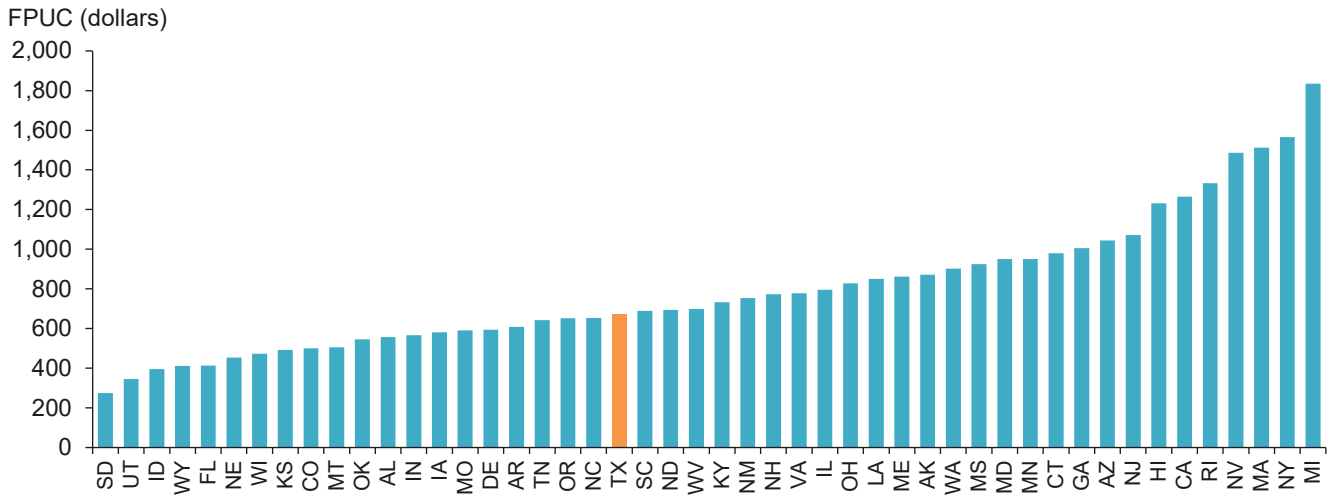
Most importantly, the CARES Act created the FPUC program to substantially increase benefit amounts under the existing unemployment insurance system—a program providing benefits designed to replace roughly 50 percent of past wages for eligible recipients.

Regular state benefits are capped, and maximum weekly benefit amounts vary widely across states, ranging from \$235 in Mississippi to \$823 in Massachusetts. Regular weekly state unemployment insurance benefits in Texas are capped at \$521.¹ Regular state benefits last up to 26 weeks in most states. An extended benefits program, funded equally by the state and the federal governments, provides benefits for an additional 13 to 20 weeks in states facing high unemployment.

It is widely believed that, along with other stimulus measures in the CARES Act, the additional weekly \$600 unemployment payments threw a lifeline to an economy in freefall as the pandemic struck. Unlike regular state unemployment insurance payments, which are tied to prior wages, FPUC benefits were a monthly lump sum to top up regular benefits. These were, therefore, especially generous to low-wage workers who needed the most help.

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Texas Lags Many States in Per-Capita Federal Pandemic Unemployment Compensation



NOTE: Data show Federal Pandemic Unemployment Compensation (FPUC) funds divided by civilian population, age 16 years and older.
SOURCES: Department of Labor's Unemployment Insurance Financial Transaction Summary accessed on Oct. 19, 2020; author's calculations.

The median replacement rates from jobless benefits with FPUC rose to 153 percent in Texas—substantially higher than the average replacement rate of 52 percent from the regular state unemployment insurance program.²

Receiving Less Per Capita

Benefit payments through the FPUC program differed widely across states, U.S. Department of Labor data show.³ Texas received nearly \$15 billion of the \$224 billion the federal government sent to states, based on available data. Per-capita FPUC payments through July in Texas were \$675—25 percent lower than the national average of \$900.

Per-capita benefit payments ranged from \$275 in South Dakota to \$1,834 in Michigan, with Texas among the bottom half of the states ranked by the size of per-capita federal assistance through FPUC (*Chart 1*). The wide variation in FPUC payments per-capita reflects differences in the severity of the downturn across states. States with higher unemployment received more federal funding and made more payments to jobless recipients.

Besides supplementing weekly unemployment benefits under the regular state program, the FPUC program also

extended the \$600 additional payments to beneficiaries of two other programs the CARES Act created to expand eligibility and extend benefit duration.

The Pandemic Emergency Unemployment Compensation program, which expires at year-end, allowed 13 additional weeks of unemployment benefits for individuals exhausting their regular state benefits.⁴ Counting the total number of weeks under regular and special pandemic programs, Texans can receive jobless benefits for up to 59 weeks.

The CARES Act also created the Pandemic Unemployment Assistance program, which expanded eligibility for unemployment insurance benefits to the self-employed, including independent contractors and gig economy workers and those with limited work history who typically would not qualify for assistance. The program provides benefits to these individuals for up to 39 weeks until year-end.

Of the 1.12 million Texans claiming jobless benefits in the week ended Sept. 26, nearly 72 percent received benefits under the regular state program; the Pandemic Unemployment Assistance program accounted for 26 percent of total claimants and the Pandemic Emergency Unemployment

Compensation program was responsible for 3 percent.

Fewer Jobless in Texas

Lower FPUC payments in Texas were for the most part due to the state's lower unemployment rate relative to the nation. Not surprisingly, Texas also consistently had a lower share of the labor force receiving jobless benefits. Counting gig workers and other self-employed, who typically do not qualify but were newly eligible, the Texas-U.S. gap in the share of labor force receiving jobless benefits widened, suggesting that a relatively smaller share of such workers received benefits in Texas.

To be sure, Texas has fewer workers receiving jobless benefits relative to the nation because the unemployment rate did not rise as much. However, even among the unemployed, fewer in Texas received jobless benefits (*Chart 2*).

Counting just the insured unemployed under regular state programs, the reciprocity rate jumped during the most recent downturn in both Texas and the U.S., thanks to more-generous benefits and expanded coverage with few or no job search requirements. Average reciprocity rates from April to July remained slightly lower in Texas, though the gap relative to the nation

narrowed significantly when compared with the Great Recession. In fact, Texas' recipiency rate in June and July exceeded the national rate.

Nonetheless, including claims filed under the program for the self-employed, Texas' recipiency rate continued to lag the nation by a wide margin. Notably, including the claims under the program for independent contractors and gig workers, total claims exceeded the number of unemployed. This was because like regular recipients, many of the contractor recipients may be partially unemployed or out of the labor force due to reasons related to the pandemic and, thus, aren't counted among the unemployed.

Rates Across States

Unemployment insurance recipiency rates can differ across states for many reasons. First, some who are eligible do not apply for benefits. Second, not all unemployed are eligible; only those who lose jobs through no fault of their own qualify for benefits. Those simply quitting jobs or getting fired are ineligible.

Finally, to be eligible, the unemployed must also have worked and

earned sufficient wages prior to their last job before filing an unemployment claim. Workers also must be available to work and actively looking for a job in order to remain eligible. However, several states including Texas waived work search requirements during the pandemic.

Like most states, multiple factors limit eligibility in Texas. For example, workers applying for benefits must have wages in at least two quarters of the base period, which consists of four of the last five quarters before filing an application.

To qualify, an applicant must earn at least \$2,516 in the base period. Partially employed workers in Texas still on the job but whose hours have been cut must earn no more than 125 percent of the weekly benefit amount calculated, assuming total unemployment.

Bureau of Labor Statistics 2018 data on the characteristics of unemployment insurance recipients show that the take-up rate is lower for nonunion workers, younger workers and those without a college degree. A higher prevalence of all three of these characteristics in Texas relative to the U.S. also contributes to lower unemployment insurance recipiency rates in Texas.⁵

Unemployment Benefits, Cost

Fewer unemployed individuals receiving jobless benefits may be desirable if the states are paying for those benefits, particularly if the labor market is healthy and the economy is operating near full employment. Prior research indicates that overly generous unemployment benefits can damp job search efforts and contribute to higher unemployment and longer jobless spells by raising a worker's asking wage at which job offers would be worth accepting.

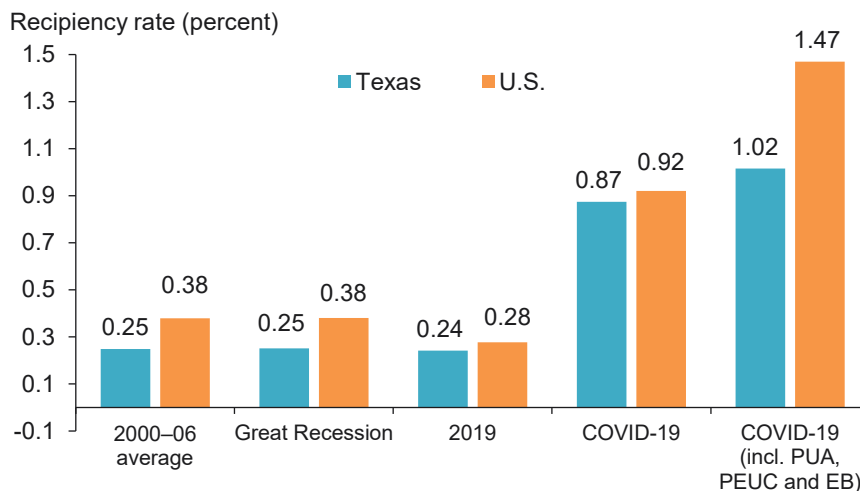
With many workers unwilling to accept job offers and expecting higher wages, firms can face difficulty hiring and filling job vacancies. Some businesses responding to special questions from the Texas Business Outlook Surveys cited generous unemployment benefits as an impediment to recalling furloughed workers when the economy reopened in the state after COVID-19 stay-at-home orders expired April 30.

While the moral hazard of reduced job search effort could be important when jobs are plentiful, it is less of a concern when the economy is in the doldrums. Those additional unemployment benefits from the FPUC program likely prevented an even-steeper drop in consumer spending by providing much-needed liquidity to unemployed individuals when there were few available jobs.

Plotting the correlation between a change in credit card spending from March to July and per-capita FPUC payments, Chart 3 shows that states receiving higher per-capita FPUC funds, such as Michigan and Massachusetts, also tended to experience smaller drops in overall credit card spending. In fact, credit card spending from March to July rose in high FPUC states. On the other hand, credit card spending fell off sharply in low FPUC states, such as South Dakota and Utah.

The correlation between FPUC payments and credit card spending is even stronger among low-income individuals. The possibility that FPUC payments boosted overall spending underscores their importance as a source of fiscal stimulus to states.

CHART 2 Texas Trails U.S. in Unemployment Insurance Recipiency Rate

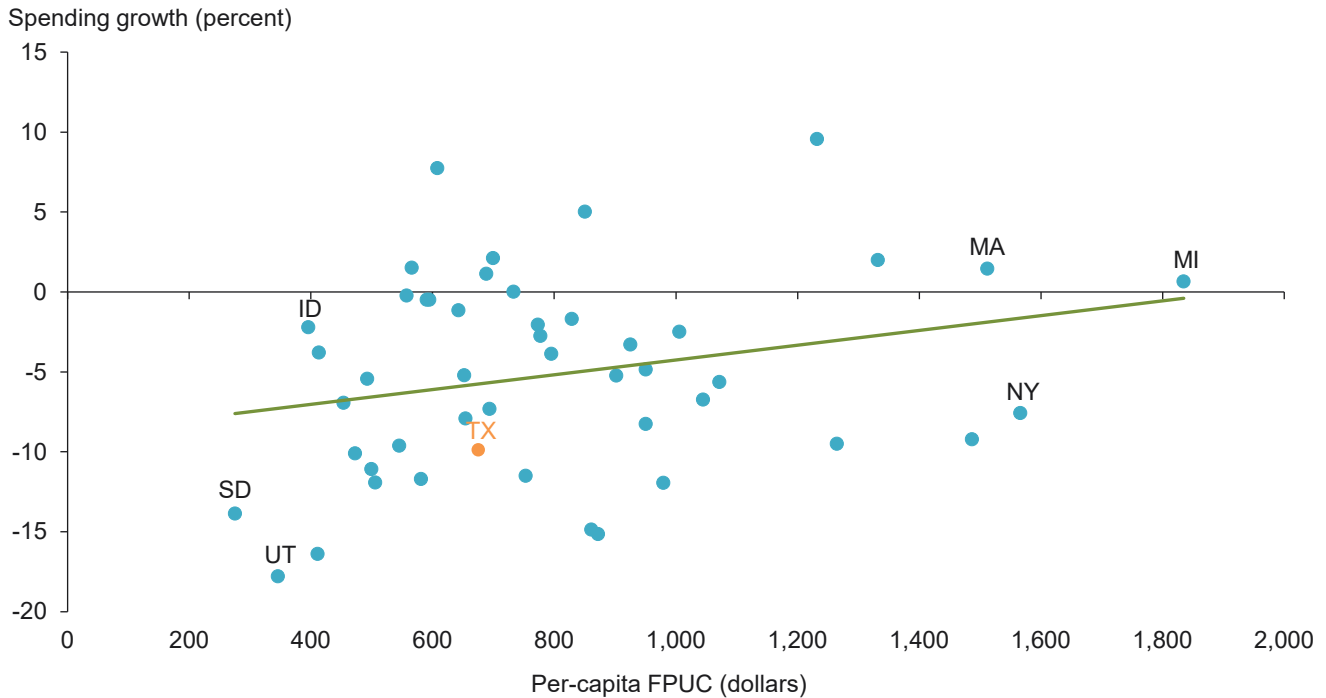


NOTES: The COVID-19 period is April to July 2020. Recipiency rates for the COVID-19 period are calculated by dividing weeks of continued claims in the week containing the 19th of each month by the number unemployed for that month and then averaging the monthly rates. PUA is Pandemic Unemployment Assistance; PEUC is Pandemic Emergency Unemployment Compensation, which extends benefits 13 weeks; EB is Extended Benefits, which provides 20 additional weeks after other program benefits have been exhausted.

SOURCES: Department of Labor; author's calculations.

CHART
3

Credit Card Spending Growth Correlates with Per-Capita Pandemic Unemployment Compensation



NOTES: FPUC is the Federal Pandemic Unemployment Compensation program. Spending growth is calculated as the change in spending from March 15 to July 15 as a percent of January spending. Data are accessed from <https://github.com/OpportunityInsights/EconomicTracker> on Oct. 19, 2020. Top and bottom three states are labeled along with Texas. SOURCES: Affinity Solutions; tracktherecovery.org; Department of Labor's Unemployment Insurance Financial Transaction Summary accessed on Oct. 19, 2020; author's calculations.

A positive effect on local spending also likely helped alleviate a potentially sharper decline in sales tax revenues. Recent evidence drawn from the Great Recession suggests that more-generous unemployment insurance benefits helped reduce delinquency rates among the unemployed, prevented foreclosures and contributed to housing market stability during the last downturn.⁶ Thus, the aggregate economic stabilization benefits of FPUC payments potentially exceed the direct benefits to the unemployed.

Thanks to such positive spillovers, the FPUC program helped kick-start the recovery as early as May, though the road to full recovery remains long and bumpy. As of September, Texas employment remained 6.6 percent below its February level, and the unemployment rate was 8.3 percent—a rate last seen during the Great Recession.

Meanwhile, the \$600 FPUC payments ended on July 31, and Congress has been unable to agree on an

economic relief package to restore additional benefits. Executive action from the president authorized \$300 in additional benefits drawn from \$44 billion originally earmarked for federal disaster relief funding. This stop-gap measure was expected to provide relief for no more than six weeks. The \$300 benefit ended in Texas on Sept. 5, potentially slowing the pace of the economic recovery from COVID-19.

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Notes

¹ A handful of states, mainly in the south, end state benefits earlier; Florida and North Carolina have the shortest duration of 12 weeks. Considering both the maximum weekly benefit amount and maximum number of weeks for which benefits are provided, the maximum possible benefit in a period of unemployment ranges from \$3,300 in Florida to \$21,398 in Massachusetts, with Texas at \$13,546.

² See “U.S. Unemployment Insurance Replacement Rates During the Pandemic,” by Peter Ganong, Pascal J. Noel and Joseph S. Vavra, National Bureau of Economic Research, Working Paper no. 27216, May 2020.

³ Because Pennsylvania and Vermont had incomplete data for July and the District of Columbia was an outlier, analysis was restricted to 48 states.

⁴ The Pandemic Emergency Unemployment Compensation program is similar in spirit to Emergency Unemployment Compensation programs created by Congress during times of previous national recessions to extend expiring regular unemployment benefits. The last such emergency program was in response to the Great Recession in 2008 and expired in 2013 after multiple extensions.

⁵ Higher prevalence of undocumented workers in Texas who count among the unemployed but are not eligible for unemployment insurance benefits also contributes to a lower reciprocity rate.

⁶ See “Unemployment Insurance as a Housing Market Stabilizer,” by Joanne W. Hsu, David A. Matsa and Brian T. Melzer, *American Economic Review*, vol. 108, no. 1, 2018, pp. 49–81.

Lower U.S. Crude Oil Production Decreases Output, Raises Price of Natural Gas

By Jesse Thompson and Camila Holm

Natural gas futures plummeted to a historic low in June 2020 only to rebound by late October, with prices more than doubling to \$3 per million British thermal units (MMBtu). The main reason for the rebound: a decline in natural gas production from oil wells.

The natural gas market is largely a domestic one. So, unlike oil, which is more of a global commodity, gas prices track domestic supply and demand. With the shale boom, rising gas production in the 2010s depressed natural gas prices to less than half their prerecession levels of the mid-2000s.

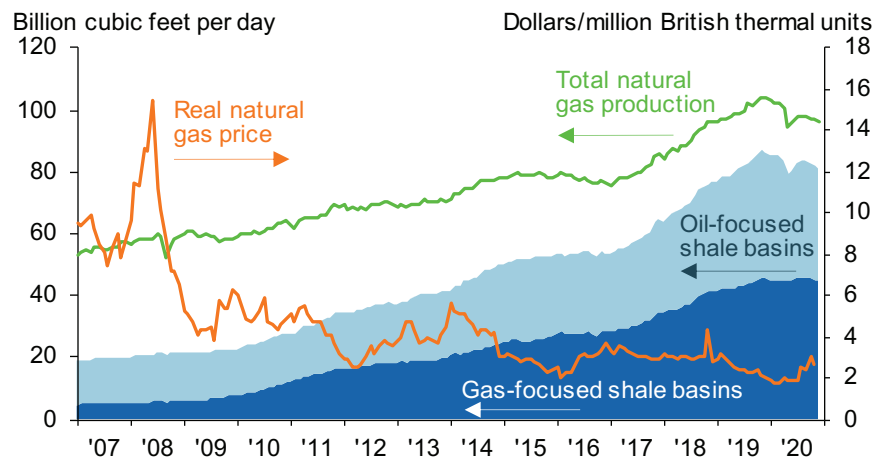
Total natural gas production reached 104.3 billion cubic feet per day (bcf/d) in December 2019, up from nearly 60 bcf/d a decade earlier (*Chart 1*). This rise came from wells intended to mainly produce gas and from those targeting oil but which—like bubbles of carbonation released when opening a bottle of soda—produce gas.

Surging production the past decade drove a boom in pipeline gas exports to Mexico and Canada and increased exports of liquefied natural gas, which peaked near 7.9 bcf/d in March 2020. Additionally, natural gas production substantially lowered energy and materials costs for the petrochemicals industry and other domestic users. It also helped drive down U.S. carbon dioxide emissions by displacing coal from the mix of fuels used to generate electricity.

The Henry Hub gas price, considered the U.S. benchmark, averaged a meager \$2.56 per MMBtu in 2019 as new supplies swamped demand. A mild 2019–20 winter left domestic natural gas inventories near a three-year high in February 2020.

A sharp economic contraction and diminished global demand for transportation followed the onset of the COVID-19 pandemic in March 2020, as

CHART 1 Natural Gas Prices Rise as Associated Production Falls



NOTES: Shale gas production data comes from the Drilling Productivity Report. "Real natural gas price" is Henry Hub adjusted for inflation and seasonality. Total natural gas production data after September 2020 are projections from the November Short-term Energy Outlook. Data and projections are subject to revision.

SOURCES: Bureau of Labor Statistics; Commodity Market Exchange; Energy Information Administration.

governments ordered lockdowns and consumers engaged in social distancing. Consumption of gasoline and other energy liquids fell 17 percent in the second quarter from year-end 2019 levels.

Henry Hub natural gas reached an inflation-adjusted historic low average price of \$1.60 per MMBtu in June, as natural gas exports and consumption by power and industrial sectors declined. U.S. oil producers were even forced to shut in crude production as spare storage capacity for unwanted crude evaporated. The number of rigs drilling for oil contracted more than 70 percent from March to June, and the number of active frac crews—teams that bring drilled wells into production—fell 87 percent. Natural gas output fell in tandem.

Output began to return in June when shut-in wells were turned back on. That process was largely completed by late summer, but declining productivity from older wells (shale output can drop by more than 70 percent in a well's first

year) kept U.S. oil and gas production below prepandemic levels. Gas from oil-focused shale basins fell from 40.6 bcf/d before the pandemic to 37.4 bcf/d in October, roughly 64 percent of the overall decline in U.S. gas. In contrast, production from gas-focused shale basins increased slightly.

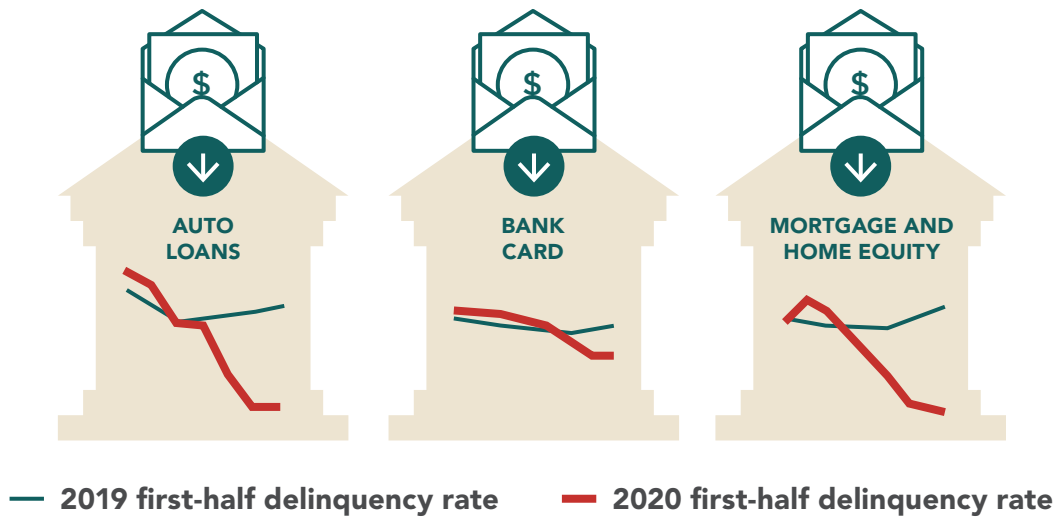
The Energy Information Administration and most industry analysts project U.S. oil production to be little changed or decline slightly through the end of 2021. Natural gas production from oil wells will likely follow.

With the winter heating season approaching and expected lower U.S. gas production, natural gas futures rose above \$3 per MMBtu at the end of October—still far below preshale levels. Subsequent gas price drops in early December—following upticks in oil well completions and oil price futures—signal that U.S. natural gas fortunes are inversely tied to expected shale oil output for now.


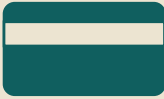

Loan Delinquencies Start to Climb After Falling with Stimulus and Relief

Design: Olu Eseyin; Content: Wenhua Di, Carlee Crocker

COVID-19 stimulus and loan relief helped Texas borrowers avoid falling behind on loan payments in 2020's second quarter.



However, as fiscal aid and loan relief started to decrease, some delinquency rates ticked up in Texas.

			
DELINQUENCY RATES IN JULY	1.8%	1.0%	0.9%
DELINQUENCY RATES IN OCTOBER	2.1%	1.3%	0.9%
ESTIMATED SHARE OF DEBT STILL BENEFITING FROM LOAN RELIEF NATIONWIDE*	4%	3%	7%

*Debt balances subject to pandemic relief have declined since June but as of October were still more than double the March level for all types of loans.

NOTES: Delinquencies here are loans past due for 30 to 89 days and do not include serious delinquencies. Equifax considers loans in accommodation to be subject to various forms of relief, including deferral, forbearance, modification, partial payment or without a scheduled payment. Federal student loan payments are suspended until Jan. 31, 2021. Survey data suggest that consumers receiving stimulus money used 35 percent of the proceeds to pay down debt.

SOURCES: Federal Reserve Bank of New York Consumer Credit Panel/Equifax; Federal Reserve Bank of New York Survey of Consumer Expectations; Equifax Credit Trends.

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COVID-19 Fuels Sudden, Surging Demand for Suburban Housing

(Continued from page 7)

by Jonathon I. Dingel and Brent Neiman, National Bureau of Economic Research, NBER Working Paper no. 26948, www.nber.org/papers/w26948. Both methods yield the same conclusion that central business districts contain a much larger share of telework-compatible jobs. See note 2.
⁸ Since the SafeGraph dataset tracks the movement of mobile devices, not people themselves, the accuracy of visitation patterns depends on how often people carry their devices.

⁹ We define offices as establishments classified with

NAICS industry codes 51 (information), 52 (finance and insurance) and 54 (professional, scientific and technical services).

¹⁰ See "The Rising Value of Time and the Origin of Urban Gentrification," by Yichen Su, Federal Reserve Bank of Dallas Working Paper no. 1913, October 2019. Also see "Urban Revival in America," by Victor Couture and Jessie Handbury, *Journal of Urban Economics*, vol. 119, September 2020, www.sciencedirect.com/science/article/pii/S0094119020300383, and "The Determinants and

Welfare Implications of U.S. Workers' Diverging Location Choices by Skill: 1980–2000," by Rebecca Diamond, *American Economic Review*, vol. 106, no. 2, 2016, www.aeaweb.org/articles?id=10.1257/aer.20131706.

¹¹ See note 2.

¹² Some doubt may be cast on the validity of the magnitude given that the pandemic might skew the sample of survey respondents, but a dramatic homeownership increase is apparent in the data.



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