The Great Lockdown

- Crisis like no other. Severity. Uncertainty surrounding duration, impact.

- Texas Weekly Leading Index signals uptick in economic activity
  ✓ However, index still indicates recession in future.
The Great Lockdown

Texas Weekly Leading Indicator
Index 01/07/2006=100

Note: Seasonally Adjusted
Source: Real Estate Center at Texas A&M University
The Great Lockdown

Texas Weekly Leading Indicator
Jan2006=100

Note: Seasonally Adjusted
Source: Real Estate Center at Texas A&M University
## Number of jobs (thousand) gained and lost during COVID-19 pandemic

<table>
<thead>
<tr>
<th>Period</th>
<th>U.S.</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-Apr 20</td>
<td>-22,160</td>
<td>-1,412</td>
</tr>
<tr>
<td>May - Jun 20</td>
<td>7,499</td>
<td>475</td>
</tr>
<tr>
<td>Net gain/lost</td>
<td>-14,661</td>
<td>-937</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics and Real Estate Center at Texas A&M University
## Pandemic impact on economy

### Number of Initial Unemployment Claims

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 21 - Aug 15</td>
<td>57,389,948</td>
<td>3,273,127</td>
</tr>
</tbody>
</table>

Note: Seasonally Adjusted

Source: Texas Workforce Commission and Real Estate Center at Texas A&M University
Pandemic impact on economy

Unemployment Rate (%)

- U.S.
- Texas

Jan-20: 3.6 (U.S.), 3.5 (Texas)
Feb-20: 3.5 (U.S.), 3.5 (Texas)
Mar-20: 4.4 (U.S.), 5.1 (Texas)
Apr-20: 14.7 (U.S.), 13.5 (Texas)
May-20: 13.3 (U.S.), 13.0 (Texas)
Jun-20: 11.1 (U.S.), 8.6 (Texas)

Note: Seasonally Adjusted
Source: Real Estate Center at Texas A&M University
Pandemic impact on economy

Texas Employment by Sector Jun-20
(Year-over-Year and Quarter-over-Quarter Annualized Percent)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Qtr-over-Qtr Ann. (3MMA)</th>
<th>Year-over-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nonfarm (100%)</td>
<td>-29.9</td>
<td>-5.3</td>
</tr>
<tr>
<td>Trade/Trans/Utilities (20%)</td>
<td>-22.3</td>
<td>-3.2</td>
</tr>
<tr>
<td>Government (16%)</td>
<td>-14.3</td>
<td>-4.1</td>
</tr>
<tr>
<td>Prof/Business Svcs (14%)</td>
<td>-22.3</td>
<td>-2.7</td>
</tr>
<tr>
<td>Education/Health Svcs (14%)</td>
<td>-27.5</td>
<td>-4.2</td>
</tr>
<tr>
<td>Leisure/Hospitality (10%)</td>
<td>-72.4</td>
<td></td>
</tr>
<tr>
<td>Manufacturing (7%)</td>
<td>-15.5</td>
<td>-4.0</td>
</tr>
<tr>
<td>Financial Activities (7%)</td>
<td>-16.3</td>
<td>-6.9</td>
</tr>
<tr>
<td>Construction (6%)</td>
<td>-26.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Other Services (3%)</td>
<td>-49.0</td>
<td>-3.6</td>
</tr>
<tr>
<td>Mining &amp; Logging (2%)</td>
<td>-46.1</td>
<td>-8.2</td>
</tr>
<tr>
<td>Information (2%)</td>
<td>-29.7</td>
<td>-8.2</td>
</tr>
</tbody>
</table>

Note: Seasonally adjusted.
Pandemic impact on economy

Texas Production of Crude Oil and Rig Count
(Number of rigs, Millions of barrels per day)

- Production of Crude Oil (Right Axis)
- Number of Operating Rigs

Note: Seasonally Adjusted
Source: Real Estate Center at Texas A&M University
Pandemic impact on economy

Crude Oil and Natural Gas Prices
($/Barrel, $/million BTU)

Note: Seasonally Adjusted
Source: Real Estate Center at Texas A&M University
Road to recovery depends on health outcomes

Pandemic impact on residential, commercial development

- Longer crisis persists, more likely to see transformative, lasting changes in behavior.
- Difficult to change behavior if it has a short-run impact.
- Structural change takes time.
Pandemic impact on residential, commercial development

- COVID-19 accelerated changes already prevalent:
  - ✔ Working from home
  - ✔ On-line purchases
  - ✔ Healthy lifestyle benefits
  - ✔ Education/skill attainment outcomes
Pandemic impact on residential, commercial development

Residential

▪ People hurt most during crisis: low-skill/low-wage.
▪ Majority renters who cannot afford to buy houses.
▪ Some first-time homebuyers lost during pandemic.
▪ Housing supply lag will continue, especially starter homes in short-run.
▪ Preference to purchase a home supported.
Residential

- About 1/3 of country’s renters protected by an eviction moratorium that covers properties with federally insured mortgages.
  - Expired July 25.
  - NMHC Rent Payment Tracker 86.9% of apartment Households paid rent (August 13)
- Some cities/landlords offered temporary rent reductions and repayment plans.
Residential

▪ Many renters are jobless and depend on supplemental weekly unemployment benefits $600
  ✓ Expired July 31

▪ The number of tenants able to pay rent going forward is unknown.
  ✓ depends on them being employed and earning wages.
Residential

- People still need place to live, income constraints play important role.
- Supply could be negatively affected in short-run, but massive migration out of apartments not likely.
- Residual fear about COVID-19 and/or future viruses and clustering effect could hamper future apartment demand.
  - Housing affordability issues help demand
Residential

- Long-run, expect movement to more amenities less density (e.g., better communal spaces, storage units, fewer than 40 apartments per development).
- Trend toward mixed-use commercial developments which include office, retail, and multifamily, should continue
  - offer quality amenities and less density, and often in suburbs or urban fringe.
Pandemic impact on residential, commercial development

Commercial

- Strong relationship between CRE vacancies, unemployment.
  - Longer unemployment lasts, stronger the negative impact.
- Accelerated retail restructuring, development of industrial
  - Retail will be hit hardest, accelerating shift to e-commerce.
  - Industrial less affected, benefiting from shift to e-commerce and need for distributive and warehousing centers.
Pandemic impact on residential, commercial development

Commercial

- Not everyone can work from home.

What is future of office building?

SARS Hong Kong did not have real impact on office buildings.

- Some office amenities cannot be duplicated at home.

- Relationship and networking-building difficult to accomplish working from home.
The process of some high-tech employees working from home and of doing business online will accelerate.

Expect more satellite offices in suburbs or in other cities with less density to put fewer employees in central downtowns or in high-density areas.

This pattern was observed before pandemic due to housing affordability issues.
Leading index points toward higher activity going forward

Texas Residential Construction Coincident and Leading Index
(Oct1990=100)

- TX Coincident Index
- US Coincident Index
- TX Leading Index

Note: Seasonally adjusted.
Source: Dallas Federal Reserve and Real Estate Center at Texas A&M University
Residential construction rebounded in June

Texas Residential Construction Permits (#)

Note: Seasonally adjusted. Total Residential Construction Permits
Source: U.S. Census Bureau and Real Estate Center at Texas A&M University
Led by single-family permits

Texas Single-Family Construction Permits
(#)

Note: Seasonally adjusted. Single Family Residential Construction Permits
Source: U.S. Census Bureau and Real Estate Center at Texas A&M University
Multifamily permits continue to fall

Texas Multifamily Construction Permits

Note: Seasonal adjusted. Multi Family Residential Construction Permits
Source: U.S. Census Bureau and Real Estate Center at Texas A&M University
Production pipeline for lower price home never returned

DFW Vacant Developed Supply
(Index 3Q2001=100)

Note: Trend-Cycle Component..
Source: Metro Study and Real Estate Center at Texas A&M University.
Housing sales are expanding

Texas Housing Sales

Note: Seasonal adjustment. Shaded area refers to US recession.
Source: Real Estate Center at Texas A&M University.
Housing sales slowed considerably for lowest price cohort

Houston Housing Sales by Price Cohort
(Index Jan2011=100)

Note: Trend-Cycle Component. Includes existing and new homes.
Source: Real Estate Center at Texas A&M University.
Months of inventory continue to decline

Months of Inventory
(Months)

- U.S.
- Texas
- Austin-Round Rock
- Dallas-Plano-Irving
- Fort Worth-Arlington
- Houston-The Woodlands-Sugar Land
- San Antonio-New Braunfels

Note: Seasonal adjusted.
Source: Real Estate Center at Texas A&M University.
Months of inventory continue to decline for home prices below $300,000

Note: Seasonally adjusted.
Source: Real Estate Center at Texas A&M University.
Home price growth continues in 2020

Real Estate Center Repeat Sales Housing Price Index
(Year-over-Year Percentage Change)

Note: Seasonally Adjusted. Quarterly House Price Index.
Source: Real Estate Center at Texas A&M University.
Mortgage rates fall as inflation and growth expectations decline

30-Year Mortgage Rate, 10-Year Bond Yield and Annual Inflation (Percent)

Note: Seasonally adjusted. CPI All Urban Consumers 1982-84=100.
Sources: Federal Home Loan Mortgage Corporation, Federal Reserve Board and Bureau of Labor Statistics
Falling interest rates and slower price growth benefited affordability

Real Estate Center Housing Affordability Index
(Index)

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio

Note: Seasonal Adjusted.
Source: Real Estate Center at Texas A&M University.
Positive rent growth and negative occupancy change

Overall Apartment Market Change in Effective Rent and Occupancy
(y-o-y % Jul-20)

Chg. in Occupancy

Pct. Chg. in Rent

DFW

San Antonio

Texarkana

Longview/Tyler

Rio Grande Valley

Waco/ Temple/ Killeen

BCT

Ft. Worth

El Paso

Dallas

Corpus Christi

Amarillo

San Angelo

Abilene

Laredo

Victoria

Austi

Houston

Lubbock

Lufkin

Beaumont

TX Avg.

Midland/Odessa

Fuente: ALN Apartment Data and Real Estate Center at Texas A&M University
Vacancy rates increase and effective rent growth declines

Austin Overall Apartment Vacancy and Effective Rent Growth (%)

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar and Real Estate Center at Texas A&M University.
Demand turns negative as supply declines

Houston Overall Apartment Net Absorption and Construction Starts Index
(Units, Index 2000Q1 = 100)

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar, Dodge Analytics and Real Estate Center at Texas A&M University.
Demand continues positive for Class A

DFW Class A Apartment Net Absorption and Construction Starts Index
(Units, Index 2000Q1 = 100)

Net Absorption Units
Construction Starts Index

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar, Dodge Analytics and Real Estate Center at Texas A&M University.
Leading index points toward slower activity going forward

Texas Nonresidential Construction Coincident and Leading Index
(Oct1990=100)

Note: Seasonally adjusted. Total Residential Construction Permits
Source: Dallas Federal Reserve and Real Estate Center at Texas A&M University
Vacancy rates increase and asking rents remain positive

Austin Overall Office Vacancy and Effective Rent Growth (%)

- Vacant Percent of Total
- Natural Vacancy Rate
- Asking Rent Growth

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar and Real Estate Center at Texas A&M University.
Demand continues negative as employment falls

Houston Overall Office Net Absorption and Construction Starts Index (SQR, %)

Note: Seasonally Adjusted and Trend-Cycle Component. Source: CoStar and Real Estate Center at Texas A&M University.
Demand continues negative as employment falls

DFW Class A Office Net Absorption and Construction Starts Index (SQF, %)

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar and Real Estate Center at Texas A&M University.
Vacancy rates increase and asking rents growth stabilizes

**Houston Retail Vacancy and Effective Rent Growth (%)**

- Vacant Percent of Total
- Natural Vacancy Rate
- Asking Rent Growth

*Note: Seasonally Adjusted and Trend-Cycle Component.*
*Source: CoStar and Real Estate Center at Texas A&M University.*
Demand turns negative as employment falls

Austin Retail Net Absorption and Employment Growth
(SQF, %)

Note: Seasonally Adjusted and Trend-Cycle Component.
Vacancy rates decreases, and asking rents growth continues

Houston Warehouse Vacancy and Asking Rent Growth (%)

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar and Real Estate Center at Texas A&M University.
Demand remains strong as employment slows

San Antonio Warehouse Net Absorption and Employment Growth (SQF, %)

Note: Seasonally Adjusted and Trend-Cycle Component.
Source: CoStar and Real Estate Center at Texas A&M University.
Real estate markets going forward

- Path to recovery depends on COVID-19 outcomes.
  - Economic recovery could be hindered going forward by possible upsurges in Texas COVID-19 cases.

- Further waves of infections can reverse increased mobility and spending, affecting the path to recovery.
Real estate markets going forward

- Housing market characterized by low inventories accompanied by positive price growth.

- Apartment market outlook is worrisome due to uncertainty surrounding people losing extra unemployment benefits.

- Office weaker demand, resilience for some sectors
  ✓ Negative outlook for Houston office market, started before COVID-19.

- Retail restructuring will proceed benefiting warehouse market while hurting retail.
Please visit our webpage

www.recenter.tamu.edu