# Texas Quarterly Apartment Report

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**TEXAS A&M UNIVERSITY**

Texas Real Estate
Research Center

# Texas Quarterly Apartment Report:
## 4th Quarter 2020

### DALLAS FORT WORTH

| | OCCUPANCY RATES | ASKING RENTS |
|---|---|---|
| OVERALL | 91.5% ▬ | 0.5% ▲ |
| CLASS A | 87.4% ▬ | -2.1% ▼ |

### AUSTIN

| | OCCUPANCY RATES | ASKING RENTS |
|---|---|---|
| OVERALL | 89.6% ▼ | -2.6% ▲ |
| CLASS A | 88.7% ▲ | -2.8% ▲ |

### SAN ANTONIO

| | OCCUPANCY RATES | ASKING RENTS |
|---|---|---|
| OVERALL | 90.9% ▲ | 0.5% ▲ |
| CLASS A | 89.8% ▲ | -1.0% ▲ |

### HOUSTON

| | OCCUPANCY RATES | ASKING RENTS |
|---|---|---|
| OVERALL | 89.5% ▼ | -1.5% ▬ |
| CLASS A | 86.4% ▼ | -4.8% ▬ |

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Sources: CoStar and the Texas Real Estate Research Center at Texas A&M University

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# About this Report

Texas Real Estate Research Center economists continuously monitor multiple facets of the global, national, and Texas economies. The *Texas Quarterly Apartment Report* summarizes important economic indicators that help discern apartment real estate trends in Texas' four major metropolitan areas (Austin, Dallas-Fort Worth, Houston, and San Antonio).

All quarterly measurements are calculated using seasonally adjusted and trend-cycled data, while percentage changes reflect nominal year-over-year estimates, unless stated otherwise. Seasonal adjustment smooths the quarterly fluctuations in the data. Graphs are also trend-cycle adjusted, which provides a clearer, less volatile view of upward and downward movements. Both enrich our analysis by producing a more accurate depiction of long-term movements in the data.

This report analyzes effective rents, as opposed to asking rents, to reflect rental concessions. This report utilizes data from ALN Apartment Data and CoStar. The time series varies by sector and geography, depending on the data available. Sectors with shorter time series limit the interpretation of the data. CoStar makes changes to its historical data series.

This quarterly publication provides data and insights on the Texas apartment real estate markets. We hope you find them useful. Your feedback is always appreciated. Please send comments and suggestions to info@recenter.tamu.edu.

Dr. Luis Torres, Dr. Harold Hunt, Clare Losey, Kristina Richter, and Garrett Newman

# Texas Economic Overview

The COVID-19 pandemic didn't just end the longest economic expansion in Texas' history, it also pervaded every facet of the state's economy. Global shutdowns in the spring weighed heavily on the manufacturing, energy, and trade sectors as industrial output plummeted, and the West Texas intermediate (WTI) crude oil spot price dropped from an averaged $58 per barrel in 2019 to $39 per barrel in 2020.

Conditions improved as factories reopened with social distancing and mask-wearing mandates. Cautious public and consumer sentiment had a greater impact on oil demand and the leisure/hospitality sector via extremely reduced business and pleasure travel, dining at restaurants, and trips to museums and other contact-intensive recreational businesses. Many of the direct stimulus checks Americans received went to paying off debt, building up savings, or paying rent/mortgage rather than being spent on consumer goods and services.

Labor-market conditions deteriorated compared with strong 2019 levels. Layoffs could have been worse if not for federal loans to small businesses that incentivized employee retention. One of the few bright spots, Texas' housing market boomed with record sales amid historically low interest rates, although depleted inventory is a significant headwind in 2021. The nature of the pandemic-induced recession for 2021, however, suggests a silver lining. If the virus is contained through vaccinations, immunity, and continued measures to prevent the spread of the disease (e.g., social distancing, mask wearing), economic activity and mobility may recover to pre-pandemic levels in the short-term. For additional commentary and statistics, see the Center's *Outlook for the Texas Economy*.

The Texas Residential Construction Cycle (Coincident) Index, which measures current construction activity, flattened in 2020 as industry hiring was sluggish during the pandemic, particularly in multifamily. The Texas Residential Construction Leading Index, however, reached an all-time high in 2020 due to record-low interest rates and strong building permits and housing starts, indicating construction activity will pick up in the new year especially in single family (Figure 1). These metrics in Texas' major Metropolitan Statistical Areas (MSAs) trended upward, especially in Austin and Houston, supporting a positive outlook (Figure 2).

Overall market trends continued to decline during December as more MSAs started to register year-over-year lower changes in both occupancy and rents, while other MSAs continued to record negative changes in occupancy rates, and in some cases other registered negative numbers in both rent and occupancy change. This caused the Texas average to continue to register a negative value in both rent and occupancy change. Due to the difficulties facing the oil industry, the apartment market in Midland/Odessa continued to struggle during December, registering both negative rent growth and negative changes in occupancy rates. Additionally, the Austin, Houston, and Laredo MSAs registered negative numbers in both categories (Figure 3).

Texas shed a record-breaking 431,150 nonfarm jobs in 2020, amounting to 3.4 percent of payrolls, the greatest annual percentage decline since 1945 but less than the national loss of 5.8 percent. Moreover, Texas' labor force participation rate ticked down to an all-time low of 62.7 percent as more than 81,500

Texans exited the labor force amid pandemic-related disruptions and uncertainty. Women in the 25-to-34 year age group were more likely than men to leave the labor force to take care of children amid in-person school closures. The total contribution to the labor-force contraction, however, was double for men than for women in percentage terms.

Houston shed 122,700 nonfarm jobs, a steeper decline than the state average in percentage terms (3.9 percent). Leisure/hospitality accounted for more than a third of the decrease, followed by the goods-producing sector. The other major MSAs registered the largest drops in leisure/hospitality and education/health services employment. Although Fort Worth regained all the retail layoffs from the previous year plus some, total payrolls still shrank by 35,500 employees (3.3 percent). Transportation/utilities was the bright spot in San Antonio with double-digit annual growth, but the metro still cut 33,400 positions altogether (3.1 percent). In Austin and Dallas, hiring in the financial activities sector offset some of the overall contractions to cap losses at 23,000 (2.1 percent) and 49,250 jobs (1.8 percent), respectively.

Texas' goods-producing sector decreased by 87,000 workers with 45,000 of the discharges energy-related. Due to still-diminished employment levels from the 2015-16 oil bust, however, 2020 mining/logging losses were less than half compared with the mid-decade industry downturn, with hiring resuming, albeit modestly, in the fourth quarter. More than 24,300 manufacturers were laid off, mostly in Houston and Fort Worth's durable-goods industry. While, the construction industry laid off more than 17,700 employees with the majority of losses in Houston.

Service-providing employment marked its worst year on record (series starting in 1990), falling by 344,100 positions annually. Coinciding with the economic shutdown, almost 1.3 million jobs were lost in March and April alone. On the subsector level, only transportation/utilities and financial activities eked out modest gains, increasing 1.3 and 1.2 percent, respectively. Leisure/hospitality payrolls declined by 13.9 percent, or 194,000 jobs. Education/health services shed 46,800 positions. Other service-providing services, including personal/laundry services, posted the second-largest percentage decrease of 5 percent.

Economic uncertainty surrounding the COVID-19 pandemic prompted investors to purchase safe-haven assets at an accelerated rate during the first half of the year, pulling interest rates to historically low levels. Expansionary monetary measures by the Federal Reserve and development on the vaccine front generated both higher inflation and growth expectations, pushing interest rates up in the fourth quarter, but the ten-year U.S. Treasury bond yield still fell 125 basis points in 2020, averaging a record-low 0.9 percent. Even before the pandemic, the spread between apartment capitalization rates and the ten-year Treasury yield increased at the end of 2019 and continued up to 3Q2020. This increased spread indicated increased risk and profitability in apartment real estate (Figure 4). This trend ended during 4Q2020 due to the increase in the ten-year Treasury yield.  The announcement of two COVID-19 vaccines at the end of 2020 reduced the future uncertainty created by the COVID-19 pandemic reducing the risk on multifamily real estate.

Overall apartment cap rates for Houston and San Antonio remain the highest, followed by DFW and Austin. The spread with the ten-year Treasury bill decreased during 4Q2020. Austin continues to be the least risky and lowest return market for multifamily real estate based on its spread with the ten-year Treasury bill (Figure 4).

Almost 4.2 million initial unemployment insurance claims were filed during 2020 (with more than 40 percent submitted in March and April), about three-and-a-half times the number in 2009 compared with just two-and-a-half times nationally. Although the data around the holidays is more volatile, Texas claims climbed in December as COVID-19 cases surged, a divergence from the U.S. eight-month downtrend. Meanwhile, the statewide unemployment rate rose more than 4 percentage points annually to average 7.7 percent. Among the major MSAs, joblessness was highest in Houston, where the rate shot up to 8.6 percent due to a higher-proportion of energy-related jobs in the metro. The metric in San Antonio and DFW was lower than the state average at 7.3 and 7.1 percent, respectively, but Austin maintained the lowest rate of 6.2 percent, although unemployment still increased considerably. The decrease in unemployment after the 2Q2020 is important for multifamily vacancies given the relationship between unemployment rates and vacancy rates. The longer unemployment rates remain elevated, the stronger the negative impact on vacancies and rents. As expected, the unemployment rate increases during 2Q2020 pushed up vacancy rates in the major metros, but the eviction moratorium and the Federal stimulus that included transfer payment trough stimulus checks and increases in unemployment benefits pushed down vacancy rates (Figures 5-8).

According to the U.S. Census' Household Pulse Survey, 17 percent of Texas renter-occupied households were behind on their payments during December, lower than the national rate of 18 percent (Table 1). Renter households in DFW registered a lower value of 15 percent, contrasting with the Houston MSA value of 18 percent, recording a similar value than what was observed at the national level but higher than the state.

On the respondents' ability to pay next month's rent, 37 percent of renter households in Texas stated they have no confidence or only slight confidence in making their rent payment next month, higher than the 31 percent observed at the U.S. level (Table 2). Both the DFW and Houston MSAs recorded higher percentages of 42 and 40 percent, respectively. This is a troubling sign for both renters and landlords going forward.

Fifty-seven percent of Texas respondents who were not current on rental payments stated the likelihood of eviction to be either very likely or somewhat likely in the next two months compared with 52 percent nationwide (Table 3). That same metric, however, was higher in DFW at 74 percent compared with Houston, which registered 49 percent. The DFW multifamily rental market outlook is worrisome due to the high numbers of households that could possibly be evicted. Federal eviction moratoriums are in place until March 31, 2021. Continued households' stability is essential to Texas' economic recovery.

**Less Uncertain, but Worrisome Short-Term Outlook of COVID-19 Impact on Multifamily**

- National eviction moratorium expires March 31, 2020.
- The further rounds of fiscal stimulus enacted by the Federal Government and increasing vaccination rates will benefit the multifamily market in 2021.
    - Fiscal stimulus is serving as a bridge for unemployed workers by not allowing their incomes to fall drastically until they re-enter the labor force, and by allowing businesses not to close permanently.
    - Increasing vaccination rates will allow the economy to reopen completely, especially benefiting service industries that cannot socially distance.
- The COVID-19 relief bill passed by Congress on March 10, 2021, includes help for tenants who are behind on their rent and utility bills.
    - Congress has appropriated a total around $46.55 billion.
    - Texas is one of 16 states and 40 localities accepting applications from tenants and landlords (both should apply together), according to the National Low Income Housing Coalition.
    - In general, to be eligible tenants must make less than 80 percent of the median income in their area, have at least one person in their household who has lost a job, and can demonstrate they are at risk of losing their place of residence.
    - States and localities will have until Sept. 30, 2021, to use the rental assistance money before the Treasury can reallocate unused portions.
- Even with the assistance provided by latest round of fiscal stimulus, many renters are jobless and depend on weekly unemployment benefits.
- The number of tenants who will be able to pay rent going forward is unknown, depending on their being employed and earning wages or additional unemployment support. This affects landlords' ability to cover operating costs and make mortgage payments on properties.
- Apartment market short-term outlook is worrisome due to the uncertainty surrounding the ending of the eviction moratorium, but will be helped by the latest round of fiscal stimulus.
- Once the pressures born of the pandemic are lifted, the multifamily market is positioned to do well because of constrained single-family supply and prices rapidly outpacing incomes, especially in high growth Texas markets like Austin and Dallas-Fort Worth.

**Table 1. Last Month's Payment Status for Renter-Occupied Housing Units**

| Region | Occupied Without Rent | Household Currently Caught Up on Rent Payments | | |
|---|---|---|---|---|
| | | Yes | No | Did not report |
| United States | 6% | 76% | 18% | 0% |
| Texas | 6% | 77% | 17% | 0% |
| Dallas-Fort Worth | 3% | 82% | 15% | 0% |
| Houston-The Woodlands-Sugar Land | 12% | 70% | 18% | 0% |

Note: Total includes population 18 years and older in renter-occupied housing units and excludes those living in different types of housing units and those who did not report their housing situation. Totals may not equal 100 percent due to rounding.

Source: U.S. Census Bureau Household Pulse Survey, Dec. 9–21.

**Table 2. Confidence in Ability to Make Next Month's Payment for Renter-Occupied Housing Units**

| Region | Confidence to Pay Next Month's Rent | | | | | |
|---|---|---|---|---|---|---|
| | No Confidence | Slight Confidence | Moderate Confidence | High Confidence | Payment Is/Will Be Deferred | Did Not Report |
| United States | 14% | 17% | 23% | 39% | 1% | 0% |
| Texas | 16% | 21% | 24% | 32% | 0% | 1% |
| Dallas-Fort Worth | 14% | 28% | 20% | 33% | 1% | 1% |
| Houston-The Woodlands-Sugar Land | 21% | 19% | 19% | 28% | 0% | 0% |

Note: Total includes population 18 years and older in renter-occupied housing units and excludes those living in different types of housing units and those who did not report their housing situation. Totals may not equal 100 percent due to rounding.

Source: U.S. Census Bureau Household Pulse Survey, Dec. 9–21.

**Table 3. Likelihood of Having to Leave this House in Next Two Months Due to Eviction**

| Region | Likelihood of Leaving This Home Due to Eviction in Next Two Months | | | | |
|---|---|---|---|---|---|
| | Very Likely | Somewhat Likely | Not Very Likely | Not Likely at All | Did Not Teport |
| United States | 17% | 35% | 28% | 19% | 1% |
| Texas | 23% | 34% | 31% | 12% | 0% |
| Dallas-Fort Worth | 18% | 56% | 22% | 4% | 0% |
| Houston-The Woodlands-Sugar Land | 25% | 23% | 45% | 5% | 2% |

Note: Total includes population 18 years and older in renter-occupied housing units and excludes those living in different types of housing units and those who did not report their housing situation. Totals may not equal 100 percent due to rounding.

Source: U.S. Census Bureau Household Pulse Survey, Dec. 9–21.

# Overall Apartment Sector

**Austin (Figures 9–12):**

Actual vacancy in Austin continued its trend upward to 10.4 percent in 4Q2020. Effective rent growth proceeded to decline to -2.6 percent in the overall Austin apartment sector. Additional data provided by Real Page Inc. show that 96.5 percent of multifamily renters made full or partial rent payments in 4Q2020, which is 2.4 percent higher than the national average. This suggests that regardless of the increase in vacancy, Austin is still outperforming other markets across the United States. Net absorption increased to numbers similar to pre-pandemic values even though there was also an increase in deliveries. This indicates an increase in multifamily demand in Austin last quarter, which is somewhat contradictory to the growth in market vacancy brought about by the increase in total inventory.

Alternatively, units under construction declined further in 4Q2020 as vacancy rates continued to trend upward and effective rent growth continued to diminish. This trend may carry on in the future as, according to the U.S. Bureau of Census, Austin dropped from second to seventh in the United States for number of 5+ multifamily unit building permits submitted from 3Q2020 to 4Q2020. Development in the overall Austin apartment market may be stalling as the pandemic has reduced occupancy rates and effective rent growth while construction costs remain high. This may change moving forward as the Texas economy benefits from the distribution of the vaccine and the further rounds of fiscal stimulus improving the outlook for the multifamily sector going forward.

**Dallas-Fort Worth (Figures 13–16):**

Actual vacancy in the overall DFW apartment market remained relatively unchanged at 8.5 percent this quarter. This is in line with the natural market vacancy in this MSA, which has not been surpassed since 2011.

Net absorption decreased slightly relative to 3Q2020, still registering relatively high numbers. Also, units delivered in this market and units under construction have both declined putting less pressure on net absorption going forward. Dallas-Fort Worth-Arlington, according to the U.S. Bureau of Census, rose from 11th in the United States in 3Q2020 for the number of 5+ multifamily units building permits submitted to being ranked ninth in the last quarter of 2020. Additionally, the value of construction starts increased in the last quarter, indicating that future new construction remains strong.

According to data obtained from RealPage Inc., 96.1 percent of multifamily renters in this MSA made rent payments in 4Q2020. This is only a 0.03 percent decline from the same quarter in 2019. Clearly, renters in Dallas-Fort Worth-Arlington are continuing to pay their rent despite

the pandemic. Hopefully, this percentage only improves with the introduction of the vaccine, leading to increased immunity from COVID-19.

**Houston (Figures 17–20):**

The actual vacancy rate in the overall Houston apartment market rose to 10.5 percent in 4Q2020, this is 1.3 percent higher than the natural vacancy rate. As a result, effective rent growth declined to -1.5 percent. The two consecutive declines in rent growth are comparable to the ones registered during 2010. The continued economic and financial stress on Houston's oil and gas industry due to the pandemic along with a historically oversupplied market contributed to high vacancy rates and negative effective rent growth.

Units under construction, deliveries, and net absorption declined slightly this last quarter, but not enough to signal any dramatic shift in new supply of apartment units. According to data obtained from the U.S. Bureau of Census, Houston-The Woodlands-Sugar Land ranked fourth in the United States for number of building permits submitted for 5+ unit multifamily developments. With additional supply in the market, data from RealPage Inc. show the percentage of multifamily tenants who paid rent in Houston during 4Q2020 declined by roughly 0.4 percent to 94.7 percent from the previous quarter.

With the introduction of the vaccine and improved herd immunity, the virus should have less impact on the economy by summer 2021. However, economic damage could be felt for months to years after the conclusion of the pandemic, especially in some industries like retail and leisure and hospitality, by the introduction of automatization and digitalization, which require fewer employees to operate successfully.

**San Antonio (Figures 21–24):**

The actual vacancy rate in the overall apartment market in San Antonio improved to 9.1 percent in 4Q2020. This still remains above the natural vacancy rate of 8.5 percent despite improving 0.5 percent from the previous quarter. According to CBRE data, San Antonio's hospitality industry declined to 42.9 percent occupancy at the end of 2020. This is a 35.3 percent decrease in occupancy from the same time in 2019. Because the leisure and hospitality sector is a large driver of San Antonio's economy, it is surprising that multifamily occupancy rates have improved. In addition, in the last quarter of 2020 effective rent growth changed little increasing 0.5 percent with respect to 3Q2020.

Net absorption continued to rise in the previous quarter despite the ongoing pandemic, the fifth straight quarter that net absorption has increased. Units under construction and units delivered to the market both decreased in 4Q2020, which could possibly contribute going forward in maintaining positive net absorption. According to U.S. Census data, despite the increase in demand for multifamily units in this market, San Antonio-New Braunfels dropped from 18th to 21st in the United States for number of 5+ unit housing building permits submitted in the last quarter.

RealPage Inc. reported the same rent payment percentage in 4Q2020 as 3Q2020 for this MSA. On average, 94.5 percent of multifamily tenants in San Antonio-New Braunsfels made at least a portion of their rental payments last quarter compared with 96.6 percent in 4Q2019. Hopefully this percentage will improve following the distribution of the coronavirus vaccine and the further rounds of fiscal stimulus.

*Note: RealPage Inc. rent payment percentages data are based on the number of renters who paid their rent in full or in partial payments.

# Class A Apartment Sector

**Austin-Round Rock (Figures 25–28):**

Actual vacancy in Austin-Round Rock's Class A apartment market in 4Q2020 decreased to 11.3 percent, an 0.8 percent improvement from third quarter 2020. At this rate, actual vacancy is still higher than the natural vacancy of 9.0 percent. Effective rent growth continued its downward trend, falling 2.8 percent in 4Q2020 and recording three straight quarters of declines. Effective rent growth hasn't registered negative numbers since 1Q2009-2Q2010, when effective rents declined for six straight quarters. More people vaccinated should allow for broader reopening of the economy, allowing for occupancy rates and effective rent growth to improve across the state in the near future.

In 4Q2020, net absorption increased for Class A apartments in Austin-Round Rock. Deliveries also rose slightly, meaning supply will increase moving into 2021. Despite this, the number of units delivered remains well below the level of deliveries recorded throughout 2019.

Since 4Q2019, the number of units under construction in Austin-Round Rock has been steadily declining, further dropping during 4Q2020. If this trend continues, occupancy rates may increase, resulting in positive effective rent growth down the line.

**Dallas-Fort Worth (Figures 29–32):**

Dallas-Fort Worth's Class A Apartment market registered an actual vacancy rate of 12.6 percent. Throughout the last year, the actual vacancy rate has stayed around 12.6 percent. Effective rent growth continued to decline to -2.1 percent by the end of the fourth quarter, which is lower compared with other markets in Texas.

Both net absorption and deliveries continued to trend upward in 4Q2020 denoting increased demand for Class A multifamily space in this market. Additional units have been added each quarter since 2Q2020. Clearly the pandemic has not prevented projects that were in the pipeline prior to COVID-19 from reaching completion. However, the number of units under construction has declined as the year has progressed, signaling a drop in units delivered and improvements in net absorption in the future. Additionally, if supply is reduced, vacancy rates may decline resulting in higher effective rent growth.

**Houston (Figures 33–36):**

The actual vacancy rate in the Houston Class A Apartment market worsened in 4Q2020 to reach 13.6 percent, 0.4 percent higher than the actual vacancy rate reported in third quarter 2020. Effective rent growth dropped further to -4.8 percent, the lowest value in this metric across the four major Texas MSAs. This could be attributed to the fact that Houston is frequently an

oversupplied market as developers have reacted to the booms and busts of the oil and gas industry. Based on the vacancy and effective rent growth rate, this market looks to be oversupplied. However, net absorption for Class A apartment space in Houston has continued to rise since the onset of the pandemic, signaling the market is recovering from the pandemic and renters are continuing to lease quality space. This increase comes as units delivered have also trended upward. Looking at these metrics together, it can be inferred this market is meeting current market demand. Class A units under construction declined to the lowest level Houston has seen since 2Q2018.

**San Antonio (Figures 37–40):**

Similar to the overall apartment market, San Antonio's Class A apartment market experienced a decrease in actual vacancy last quarter to 10.2 percent, a 1.3 percent improvement from the previous quarter. Additionally, net absorption increased to a value that has not been seen in this market since 3Q2018, while deliveries dropped off significantly compared with 3Q2020. Both market characteristics possibly aided in the reduction in actual vacancy.

Even with the improvements in both vacancy rates and net absorption, effective rent growth dropped to -1.0 percent during 4Q2020. However, the San Antonio Class A apartment sector was the only market out of the four MSAs that showed any improvement in rent growth. The number of units under construction increased in 4Q2020, possibly affecting future vacancy rates and rent growth. Further rounds of fiscal stimulus and the distribution of the COVID-19 vaccine that would allow for the complete reopening of the economy should help in the coming months.

## Figure 1. Texas Residential Construction Index
### (Index   Jan 2000 = 100)
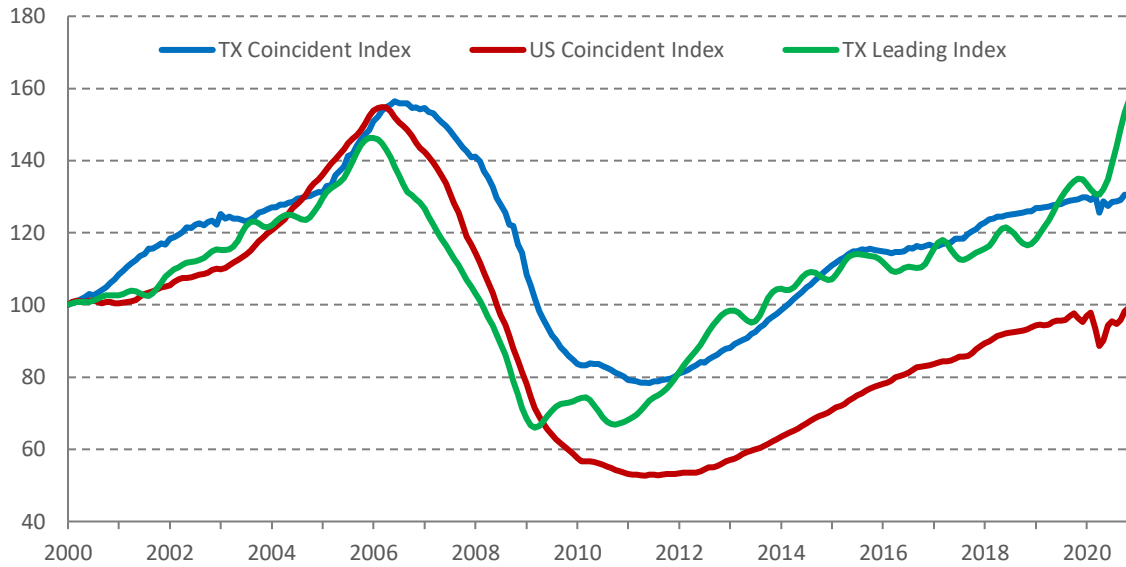


Source: Texas Real Estate Research Center at Texas A&M University

## Figure 2. Major MSAs Residential Construction Leading Index
### (Index Jan 2000 = 100)



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

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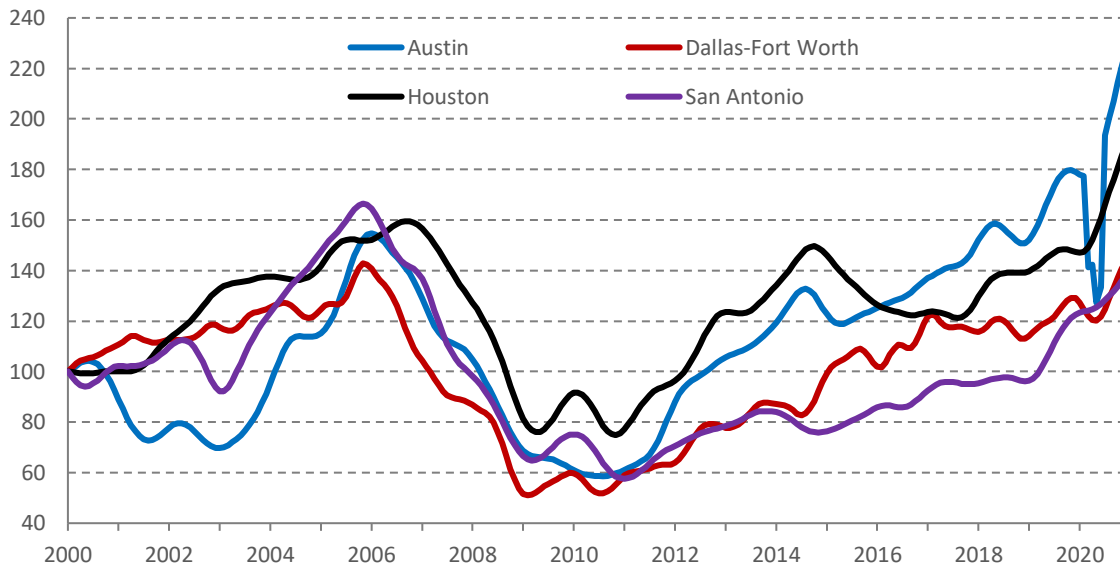
## Figure 3. Overall Apartment Market Y-O-Y Percent Changes in Effective Rent and Occupancy as of December 2020
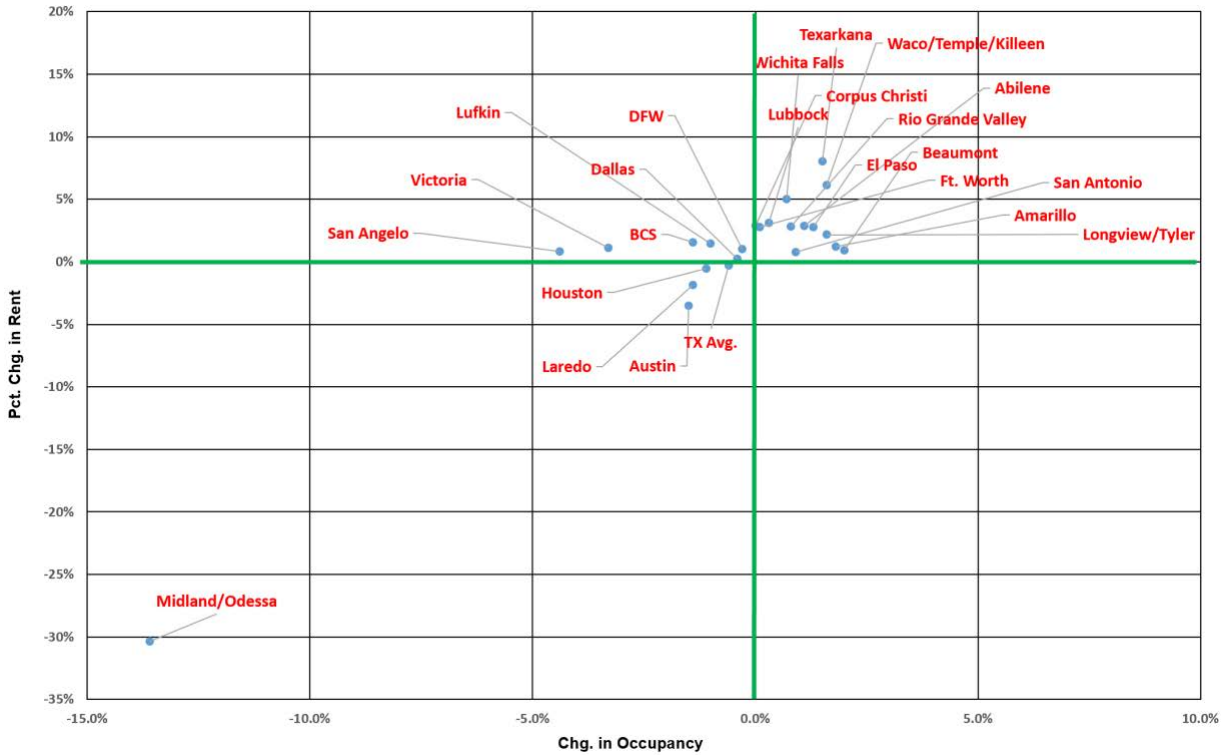


Sources: ALN Apartment Data and Texas Real Estate Research Center at Texas A&M University

## Figure 4. Capitalization Rates v. Ten-Year Treasury Bills
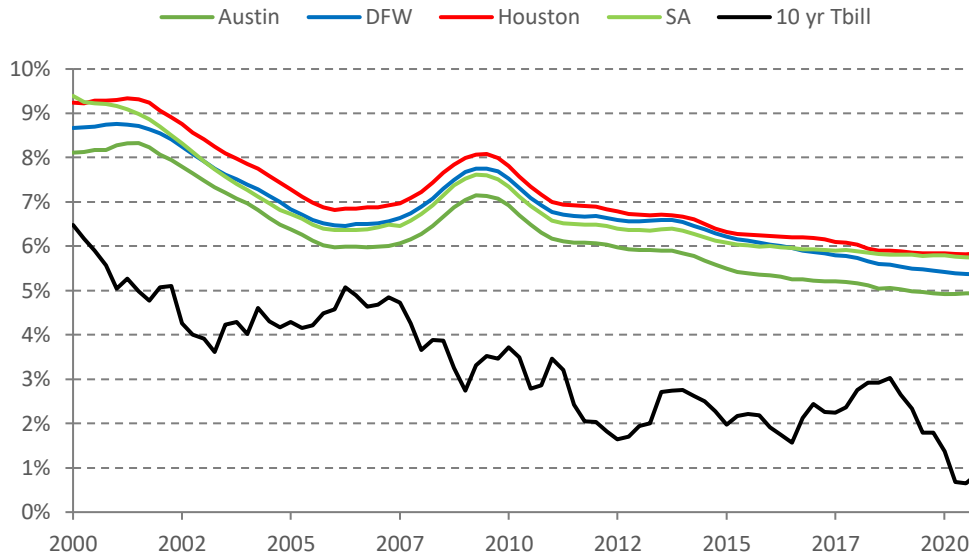


Source: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 5. Austin Apartment Vacancy Rates and Unemployment (SA and TC)\***
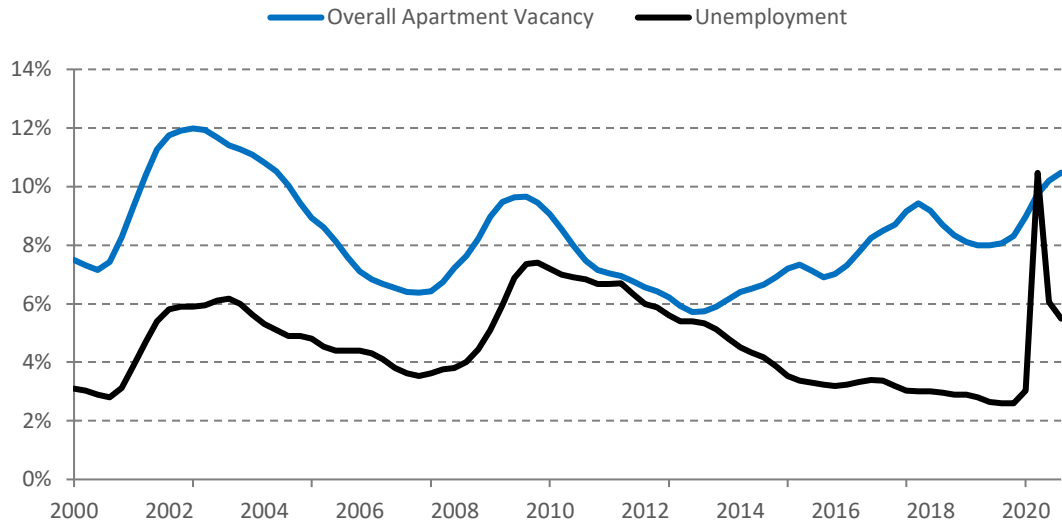


*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

**Figure 6. DFW Apartment Vacancy Rates and Unemployment (SA and TC)\***
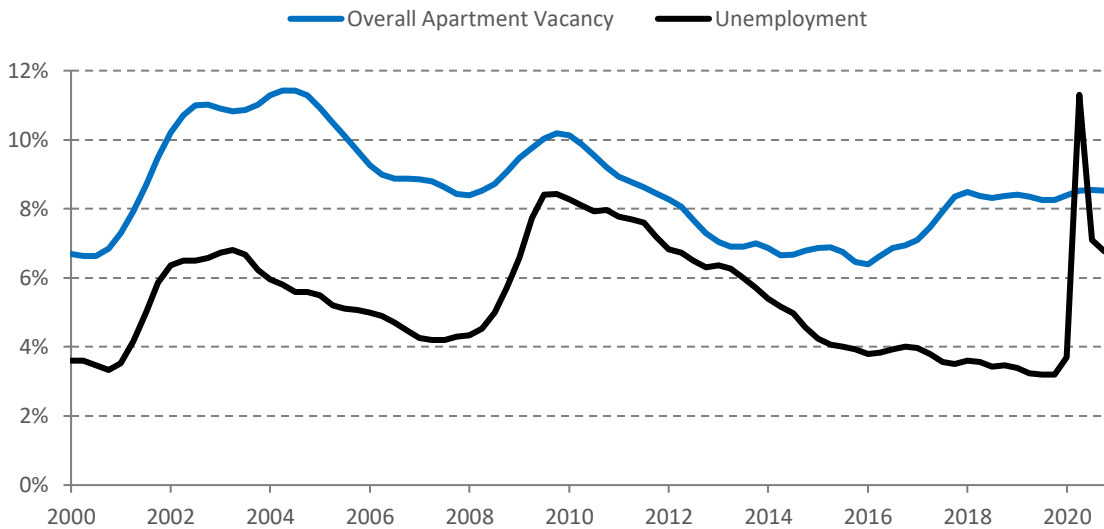


*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

**Figure 7. Houston Apartment Vacancy Rates and Unemployment (SA and TC)\***
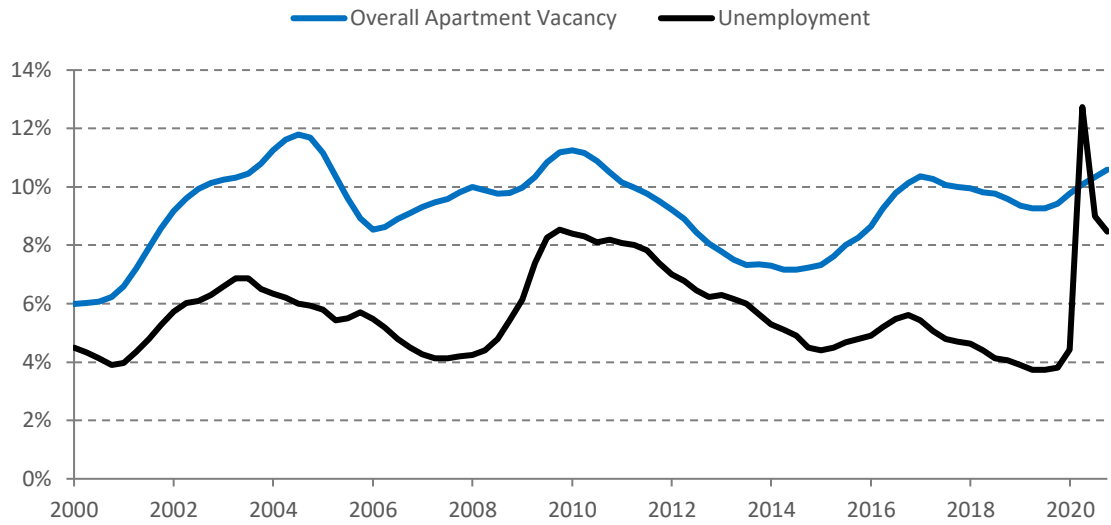


*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

**Figure 8. San Antonio Apartment Vacancy Rates and Unemployment (SA and TC)\***
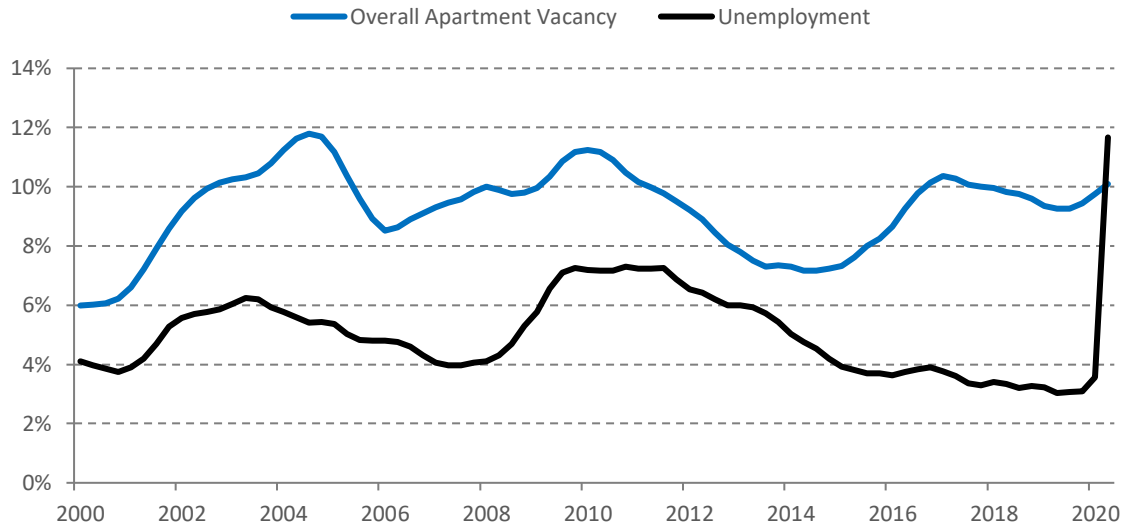


*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

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# Austin Overall

OCCUPANCY RATE
▼ 89.6%

EFFECTIVE RENT GROWTH (PER UNIT)
▲ -2.6%

NET ABSORPTION (UNITS)
▲ 2,036

CONSTRUCTION STARTS
▼

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

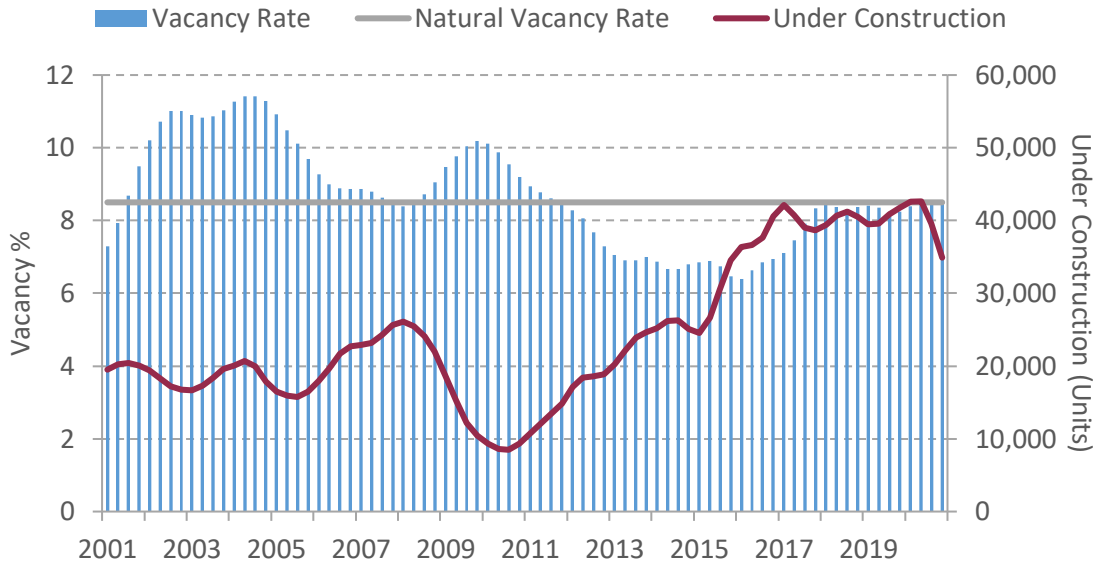**Figure 9. Austin Overall Vacancy and Effective Rent Growth (SA and TC)***
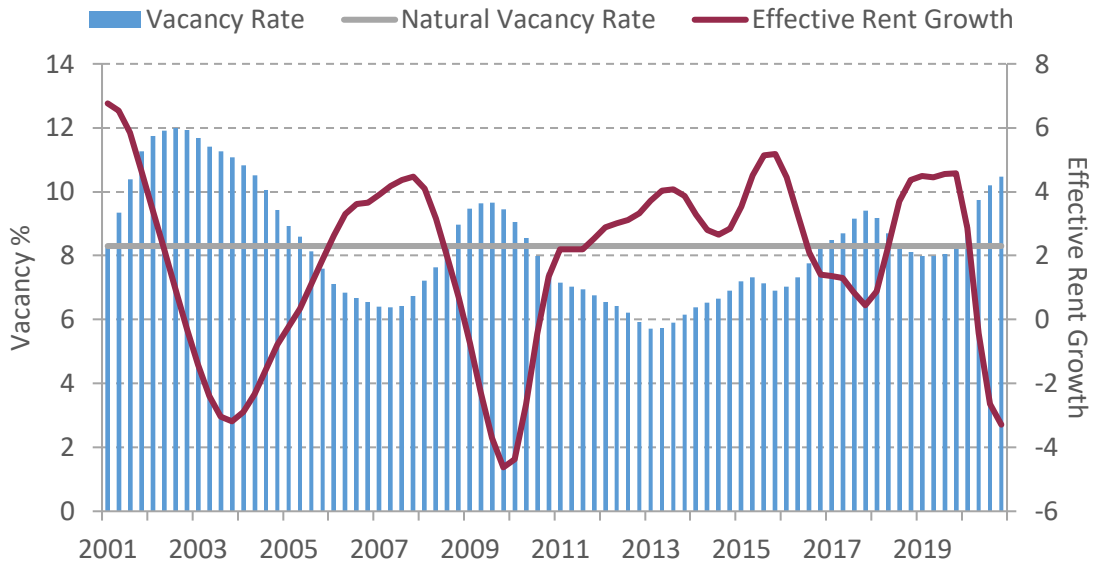


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 10. Austin Overall Net Absorption and Construction Starts Index (SA and TC)***
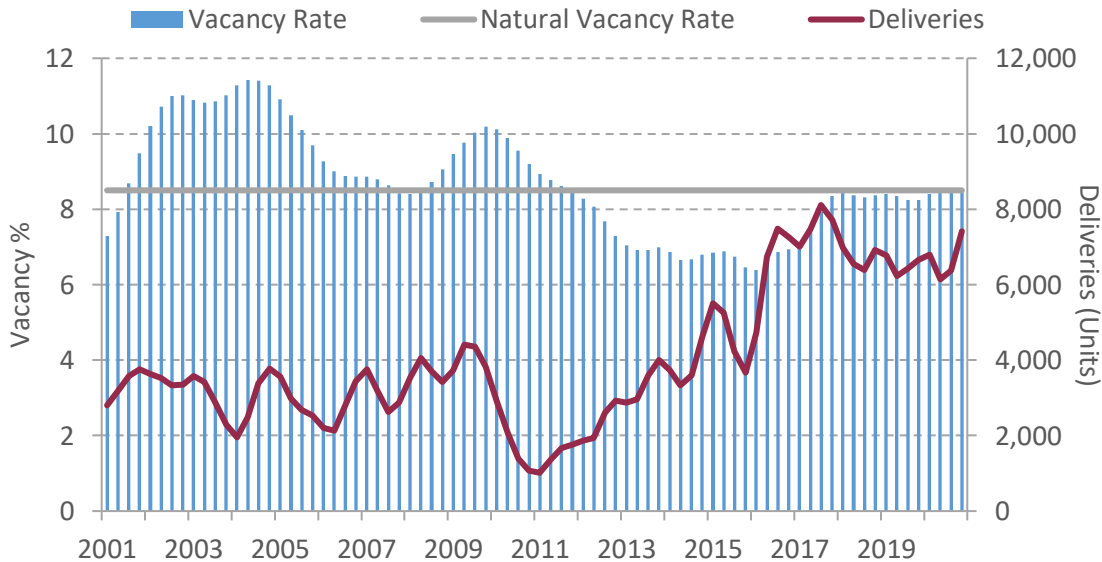**(Index 2000 Q1 = 100)**
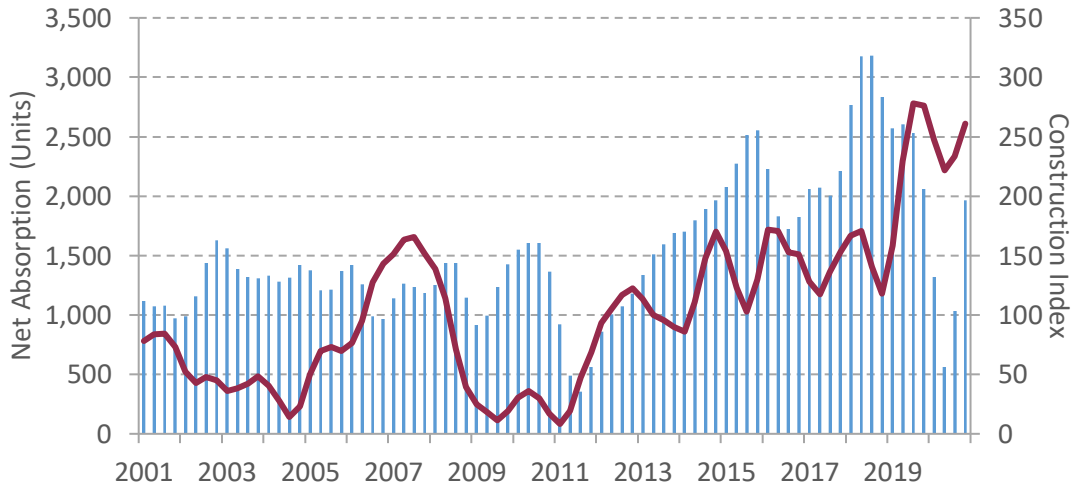


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

**Figure 11. Austin Overall Vacancy and Units Under Construction (SA and TC)\***
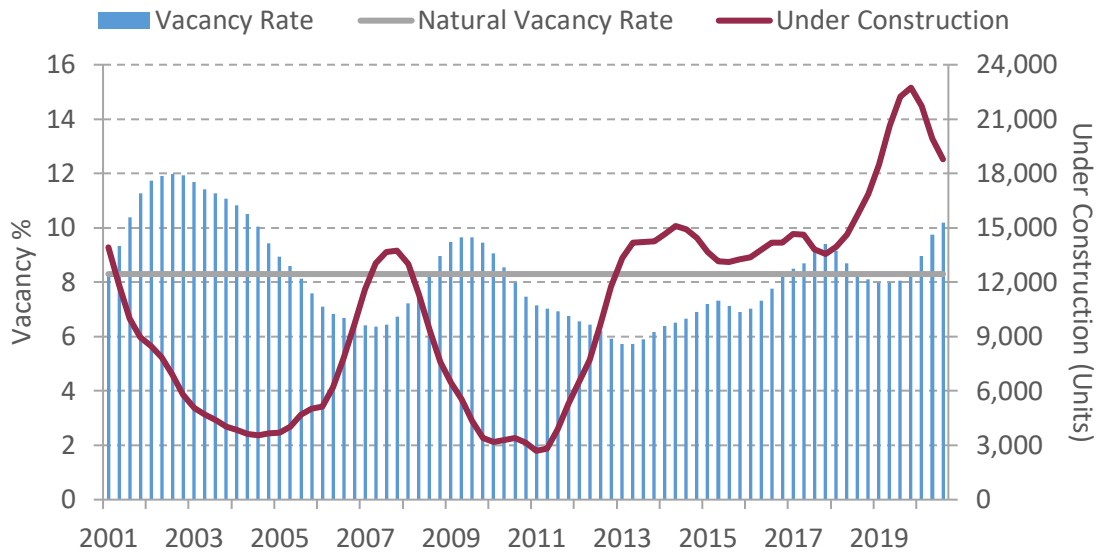


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University
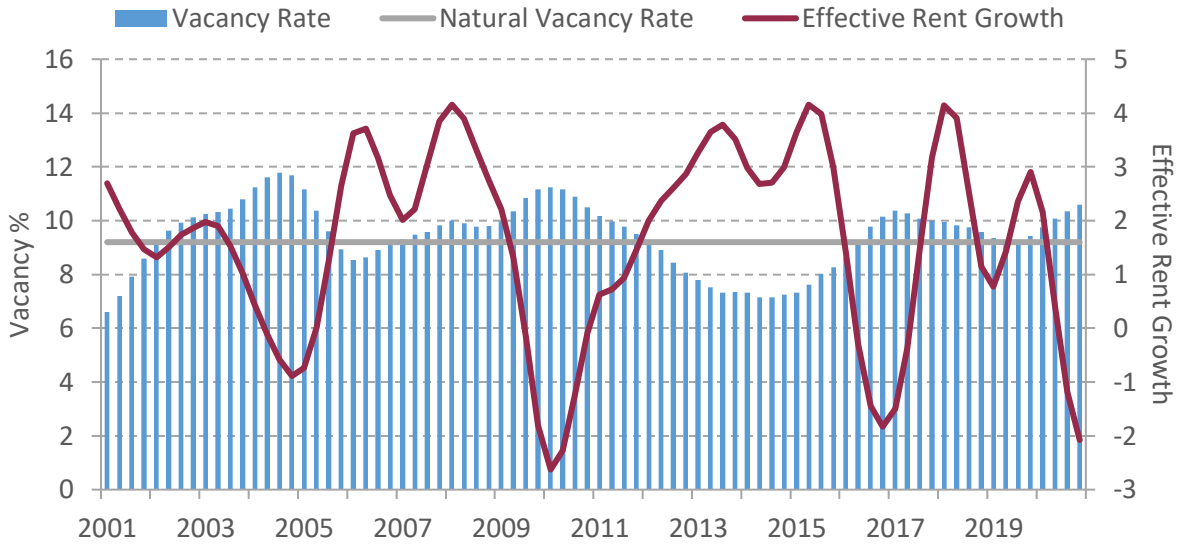
**Figure 12. Austin Overall Vacancy and Deliveries in Units (SA and TC)\***
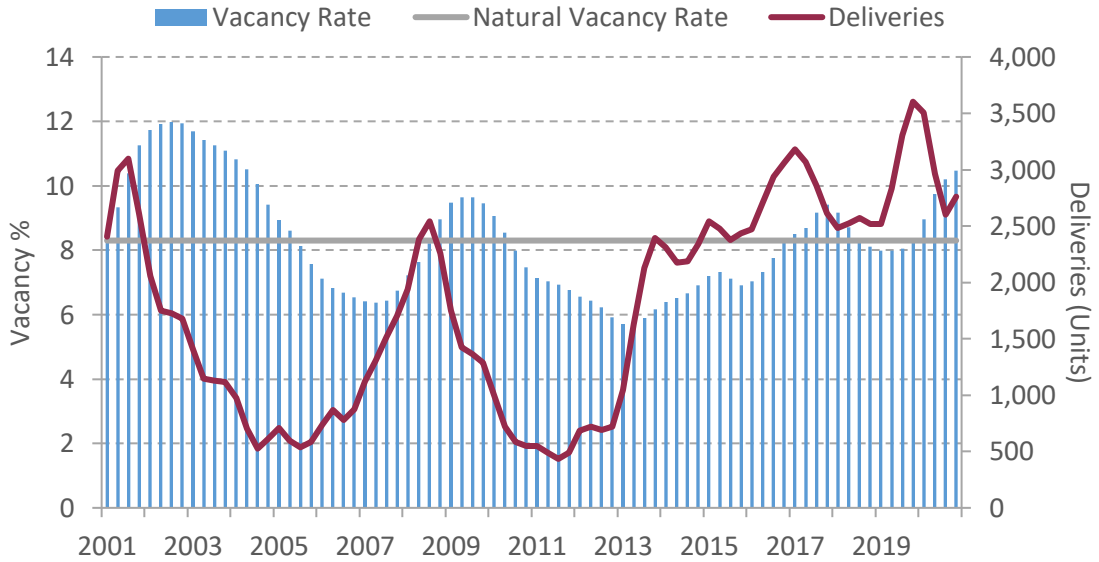


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

# Dallas-Fort Worth Overall

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|---|---|---|---|
| ▬ 91.5% | ▲ 0.5% | ▼ 6,400 | ▲ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

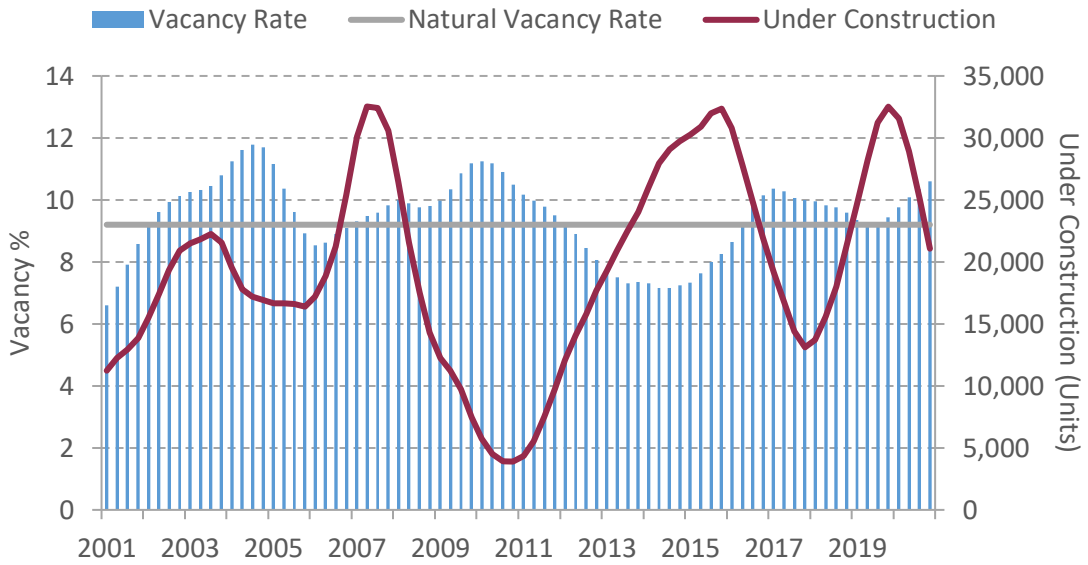### Figure 13. DFW Overall Vacancy and Effective Rent Growth (SA and TC)*
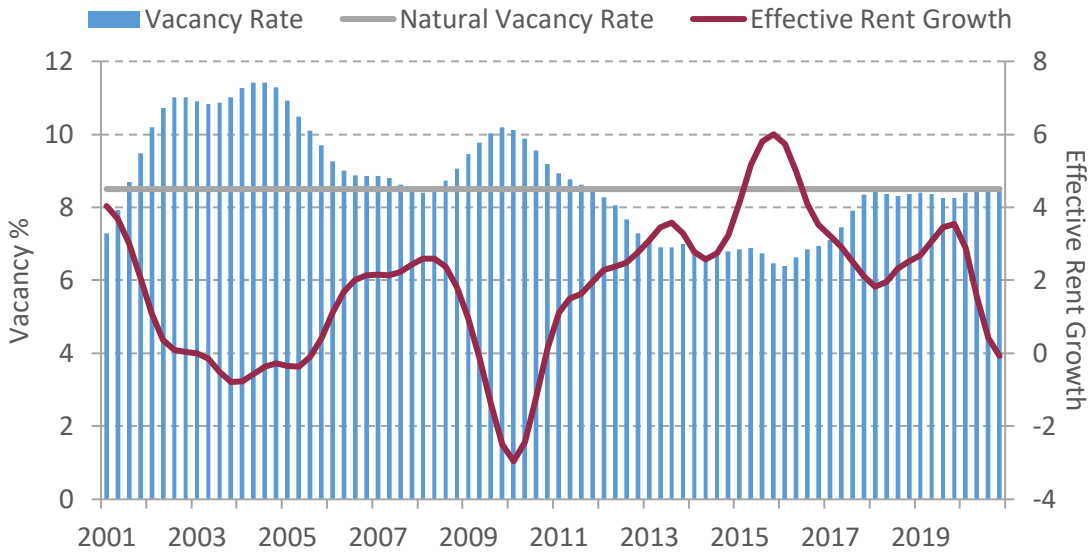


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

### Figure 14. DFW Overall Net Absorption and Construction Starts Index (SA and TC)*
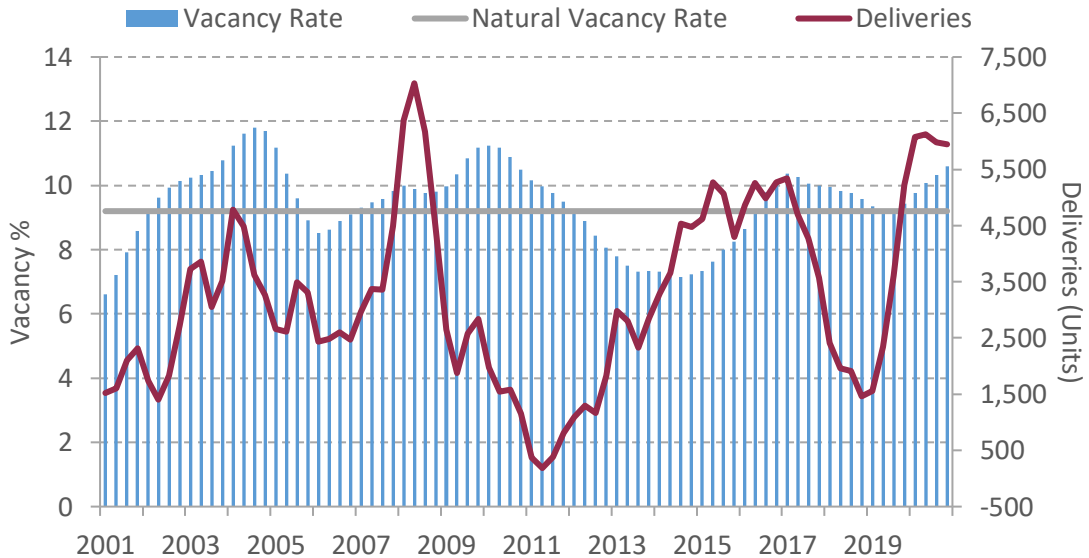**(Index 2000 Q1 = 100)**
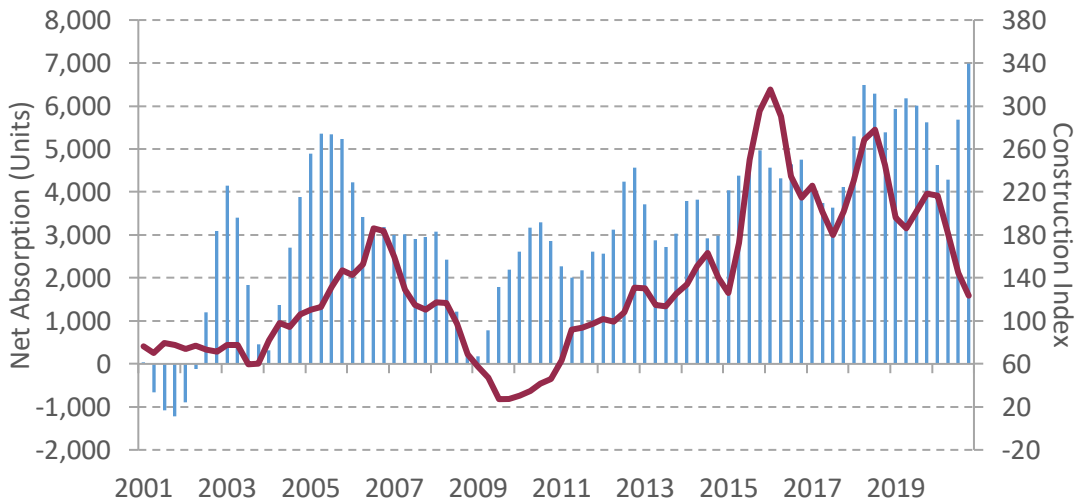


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

**Figure 15. DFW Overall Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 16. DFW Overall Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

# Houston Overall

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|---|---|---|---|
| ▼ 89.5% | ▬ -1.5% | ▼ 3,945 | ▲ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

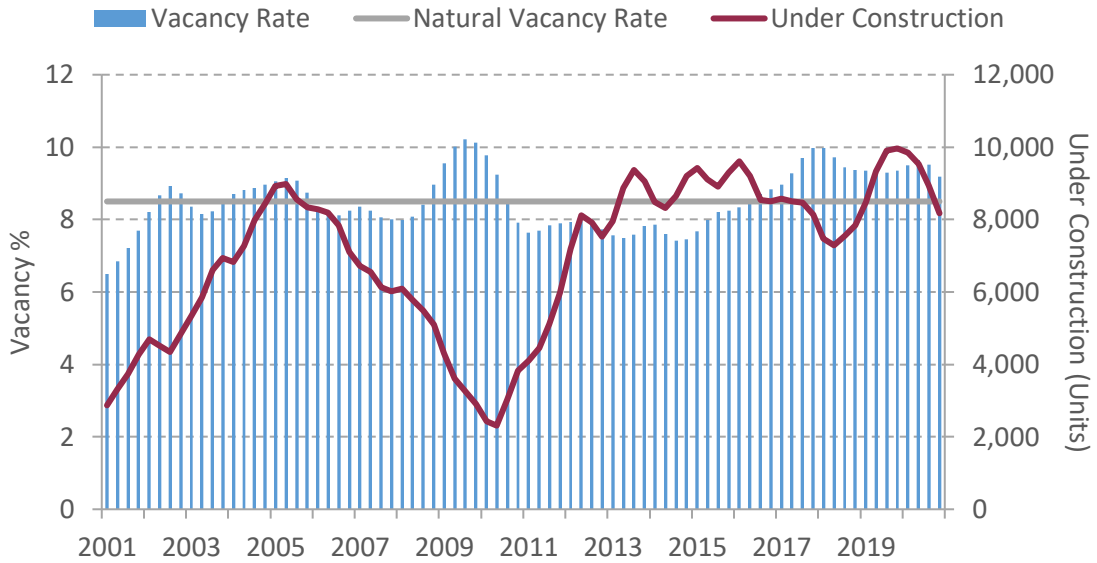**Figure 17. Houston Overall Vacancy and Effective Rent Growth (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 18. Houston Overall Net Absorption and Construction Starts Index (SA and TC)***
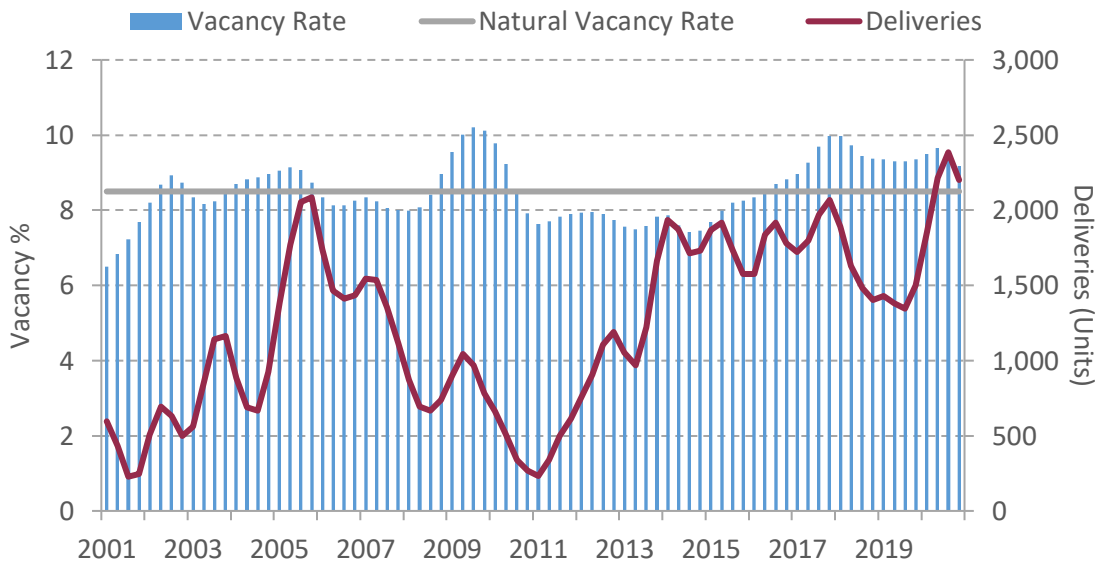**(Index 2000 Q1 = 100)**
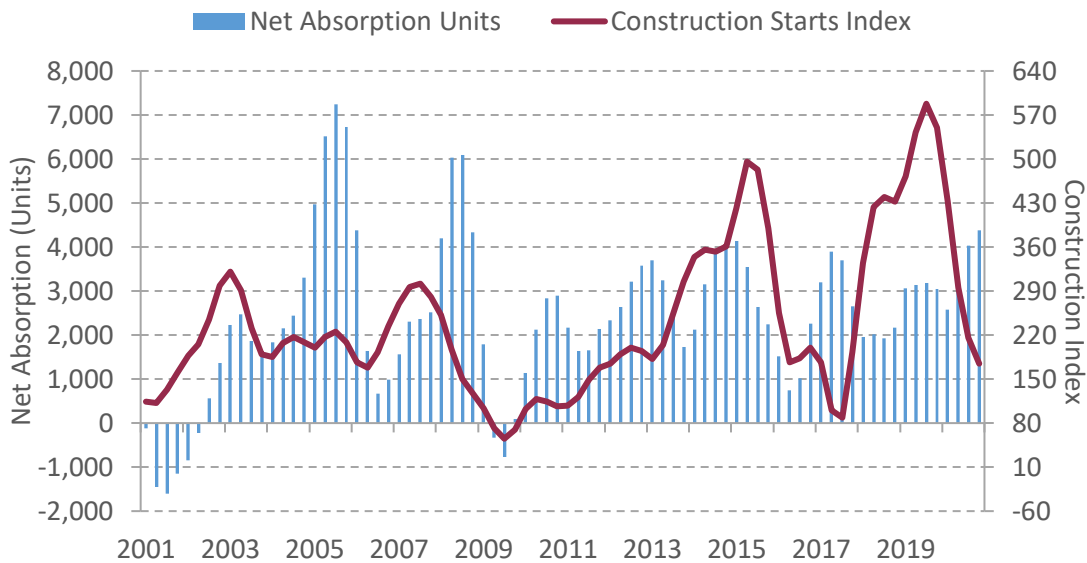


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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**Figure 19. Houston Overall Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 20. Houston Overall Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

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# San Antonio Overall

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|---|---|---|---|
| ▲ 90.9% | ▲ 0.5% | ▲ 2,826 | ▼ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

## Figure 21. San Antonio Overall Vacancy and Effective Rent Growth (SA and TC)*
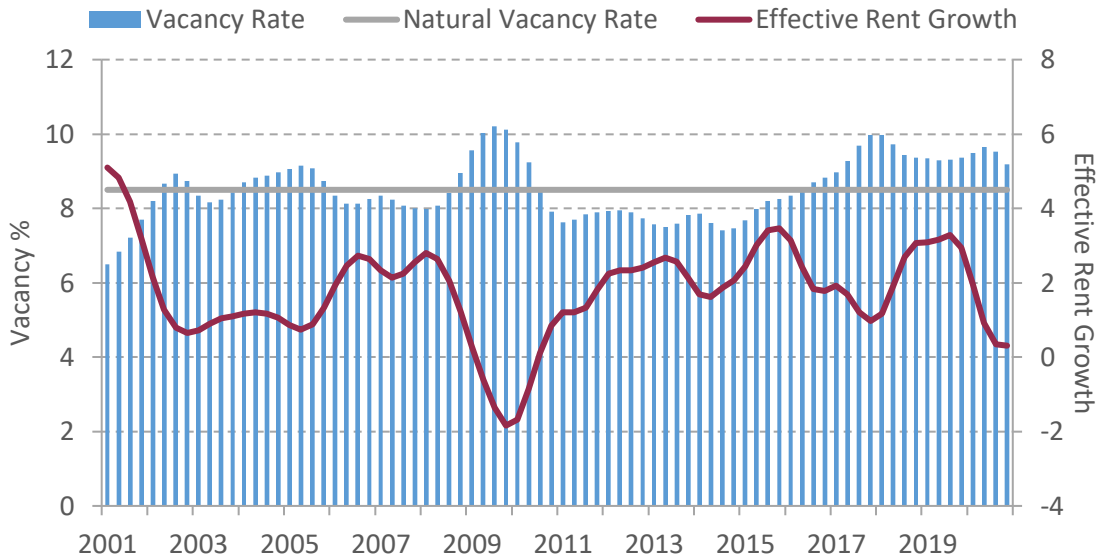


*Note: Seasonally adjusted and trend-cycle component.
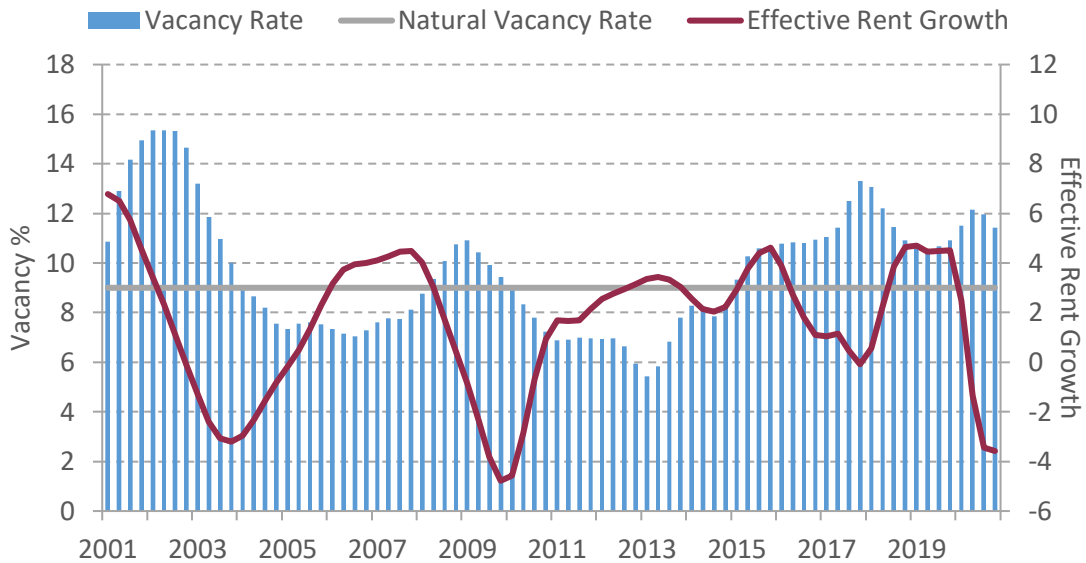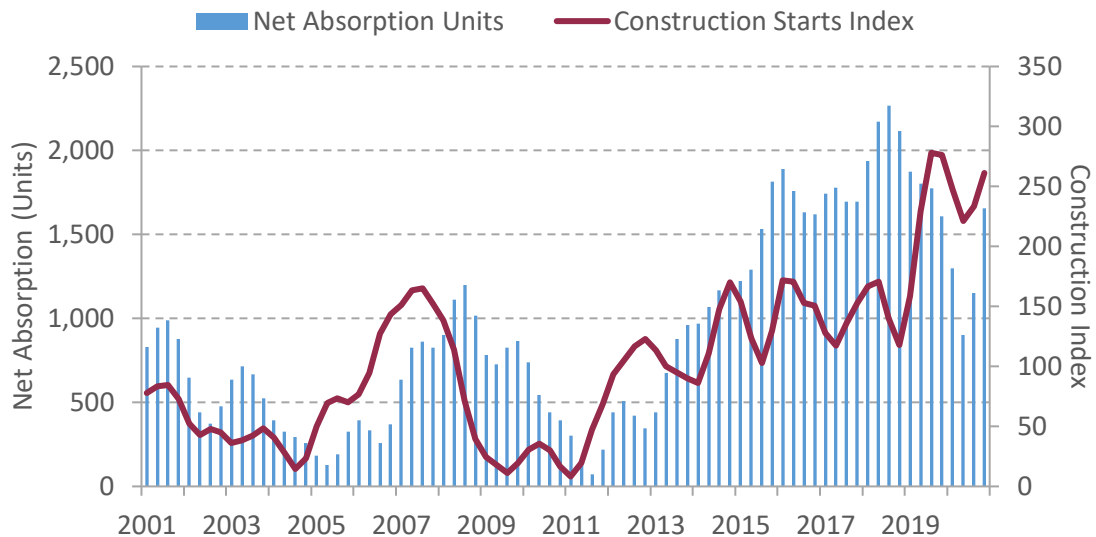Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

## Figure 22. San Antonio Overall Net Absorption and Construction Starts Index (SA and TC)*
### (Index 2000 Q1 = 100)
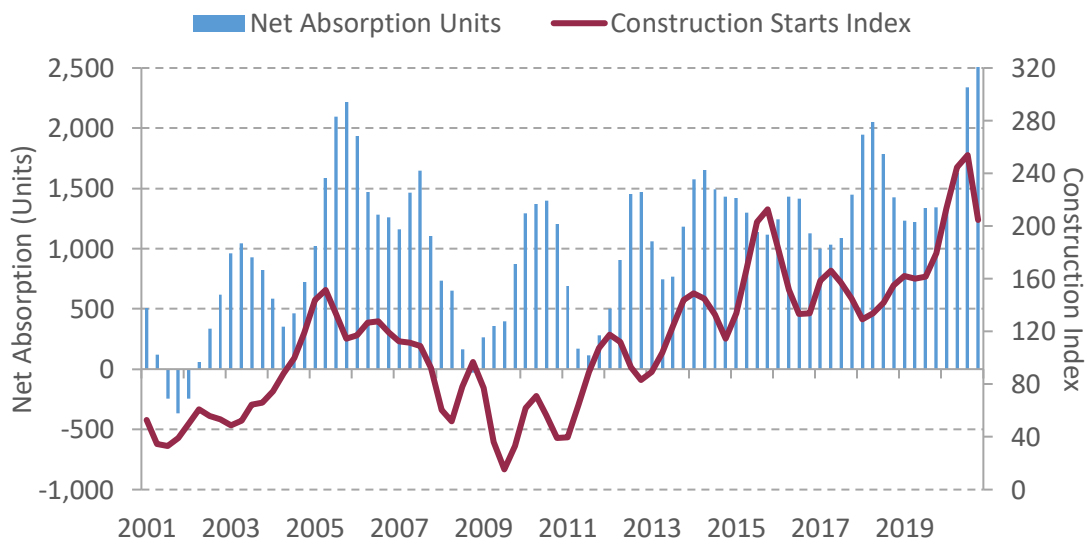


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

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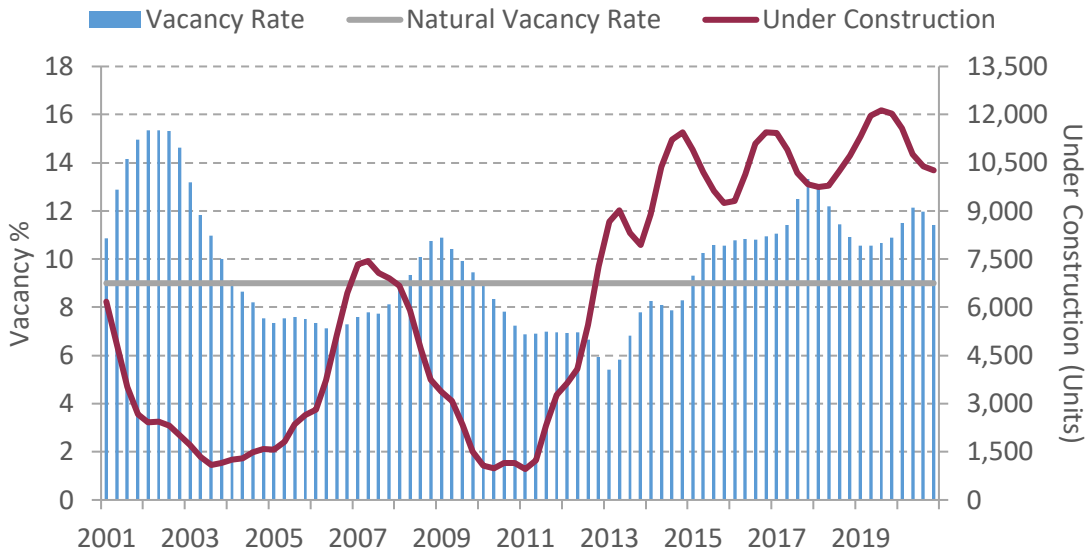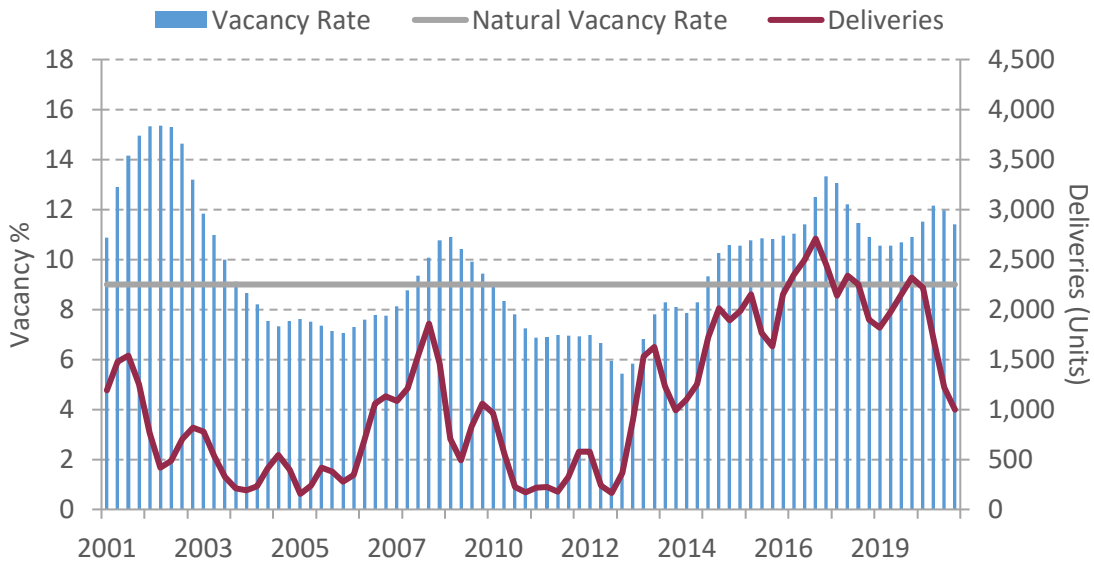**Figure 23. San Antonio Overall Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 24. San Antonio Overall Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

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# Austin Class A

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|:---:|:---:|:---:|:---:|
| ▲ 88.7% | ▲ -2.8% | ▲ 1,793 | ▼ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 25. Austin Class A Vacancy and Effective Rent Growth (SA and TC)\***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University
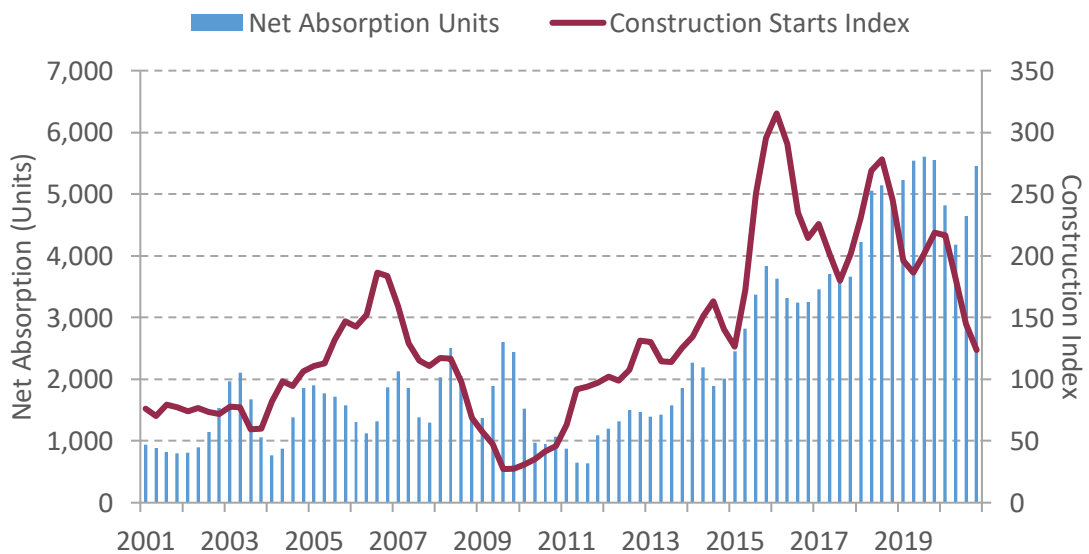
**Figure 26. Austin Class A Net Absorption and Construction Starts Index (SA and TC)\***
**(Index 2000 Q1 = 100)**



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

**Figure 27. Austin Class A Vacancy and Units Under Construction (SA and TC)***

Legend: ▮ Vacancy Rate — Natural Vacancy Rate — Under Construction



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 28. Austin Class A Vacancy and Deliveries in Units (SA and TC)***
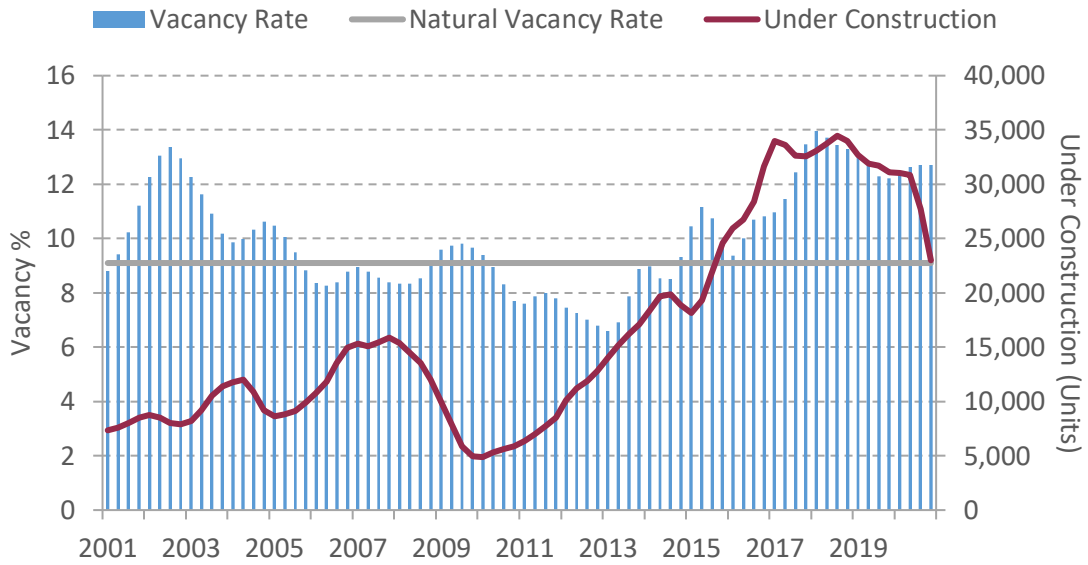
Legend: ▮ Vacancy Rate — Natural Vacancy Rate — Deliveries



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

# Dallas-Fort Worth Class A

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|:---:|:---:|:---:|:---:|
| 87.4% | ▼ -2.1% | ▼ 5,233 | ▲ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

### Figure 29. DFW Class A Vacancy and Effective Rent Growth (SA and TC)*
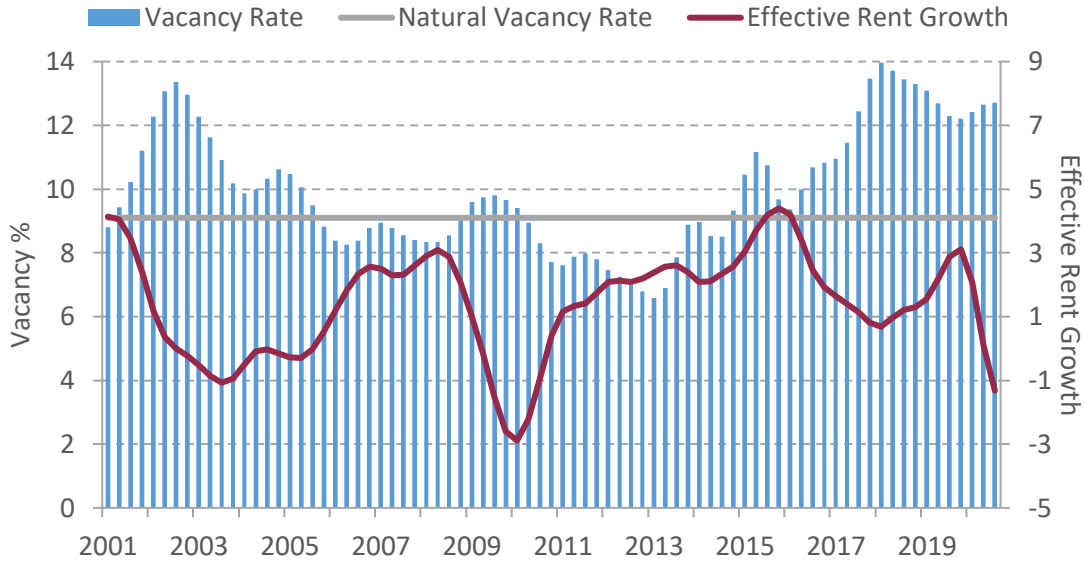


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

### Figure 30. DFW Class A Net Absorption and Construction Starts Index (SA and TC)*
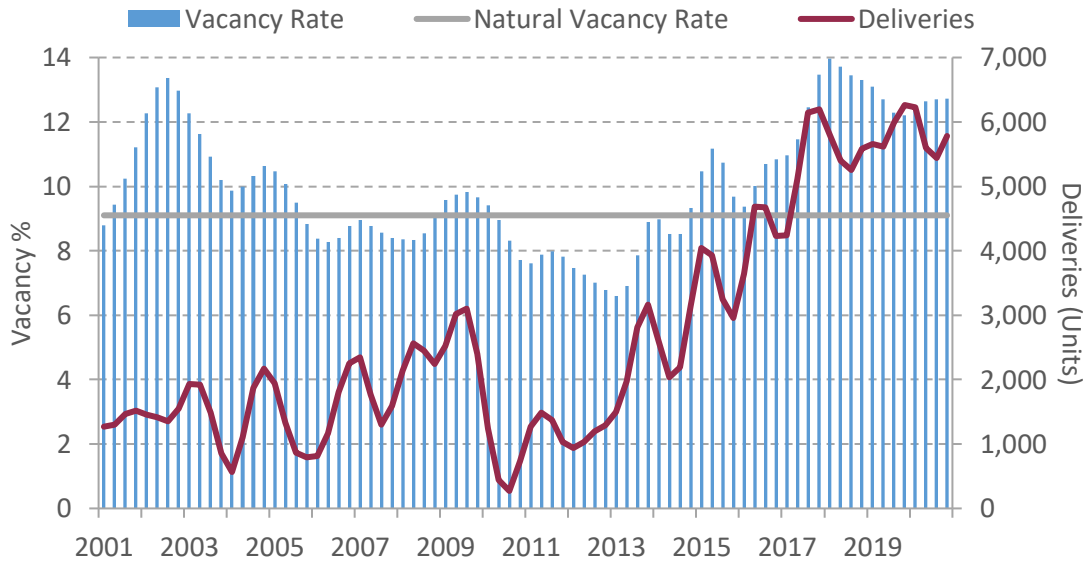**(Index 2000 Q1 = 100)**



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

**Figure 31. DFW Class A Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 32. DFW Class A Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University
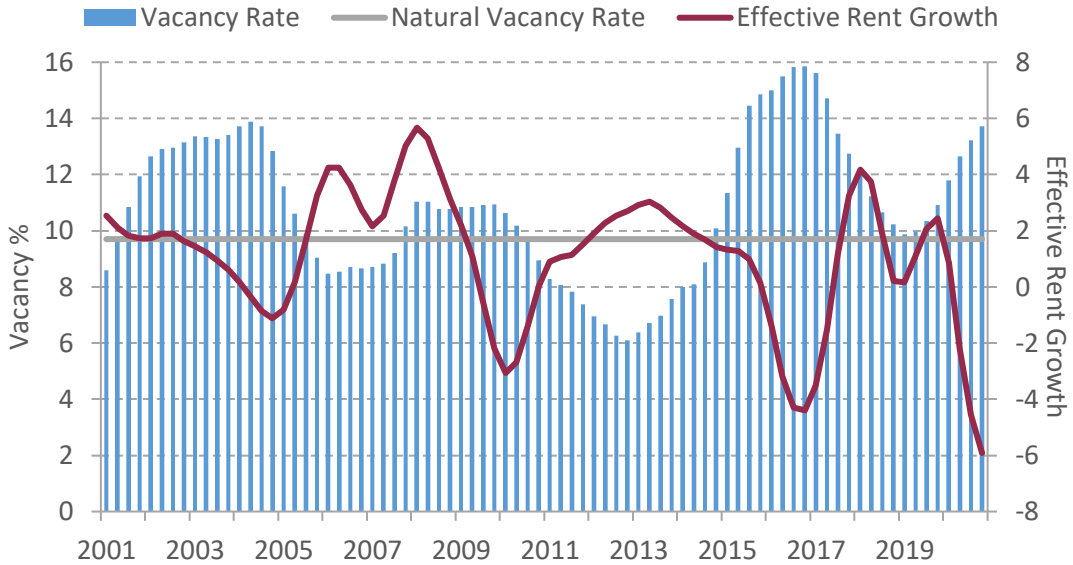
# Houston Class A

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|:---:|:---:|:---:|:---:|
| ▼ 86.4% | ▬ -4.8% | ▲ 3,496 | ▲ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

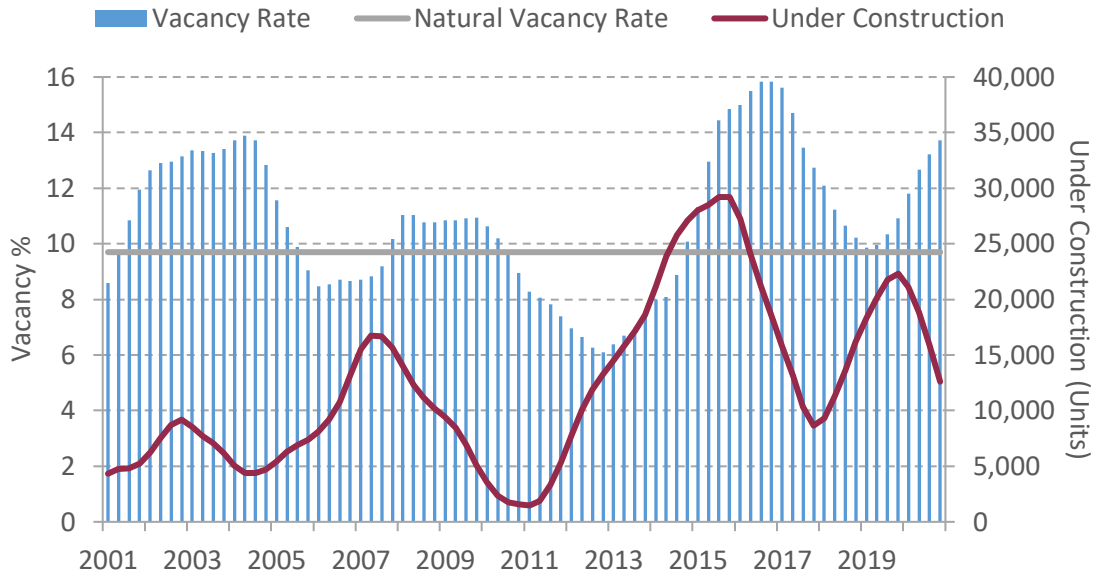### Figure 33. Houston Class A Vacancy and Effective Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

### Figure 34. Houston Class A Net Absorption and Construction Starts Index (SA and TC)*
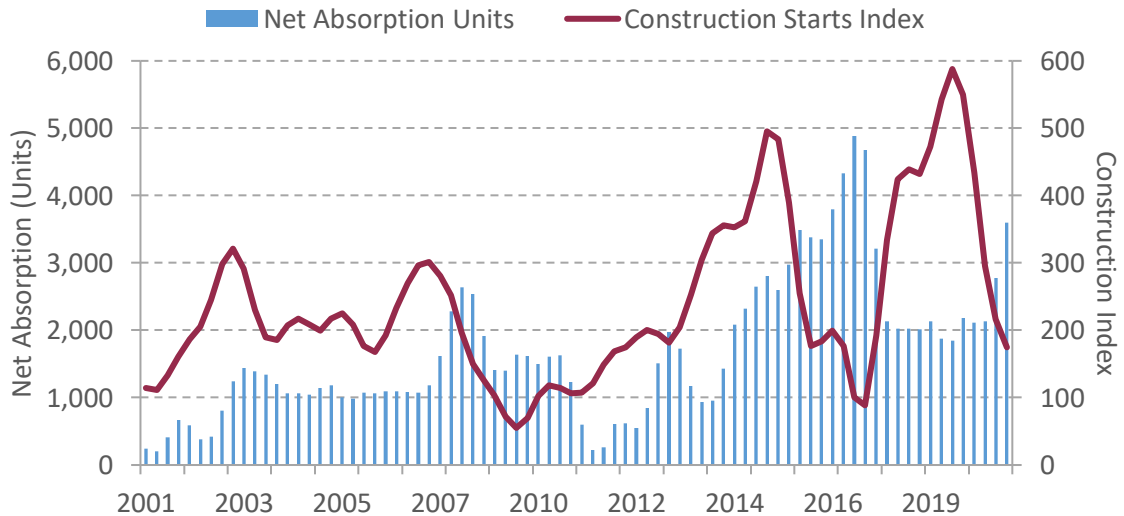
### (Index 2000 Q1 = 100)


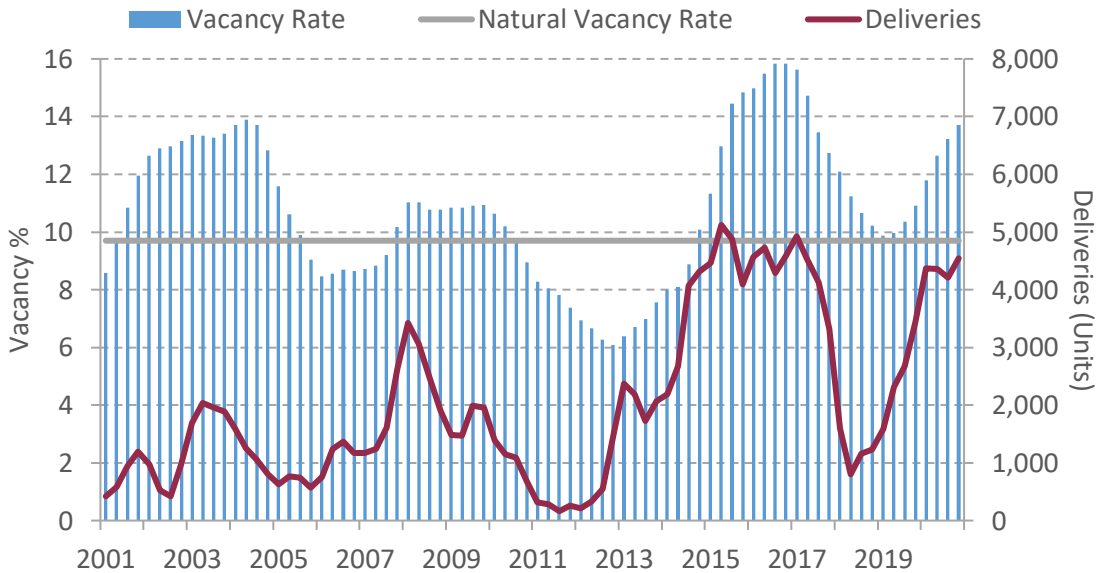
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

**Figure 35. Houston Class A Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 36. Houston Class A Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

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# San Antonio Class A

| OCCUPANCY RATE | EFFECTIVE RENT GROWTH (PER UNIT) | NET ABSORPTION (UNITS) | CONSTRUCTION STARTS |
|---|---|---|---|
| ▲ 89.8% | ▲ -1.0% | ▲ 1,436 | ▼ |

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

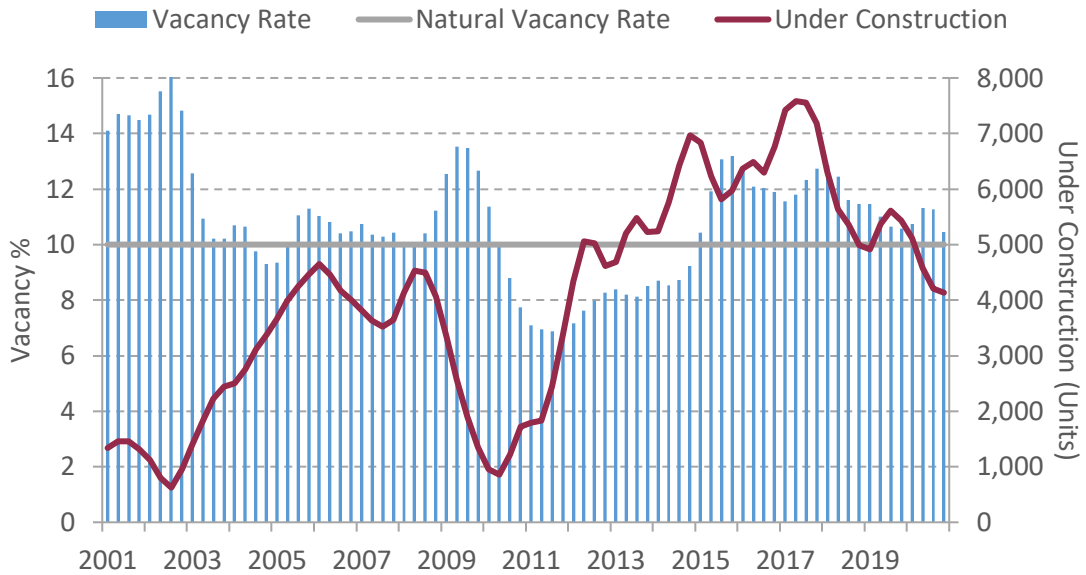### Figure 37. San Antonio Class A Vacancy and Effective Rent Growth (SA and TC)*
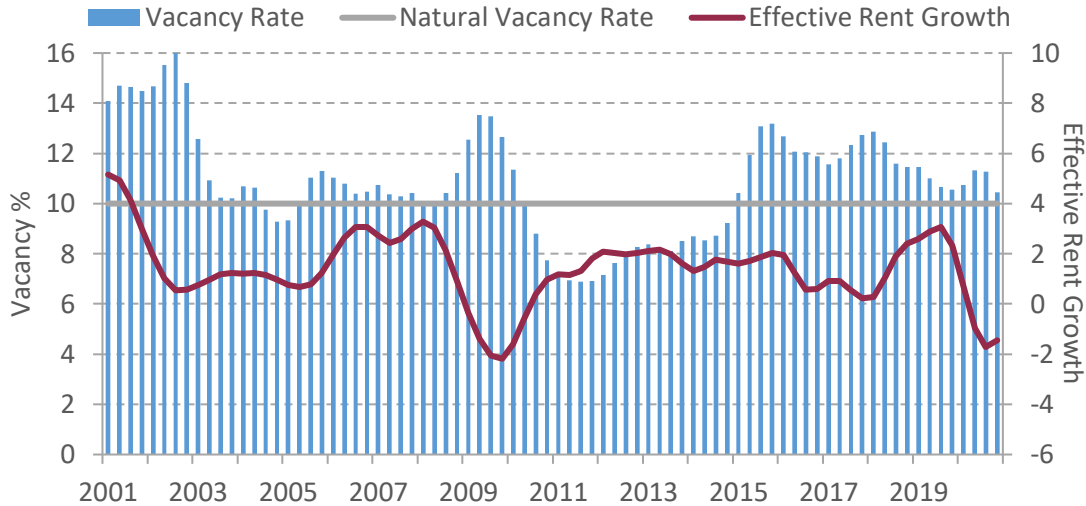


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

### Figure 38. San Antonio Class A Net Absorption and Construction Starts Index (SA and TC)*
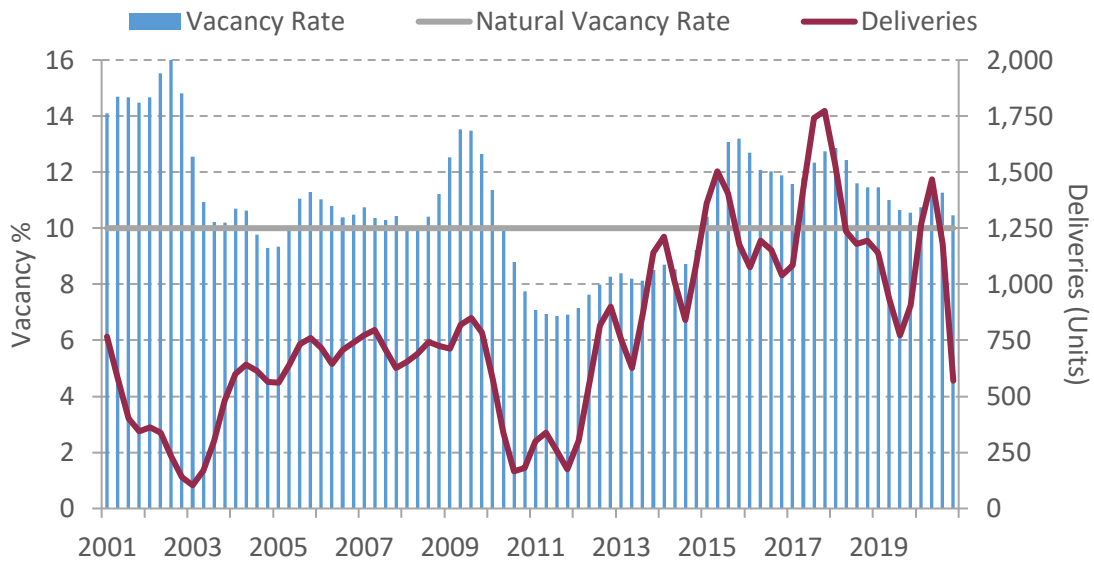**(Index 2000 Q1 = 100)**
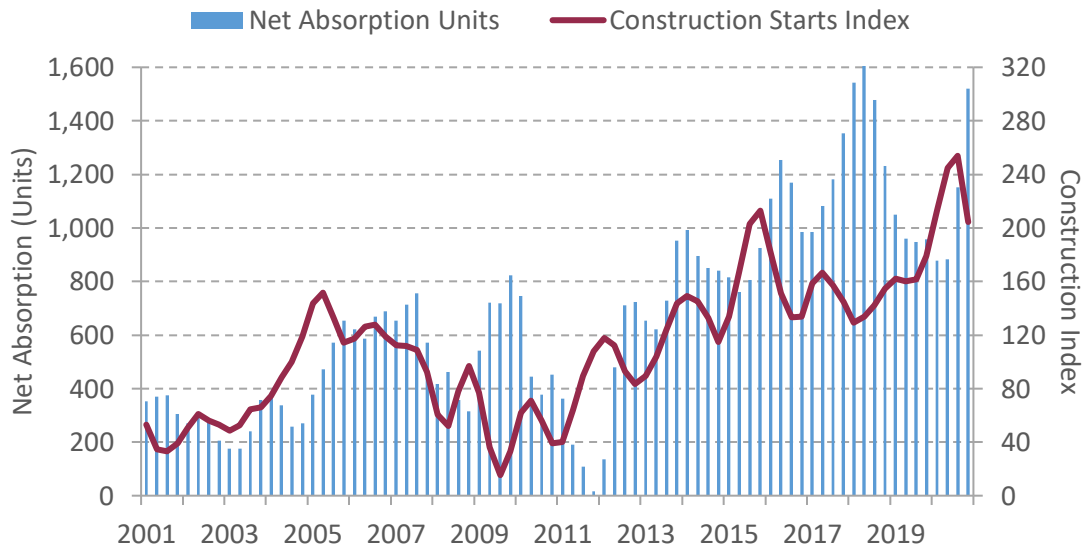


*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

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**Figure 39. San Antonio Class A Vacancy and Units Under Construction (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

**Figure 40. San Antonio Class A Vacancy and Deliveries in Units (SA and TC)***



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

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# Definitions

**Capitalization rate/cap rate:**

The cap rate is computed by dividing expected net operating income (NOI) generated from the property by the current property value (V) and expressing it as a percentage. NOI is rent minus the owner's share of expenses, such as taxes, insurance, maintenance, and management costs. Mortgage costs and any other costs of financing are not included in expenses.

In general, the higher the cap rate, the higher the risk. Investors compare cap rates for potential projects with their cost of funds when selecting investment projects, considering only those investments where the cap rates exceed the cost of funds.

Risk can be estimated by computing the "spread," the difference between the cap rate and some risk-free rate. Because commercial real estate investments are expected to generate streams of income over a long period, investors commonly use the U.S. ten-year Treasury rate as a risk-free rate.

**Construction Starts Index:** Reflects the dollar value of construction starts in relation to a specified base year (1Q2000) and is a precursor to future units under construction.

Dodge Analytics tracks commercial construction start figures as soon as a new project kicks off to estimate its total construction "value," which is essentially total construction cost. We realize some real estate professionals may question whether calling the total dollars to be spent on a project's "construction value" equates to its "market value" at completion. However, for consistency, this report will use Dodge's terminology.

**Effective rents:** Leases typically dictate this amount to be paid monthly.

**Natural and actual vacancy:**

The natural vacancy rate represents the point at which zero real (inflation-adjusted) rent growth will occur. Natural vacancy reflects the level to which vacancy rates adjust over the long term.

The actual vacancy rate reflects the seasonally adjusted and trend-cycled natural vacancy rate. The actual vacancy rate smooths the raw data by removing fluctuations created by seasonal and time trends.

Natural vacancies for the possibility of new construction are calculated separately using historical construction data. The calculated natural vacancies were compared with the actual vacancies to estimate whether new development should be expected in the various commercial

real estate markets. When actual vacancy in a local market falls below natural vacancy, developers may consider building new space.

A comparison of natural vacancy and actual vacancy along with historical vacancy trends allows researchers to anticipate the direction of commercial real estate (CRE) rental rates in real terms. When actual vacancy in a local market falls below (rises above) natural vacancy, building managers may consider increasing (decreasing) rents.

Aggregate natural vacancy in an overall market may not reflect the trigger vacancy rate an individual CRE professional uses to make decisions affecting a specific property or project. However, these measures indicate the direction of rents and new construction.

**Net Absorption:** The net change in occupied space, measured in units, over a given period. Net absorption reflects the amount of space occupied as well as the amount of space vacated.

**Nominal:** Value or rate that reflects current prices or rates, without adjusting for inflation.

**Seasonal Adjustment:** A statistical method for removing the seasonal component of a time series that exhibits a seasonal pattern.

**Trend-cycle component:** Removes the effects of accumulating data sets from a trend to show only the absolute changes in values and to allow potential cyclical patterns to be identified.

**Under Construction:** Reflects the number of units under construction within a particular market; applies to buildings that have not received a certificate of occupancy.

**Vacancy Rate:** A measurement expressed as a percentage of the total amount of physically vacant units divided by the total amount of existing inventory.

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