Texas Quarterly Apartment Report

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Texas Quarterly Apartment Report:
3rd Quarter 2020

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OVERALL	91.7% =	0.2% ▼
CLASS A	87.4% =	-1.4% ▼

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OVERALL	90.0% =	-2.9% ▼
CLASS A	87.4% ▲	-3.7% ▼

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OVERALL	90.4% =	-0.1% ▼
CLASS A	88.4% =	-2.1% ▼

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OVERALL	89.8% =	-1.5% ▼
CLASS A	87.0% ▼	-4.9% ▼

Note: Changes are considered significant if they are greater than 0.2 percent in absolute terms.

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

Table of Contents

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About this Report

Real Estate 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. James Gaines, Dr. Luis Torres, Dr. Harold Hunt, Kristina Richter, Caleb Smoot, and Garrett Newman

Economic activity rebounded during third quarter 2020 after contracting sharply during the previous quarter due to COVID-19 shelter-in-place restrictions. Putting the health crisis in a historical context, neither the Great Depression, Great Recession, nor any other recession over the past two centuries caused such a steep economic decline. The strength and pace of the recovery slowed at the end of the third quarter due to the incomplete reopening of the economy, fiscal stimulus dissipating, and future uncertainty regarding the pandemic.

The Texas Residential Construction Cycle (Coincident) Index, which measures current construction levels, ticked up due to the improvements in industry wages, employment, and construction values. The Residential Construction Leading Index rose for the fifth straight month amid increased building permits and housing starts and a decrease in the real ten-year Treasury bill (Figure 1). The major metros registered growth in their leading indexes except for San Antonio, where permits and starts fell, pulling the metric down (Figure 2).

Overall market trends declined during September as more Metropolitan Statistical Areas (MSAs) started to register year-over-year negative changes in occupancy rates, causing the Texas average to register a negative value. Due to the difficulties facing the oil industry, the apartment market in Midland/Odessa continued to struggle during September, registering both negative rent growth and negative changes in occupancy rates. Houston also registered negative numbers in both categories (Figure 3).

The Texas economy lost 1.4 million jobs in March and April but recovered 661,000 of those jobs from May through September. Texas nonfarm employment gained 40,700 jobs during September as hiring slowed after broad improvements the previous months. Jobs remained 5.1 percent below the 2019 year-end levels. Employment by sector in the major metros recovered in September at varying paces, but the leisure/hospitality sector made up the lion's share of gains across the board.

Although Austin gained only 1,300 jobs in September, the metro registered the smallest decline of 3.6 percent below year-end 2019 employment. The leisure/hospitality sector accounted for the majority of year-to-date (YTD) losses in Austin and Dallas, where monthly hiring added 10,100 workers, pulling the YTD contraction to 3.9 percent. Employment was 5.8 and 5.6 percent below year-end 2019 levels in Houston and Fort Worth, respectively, amid widespread losses across both goods-producing and service-providing industries despite the monthly addition of 20,300 positions in the former and 2,600 in the latter. Decreases in San Antonio's government sector offset hiring in leisure/hospitality, resulting in 1,600 jobs shed in September and a 5.1 percent YTD decline.

Upsurges in COVID-19 cases could hinder Texas' economic recovery going forward. Further waves of infections could reverse increased mobility and spending, affecting future recovery. The good news for the coming year is the announcement of two COVID-19 vaccines reporting between 90 percent and 95 percent effectiveness. While the initial news of a successful vaccine helps to reduce some of the economic uncertainty surrounding the pandemic, issues remain. These include monumental job loss, stagnate private investment, and a decline in business activity. Also, it will take many months before a vaccine can be administered to enough people to allow the economy to operate at pre-pandemic levels,

causing further harm to businesses that cannot socially distance. For additional commentary and statistics, see *Outlook for the Texas Economy*.

Texas' goods-producing payrolls expanded by 7,700 workers in September, but industry employment still fell 7 percent YTD. Energy-related employment contracted for the seventh straight quarter, although 1,300 monthly jobs were added. The manufacturing sector also posted gains for the month, adding 1,100 and 1,600 employees in durable goods and nondurable goods, respectively. The latter recorded positive quarterly growth but remained below year-end levels. In addition, the construction industry eked out positive quarterly growth as payrolls grew by 3,700 jobs in September.

The service-providing industry added 33,000 monthly positions, bringing the three-month recovery to 179,900 total employees. Still, jobs were down 5 percent YTD with leisure/hospitality losses numbering 239,100. Federal government employment, however, increased 14.8 percent YTD amid mid-year census-related recruitment, while professional/scientific/technical services and finance/insurance were up modestly above year-end levels. Texas' retailers faced slight job losses in September, falling 3.4 percent below year-end employment. Although general merchandisers decreased by 8,900 workers that month, the subsector registered only a 1.2 percent YTD decrease. Electronic/appliance stores and miscellaneous store retailers posted the steepest YTD declines, dropping 21.6 and 11.5 percent, respectively. In contrast, building material/garden equipment/supplies dealers increased 7.9 percent compared with December 2019 levels.

Continued uncertainty stemming from the ongoing spread of the coronavirus kept interest rates at historically low levels as expectations for future inflation and growth are currently dim. Even before the pandemic, the spread between apartment capitalization rates and the ten-year Treasury yield increased at the end of 2019 and has continued up into 3Q2020. This increased spread indicates increased risk and profitability in apartment real estate (Figure 4). This is projected to continue through the remainder of 2020, as multifamily real estate risks may increase further due to the future uncertainty created by the COVID-19 pandemic.

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 increased during 1Q2020. 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).

The state's unemployment rate reversed a four-month decline, jumping one-and-a-half percentage points to 8.3 percent, whereas the national metric continued to decrease to 7.9 percent. Joblessness rose across Texas' major metros, especially in Houston, where the rate climbed to 9.7 percent. The metric in San Antonio increased to 7.8 percent and grew to 7.7 and 7.5 percent in Fort Worth and Dallas, respectively. Austin maintained the lowest unemployment rate at 6.4 percent. The increase in unemployment 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 3Q2020 pushed up vacancy rates in the major metros (Figures 5-8).

According to the U.S. Census' Household Pulse Survey, 13 percent of Texas renter-occupied households were behind on their payments during September, lower than the national rate of 15 percent (Table 1). Renter households in DFW registered a lower value of 9 percent, contrasting with Houston's 16 percent, a value higher than the observed numbers at both the national and state levels.

Regarding ability to pay next month's rent, more than one-fourth of renter households in Texas stated they have no confidence or only slight confidence in making their rent payment next month, similar to the 25 percent observed at the U.S. level (Table 2). Both DFW and Houston recorded higher percentages of 29 and 27 percent, respectively. This is a troubling sign for both renters and landlords going forward.

Half of Texas respondents who were not current on rental payments expected eviction to be either very likely or somewhat likely in the next two months, compared with 43 percent nationwide (Table 3). That same metric, however, was lower in DFW at 42 percent compared with Houston, which registered 56 percent. The oil industry's struggles have translated into layoffs, negatively affecting Houston's labor and rental markets. The Center for Disease Control's federal eviction moratoriums are in place until Dec. 31, 2020. The Federal Housing Finance Agency has extended the eviction moratorium for properties owned by Fannie Mae and Freddie Mac (the Enterprises) until Jan. 31, 2021. The results of the survey highlight the troubling issues that the multifamily market will face in 2021 once the moratorium ends. Continued improvement in household stability is essential to Texas' economic recovery.

Uncertain Outlook of COVID-19 Impact on Multifamily

- The national eviction moratorium expires Dec. 31, 2020, but is extended until Jan. 31, 2021 for Enterprise-owned properties.
- 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 to make mortgage payments on properties.
- Apartment market outlook is worrisome due to the uncertainty surrounding the ending of the eviction moratorium.
- Amount and timing of any additional fiscal stimulus payments remain clouded.

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

Demographic	Occupied Without Rent	Household Currently Caught Up on Rent Payments		
		Yes	No	Did not report
United States	5%	79%	15%	0%
Texas	4%	83%	13%	0%
Dallas-Fort Worth	2%	89%	9%	0%
Houston-The Woodlands-Sugar Land	7%	77%	16%	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.
Source: U.S. Census Bureau Household Pulse Survey, September 30 - October 12. Totals may not equal 100 percent due to rounding.

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

Demographic	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	10%	14%	24%	45%	1%	1%
Texas	11%	15%	28%	40%	2%	0%
Dallas-Fort Worth	9%	20%	22%	47%	0%	0%
Houston-The Woodlands-Sugar Land	11%	16%	33%	32%	1%	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.
Source: U.S. Census Bureau Household Pulse Survey, September 30 - October 12. Totals may not equal 100 percent due to rounding.

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

Demographic	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	16%	27%	34%	22%	2%
Texas	16%	34%	32%	18%	0%
Dallas-Fort Worth	13%	29%	15%	43%	0%
Houston-The Woodlands-Sugar Land	39%	16%	23%	22%	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.
Source: U.S. Census Bureau Household Pulse Survey, September 30 - October 12. Totals may not equal 100 percent due to rounding.

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Austin (Figures 9 – 12)

With vacancy in the overall Austin apartment market trending upward, increasing to 10.0 percent during 3Q2020, effective rent growth has continued to decline to almost -2.9 percent. Austin has not seen such low effective rent growth percentages since the Great Recession. Despite the rising vacancy rates and low effective rent growth percentage numbers, the overall Austin apartment market's rent payment percentages are maintaining year over year. According to data obtained from Real Page Inc., the rent payment percentage of multifamily tenants in Austin remains around 96.4 percent, decreasing only 0.7 percent from the previous year, helped by the income transfers provided by the federal government during the pandemic.

Net absorption increased from 2Q2020, indicating increasing demand. In addition, construction starts rebounded during 3Q2020, although remaining below 1Q2000 levels. In a similar fashion, units under construction continued to decrease from 2Q2020, but remained relatively high compared with previous years' numbers. Finally, deliveries dropped again this quarter to just below those of 1Q2020. This metric is reinforced by information obtained from the U.S. Census Bureau that ranks Austin-Round Rock ninth in the United States for number of building permits submitted for 5+ multifamily units in 3Q2020. This comes after Austin was ranked sixth overall in 1Q2020 and fifth in 2Q2020. Looking only at Austin-specific data may suggest the Austin apartment market is stalling or even declining due to the pandemic. However, with additional information it appears to be healthier than most other U.S. cities.

Dallas-Fort Worth (Figures 13 – 16)

Actual vacancy fell to 8.3 percent in the overall Dallas-Fort Worth apartment market in 3Q2020. This reduced the vacancy rate back below the natural vacancy line of 8.5 percent. However, despite the improved vacancy percentage, effective rent growth continued to fall, eventually settling at 0.2 percent to end the quarter. As a result, net absorption increased from the previous quarter to the highest level seen in 2020.

Additionally, value of construction starts fell this quarter along with the number of units under construction. However, the reduced units under construction is attributed to the increase in units delivered in 3Q2020. Despite a drop in construction starts this last quarter, the Census Bureau ranked Dallas-Fort Worth-Arlington fourth in the nation for the number of 5+ multifamily units that had building permits submitted this quarter. This suggests DFW is experiencing more growth than other MSAs around the country.

Additional insight can be found in RealPage Inc.'s data, which show that 96.1 percent of Dallas-Fort Worth renters made rent payments in 3Q2020. This value is only a 1 percent decrease from the same quarter in 2019, establishing evidence that despite negative effects of COVID-19

most residential tenants are managing to continue paying rent. Although vacancy remained relatively unchanged in the area, the longer the recession lingers the fewer the number of renters making rent payments as the year goes on. The narrative will change when the eviction moratorium is set to expire. However, if the rent payment percentages in the overall market hold, evictions will be less than initially expected when thousands of people lost their jobs due to the pandemic.

Moving forward, the main factor that could jeopardize this market's underlying growth would be an onset of additional coronavirus cases causing nonsocially distanced industries to remain only partially open. If the number of COVID-19 cases were to increase drastically, causing added economic uncertainty, more layoffs could occur. In that case, evictions could increase, resulting in the possibility of landlords' inability to pay their debts. Landlords may be forced to sell off their assets at a discount or file bankruptcy, resulting in overall depreciation of multifamily asset values.

Houston (Figures 17 – 20)

The actual vacancy rate increased to 10.2 percent, remaining above the natural vacancy rate of 9.2 percent, similar to the other Texas MSAs. This has caused effective rent growth to continue to decline. Effective rent growth turned negative for the first time since 2Q2017, falling to -1.5 percent in 3Q2020. This was expected as landlords felt pressure to maintain or reduce rental rates to preserve a certain level of occupancy. The decimated oil and gas market as well as a large number of apartment deliveries at the end of 2019 are also contributing to the high vacancy rates and decline in effective rent growth.

The influx of units from the previous year is being counteracted now through drastic drops in units being delivered and units under construction and a steady decline in construction starts. As a result, net absorption rose to show the oversupplied space market righting itself in 3Q2020. However, this may change in the near future. Census data show Houston-The Woodlands-Sugar Land ranked highest in the United States for number of units of 5+-unit multifamily housing building permits that were submitted in 2Q2020 and 3Q2020.

Surprisingly, based on the information provided by RealPage Inc. for the overall Houston area, the percentage of apartment tenants paying their rent in full or in partial payments increased by 0.37 percent from 2Q2020 to 3Q2020 to 95.1 percent. Regardless of the seemingly positive quarter, the upsurges in Texas COVID-19 cases could hinder the recovery's pace by the incomplete reopening of the economy and future uncertainty regarding the pandemic.

San Antonio (Figures 21 – 24)

The actual vacancy rate for San Antonio's apartment market decreased during 3Q2020 to 9.6 percent, above the natural vacancy rate of 8.5 percent. This is unexpected given the leisure and hospitality industry's importance to San Antonio's, where one out of ten jobs are in this service industry. The fall in vacancy rates was accompanied by a decline in effective rent growth of 0.1

percent during this quarter. Compared with Texas' other major markets, San Antonio registered the slowest rate of decline in effective rent growth during 3Q2020.

Net absorption continued its increase from 4Q2019 despite the ongoing pandemic and increased deliveries. San Antonio had a surge in construction starts in 3Q2020 as well, potentially fueled by the uptick in net absorption and deliveries signaling additional demand, making it the only major Texas MSA with growth in this metric. Despite having its highest number of construction starts of the last 20 years, San Antonio ranked 28th overall in the United States for the number of building permits for 5+-unit multifamily housing.

Despite the pandemic's negative hit to the economy, RealPage Inc. reported a modest decline of 0.5 percent from 2Q2020 to 3Q2020 in the percentage of renters that made their rent payments in San Antonio, bringing the metric to an average of 94.5 percent. As mentioned before, the expectation is the number of renters that will be able to make their rent payments will decline as the eviction moratorium ends and the partial reopening of the economy begins.

*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 improved this quarter by declining to 12.6. Unfortunately, this is still higher than the natural vacancy rate of 9.0 percent. Effective rent growth continued to drop sharply, falling by 3.7 percent in the third quarter. In the last two decades, only in 2009 has effective rent growth been so low. With future waves of coronavirus cases continuing into 4Q2020, effective rent growth will likely continue to decline. With above-average vacancy and negative effective rent growth, demand for Class A multifamily space in Austin looks to have declined.

Net absorption leveled off in 3Q2020 from its rapid downturn in the first half of the year. This comes as deliveries continued to decline. The combination of a positive increase in net absorption and reduced deliveries suggests supply is successfully declining to meet the current reduced demand. Units under construction and construction starts have also decreased. Vacancy rates and effective rent growth will continue to fall if upsurges in COVID-19 cause economic and social activity to decrease, reversing increase mobility and spending, affecting the path to recovery.

Dallas-Fort Worth (Figures 29 – 32)

Over the course of the quarter, DFW's Class A apartment sector has made a slight recovery in several metrics. Actual vacancy remains relatively in line with historical data from the last three years at 12.6 percent. Effective rent growth decreased for the third straight quarter, settling at -1.4 percent.

Both net absorption and deliveries increased, suggesting stronger demand at least in the short run. Regardless, the expected upturn in national coronavirus cases results in expected increases in vacancy rates and a continued bleak outlook for effective rent growth.

Houston (Figures 33 – 36)

Similar to the overall apartment market, the Class A multifamily sector's actual vacancy increased from the previous quarter. Vacancy rested at 13.0 percent in 3Q2020, still several percentage points above the natural vacancy rate of 9.7 percent. Effective rent growth fell even further for Class A apartment space to -4.9 percent. Units delivered remained high compared with 2018 and early 2019, which only contributes to the relatively high vacancy rate and plummeting effective rent growth percentages.

Net absorption increased slightly this quarter to signal a stabilizing Houston economy as the MSA had begun to adjust to life in a pandemic. As with the other Texas MSAs, Houston's spike

in COVID-19 cases during 4Q2020 may worsen both actual vacancy and effective rent growth percentages.

San Antonio (Figures 37 – 40)

Actual vacancy rates in San Antonio Class A apartment space shrank in 3Q2020 to 11.6 percent. Such vacancy rates seem fairly normal compared with the last few years, which can be attributed to the decreased demand in the market for Class A space after the spike in units delivered during 2017. Due to the pandemic, rent growth decreased 2.1 percent annually during 3Q2020. Considering net absorption has remained relatively low since the end of 2019, the uptick in 3Q2020 to 1,224 units was surprising. However, this increase was aided by a reduction in deliveries this quarter.

Unlike other markets during the pandemic, San Antonio has had increases in construction starts as mentioned in the overall San Antonio apartment section. Based on the decline in Class A units under construction, it is assumed the increase in construction is mostly for Class B units and below. With the influx in supply not contributing to Class A units, Class A vacancy rates should maintain their current levels. Of course, future waves of pandemic cases make the outlook for the remainder of 2020 difficult to predict.

Figures

Figure 1. Texas Residential Construction Index
(Index   Jan 2000 = 100)
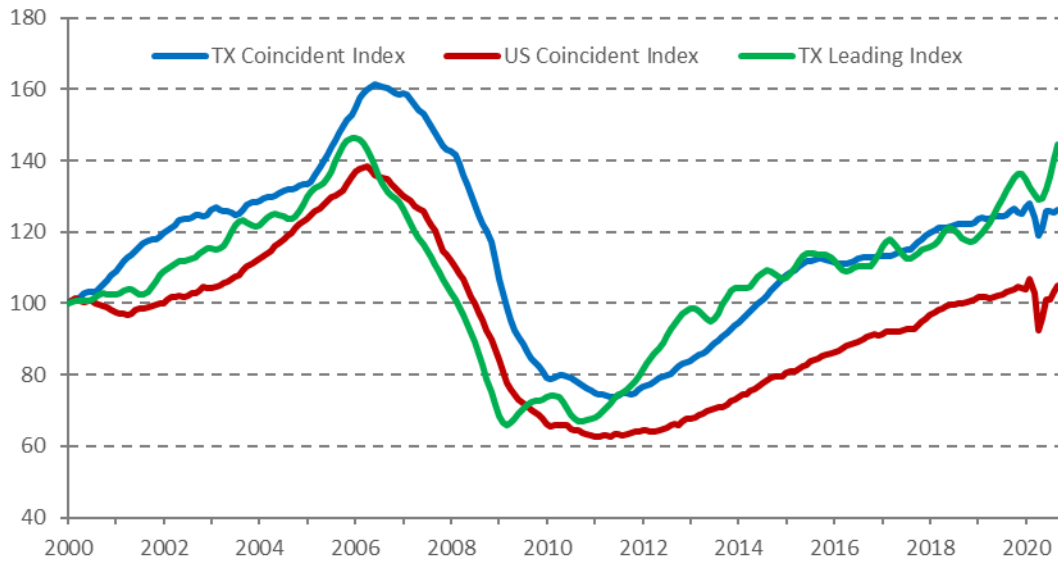
Source: Real Estate Center at Texas A&M University

Figure 2. Major MSAs' Residential Construction Leading Index
(Index Jan 2000 = 100)
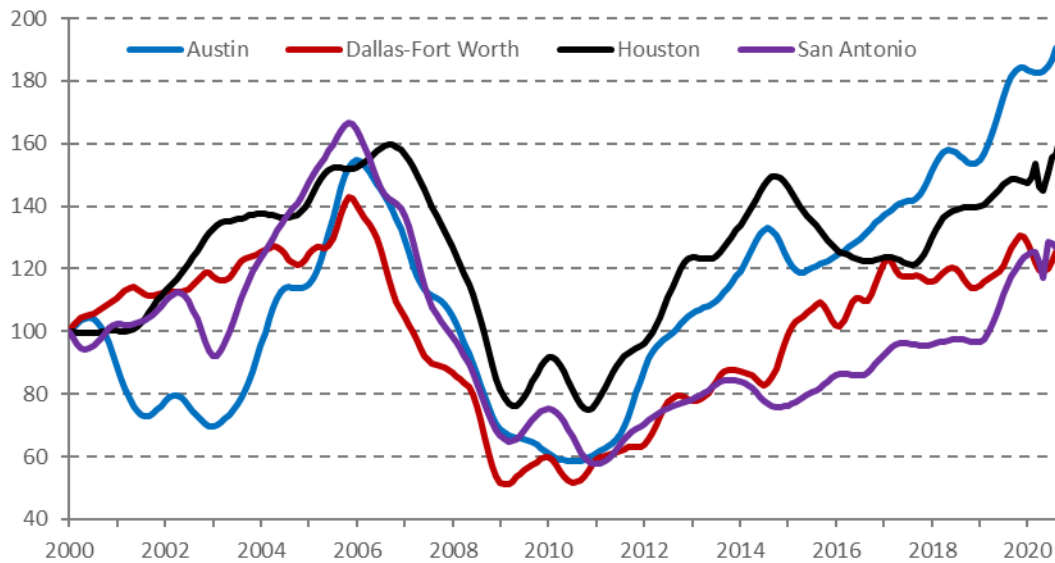
Source: Real Estate Center at Texas A&M University

Figure 3. Overall Apartment Market YOY Percent Changes in Effective Rent and Occupancy as of September 2020
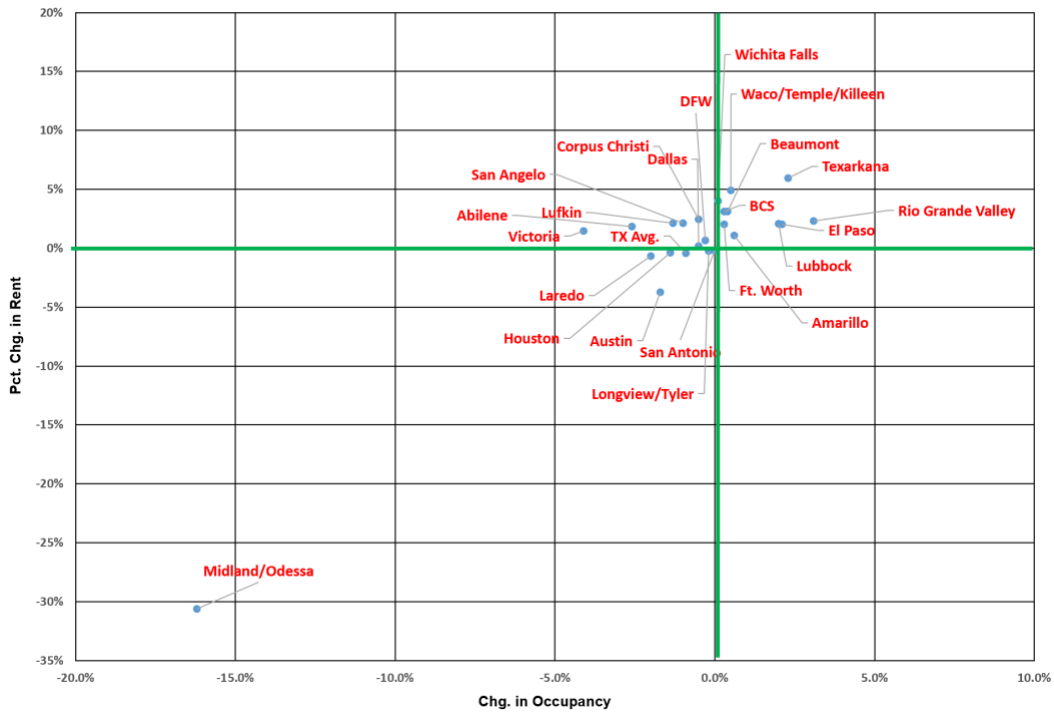
Sources: ALN Apartment Data and Real Estate Center at Texas A&M University

Figure 4. Capitalization Rates v. Ten-Year Treasury Bills
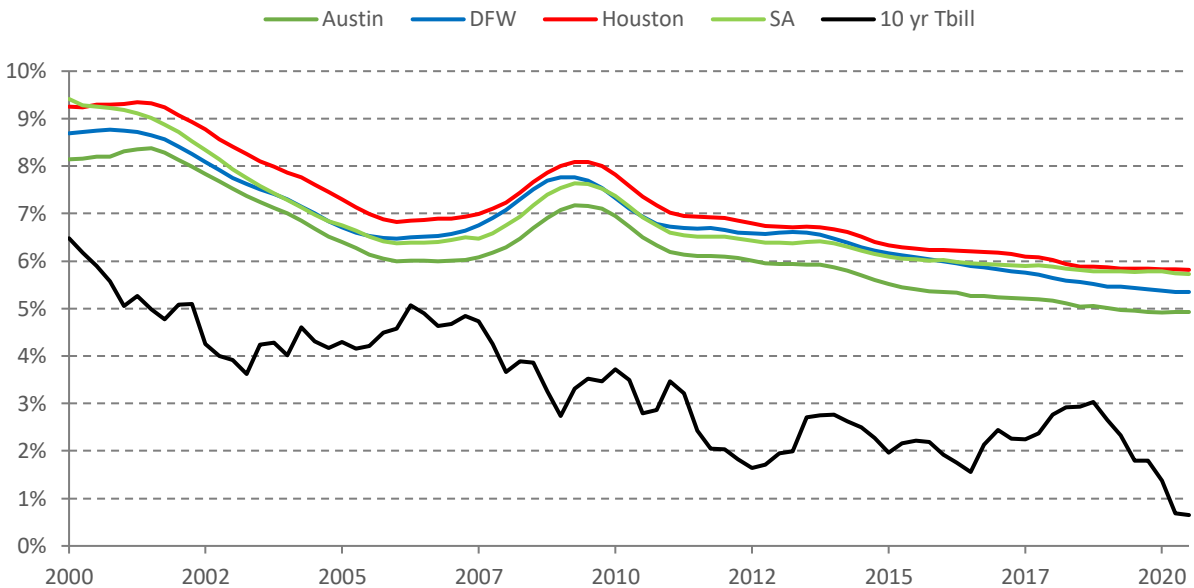
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 5. Austin Apartment Vacancy Rates and Unemployment
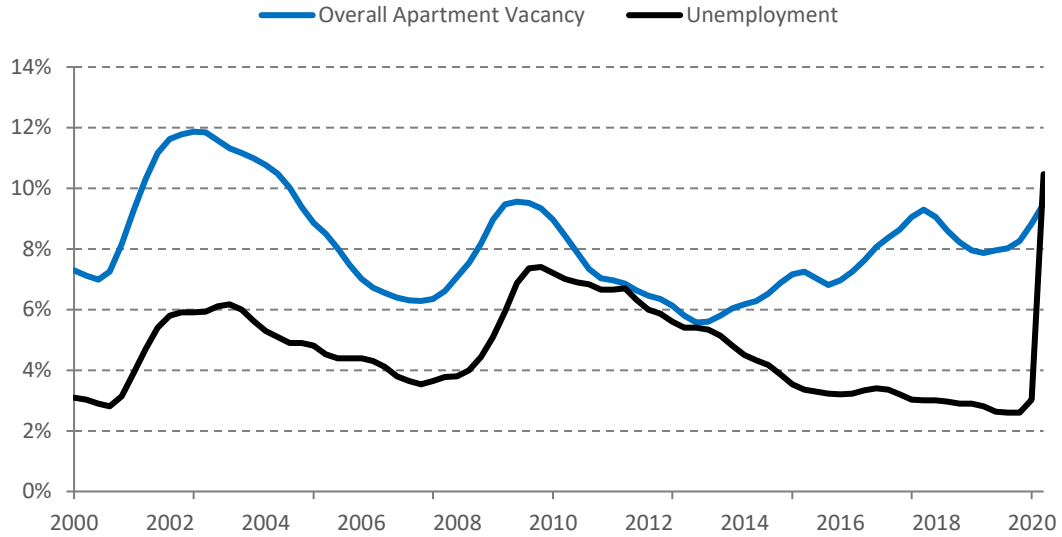
Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 6. DFW Apartment Vacancy Rates and Unemployment
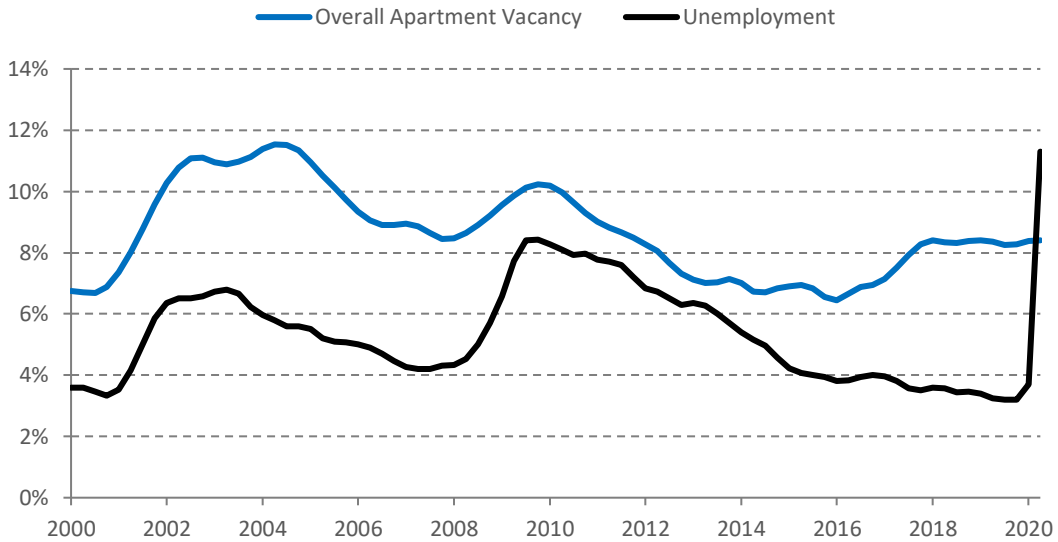
Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 7. Houston Apartment Vacancy Rates and Unemployment
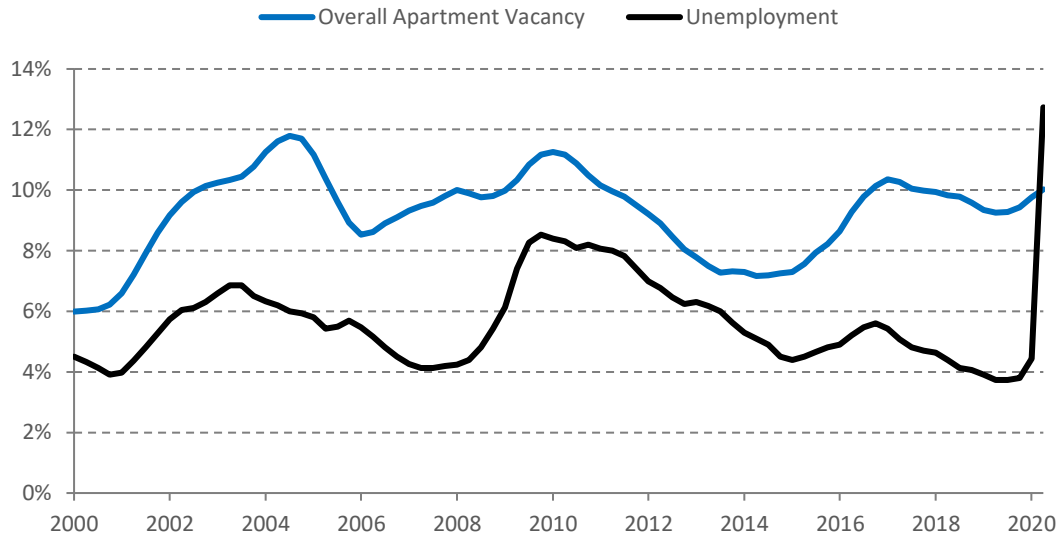
Overall Apartment Vacancy — Unemployment

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

Figure 8. San Antonio Apartment Vacancy Rates and Unemployment
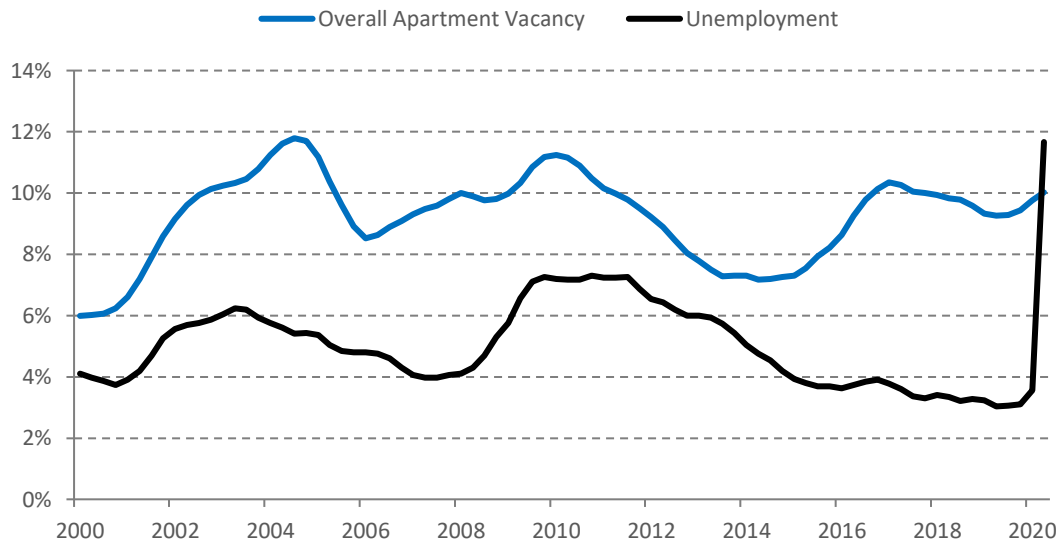
Overall Apartment Vacancy — Unemployment

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

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Austin Overall

OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
▬ 90.0%	▼ -2.9%	▲ 753	▲

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

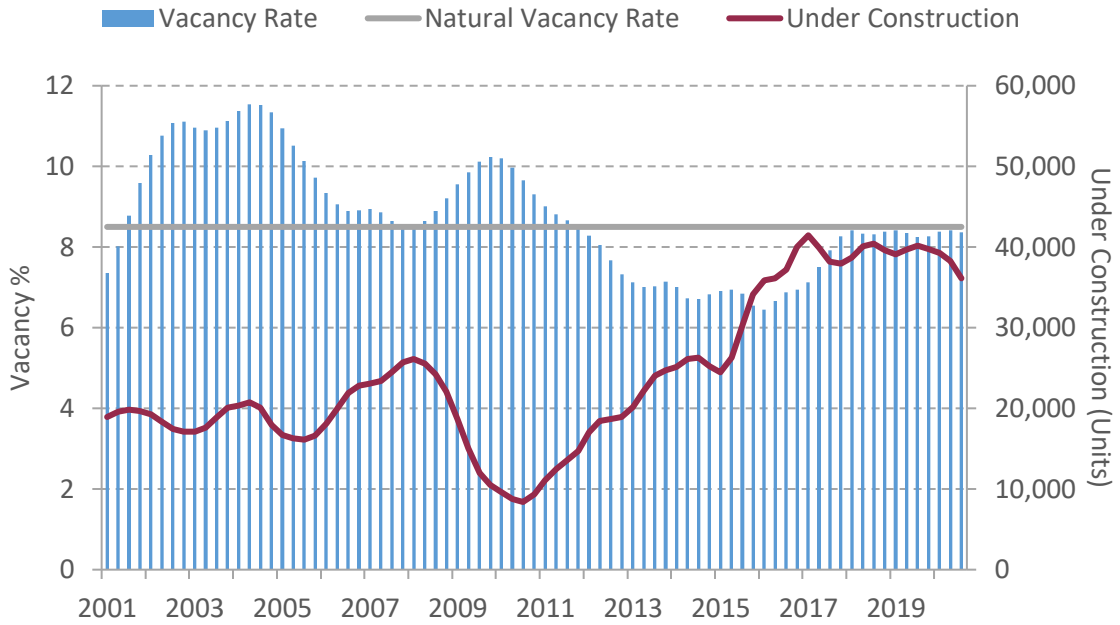### Figure 9. Austin Overall Vacancy and Effective Rent Growth
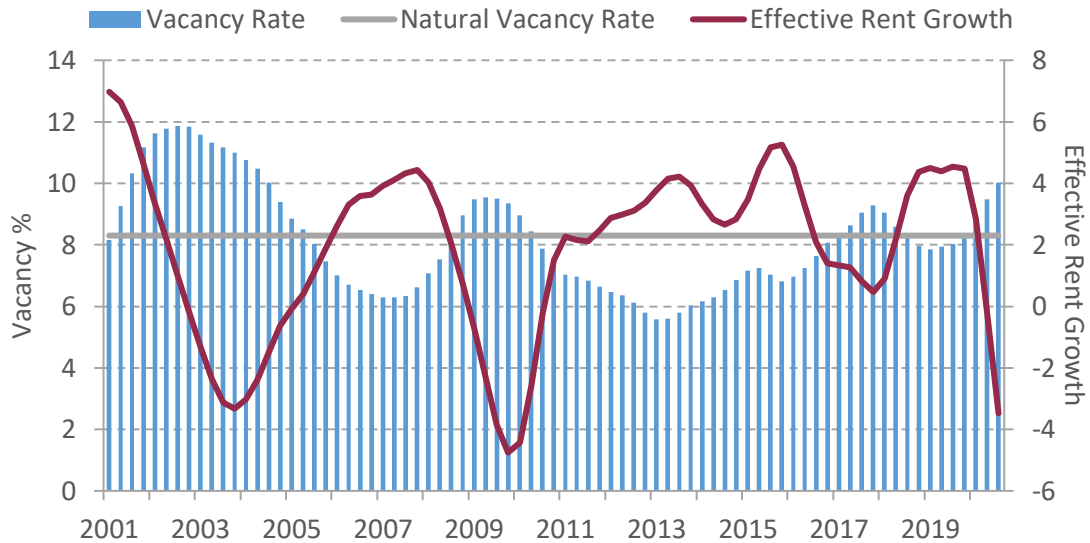
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 10. Austin Overall Net Absorption and Construction Starts Index
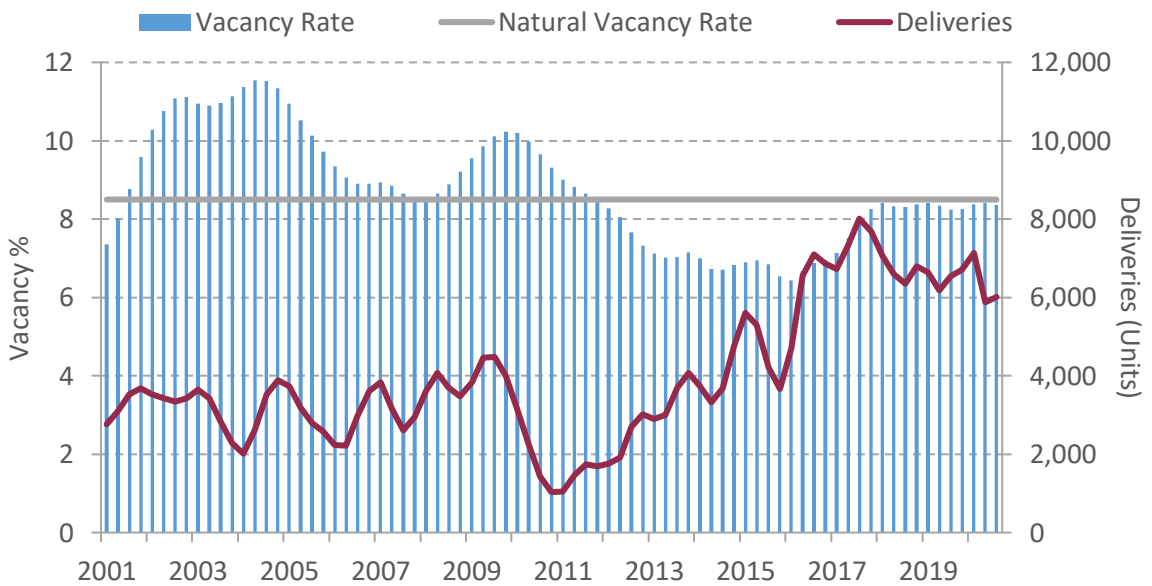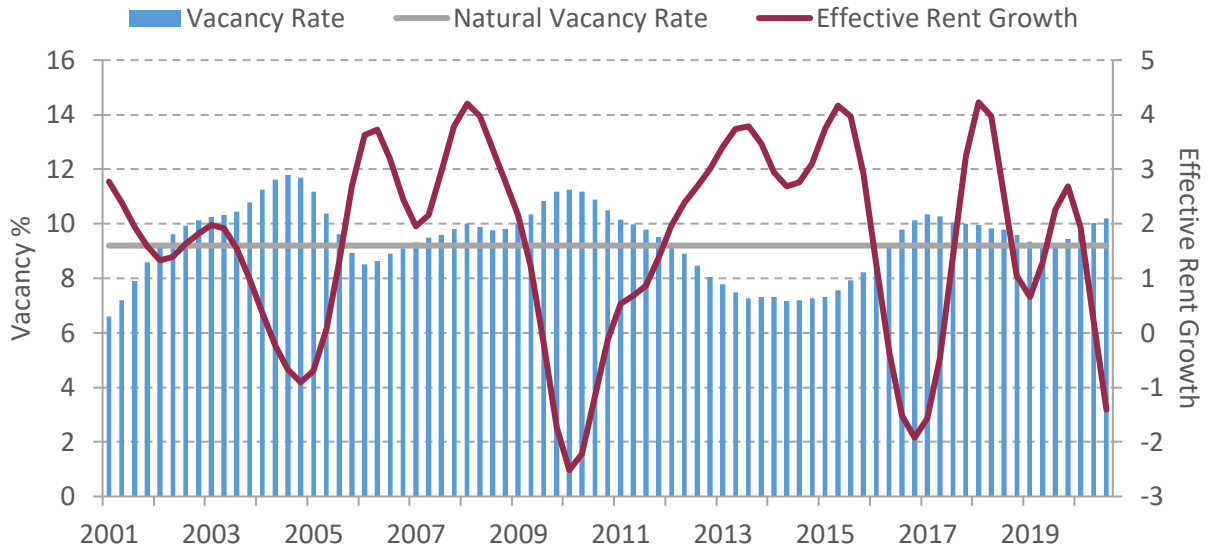**(Index 2000 Q1 = 100)**
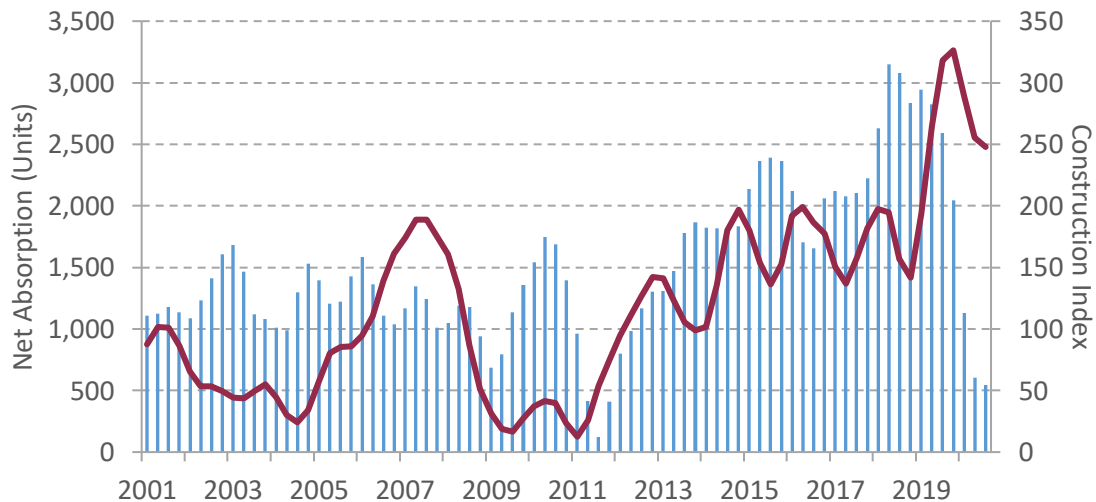
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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Figure 11. Austin Overall Vacancy and Units Under Construction
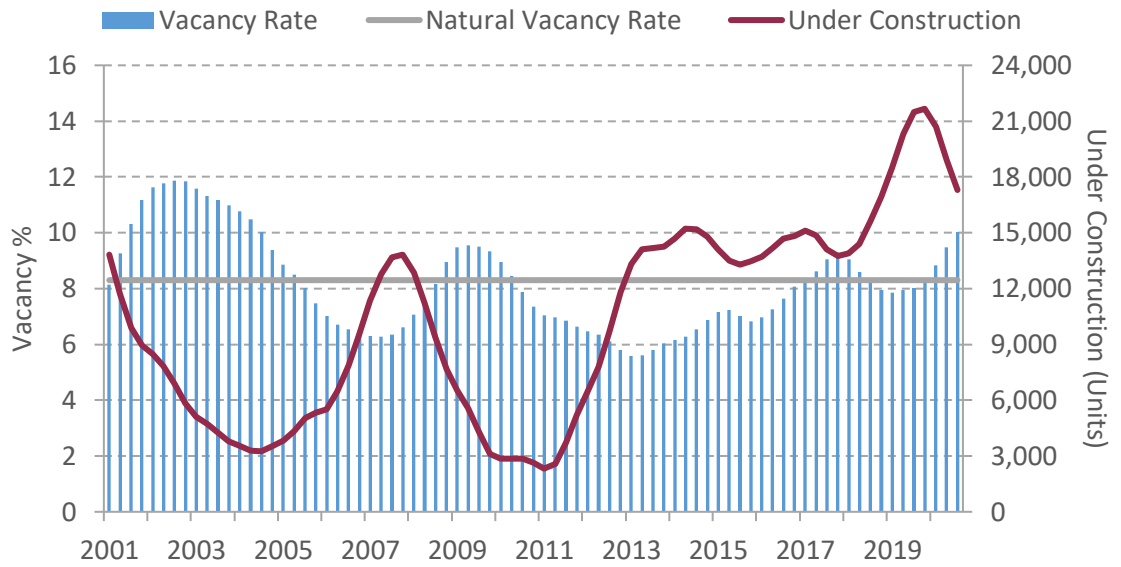
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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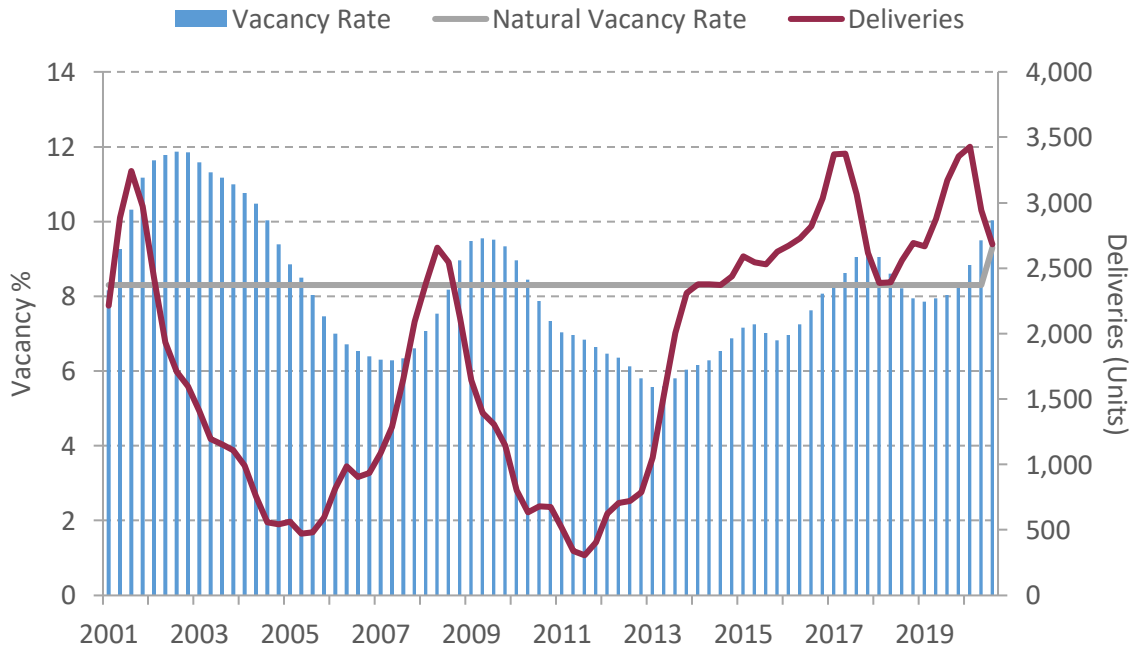
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Dallas-Fort Worth Overall

| OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
▬ 91.7%	▼ 0.2%	▲ 8,326	▼

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University
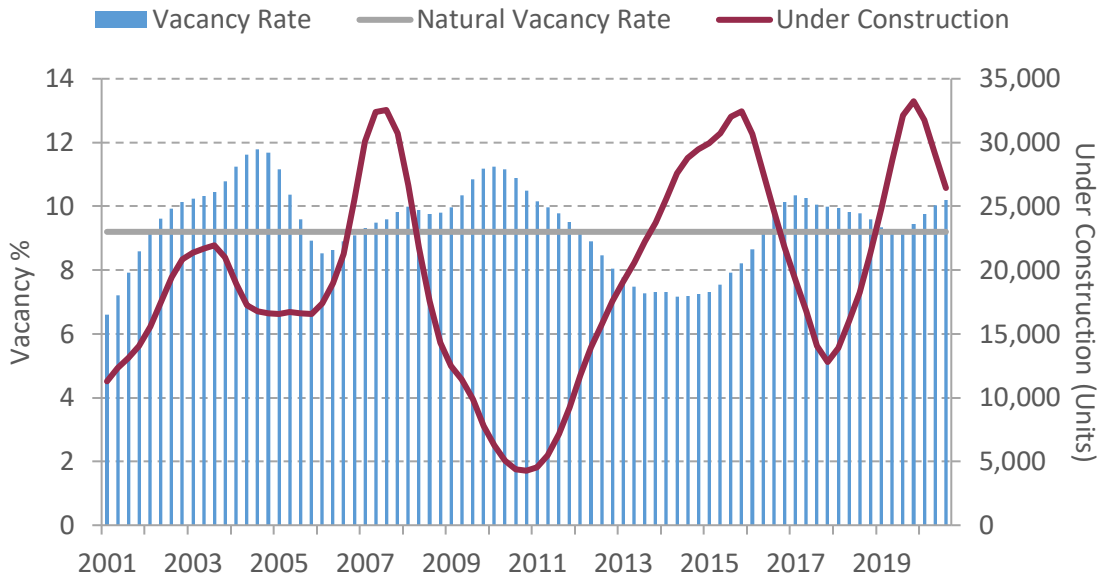
Figure 13. DFW Overall Vacancy and Effective Rent Growth
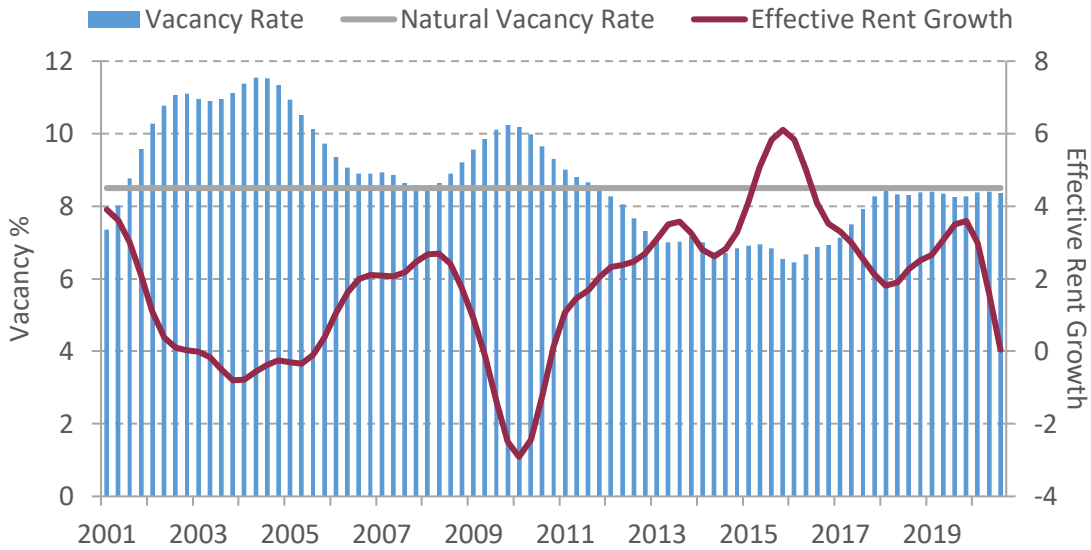
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 14. DFW Overall Net Absorption and Construction Starts Index
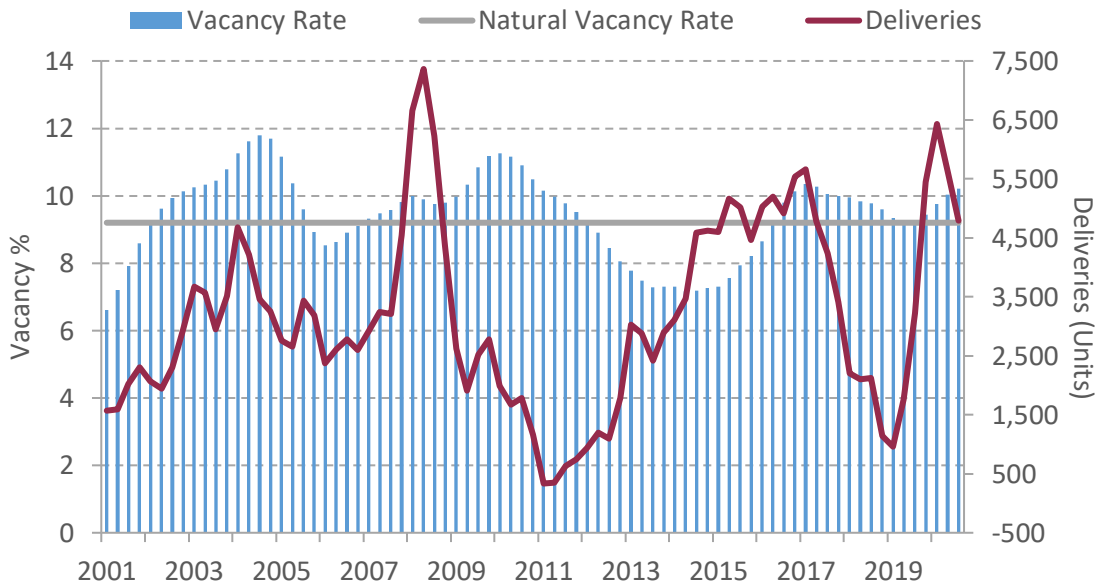**(Index 2000 Q1 = 100)**
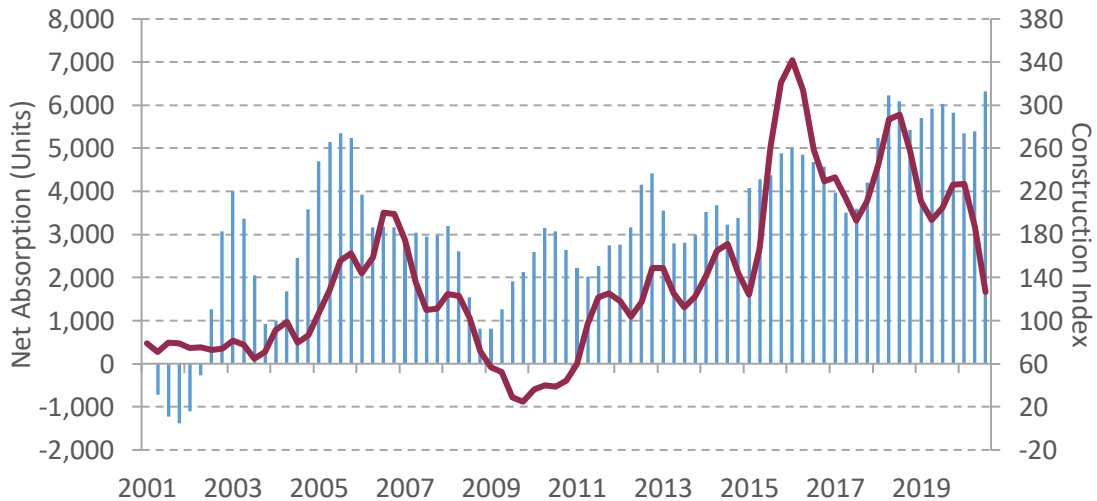
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 15. DFW Overall Vacancy and Units Under Construction

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

Figure 16. DFW Overall Vacancy and Deliveries in Units

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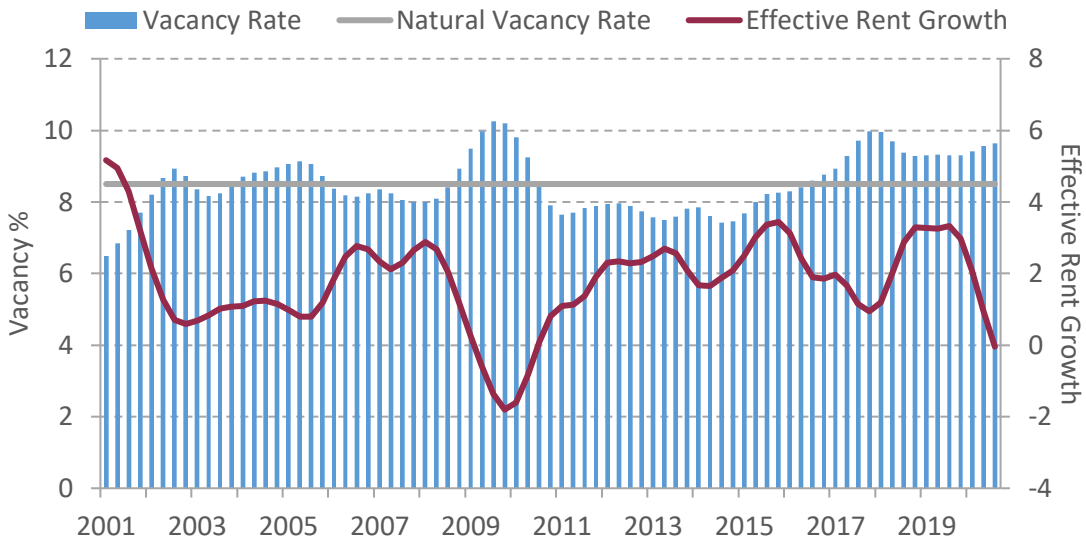Sources: CoStar and Real Estate Center at Texas A&M University

| OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
89.8%	▼ -1.5%	▲ 5,468	▼

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

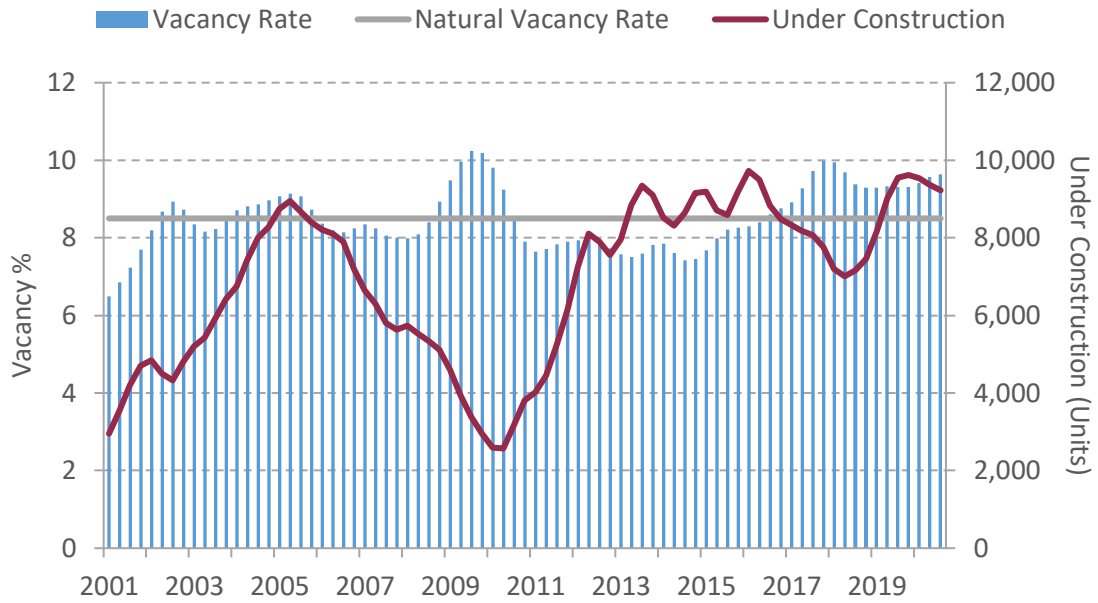**Figure 17. Houston Overall Vacancy and Effective Rent Growth**

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

Figure 18. Houston Overall Net Absorption and Construction Starts Index
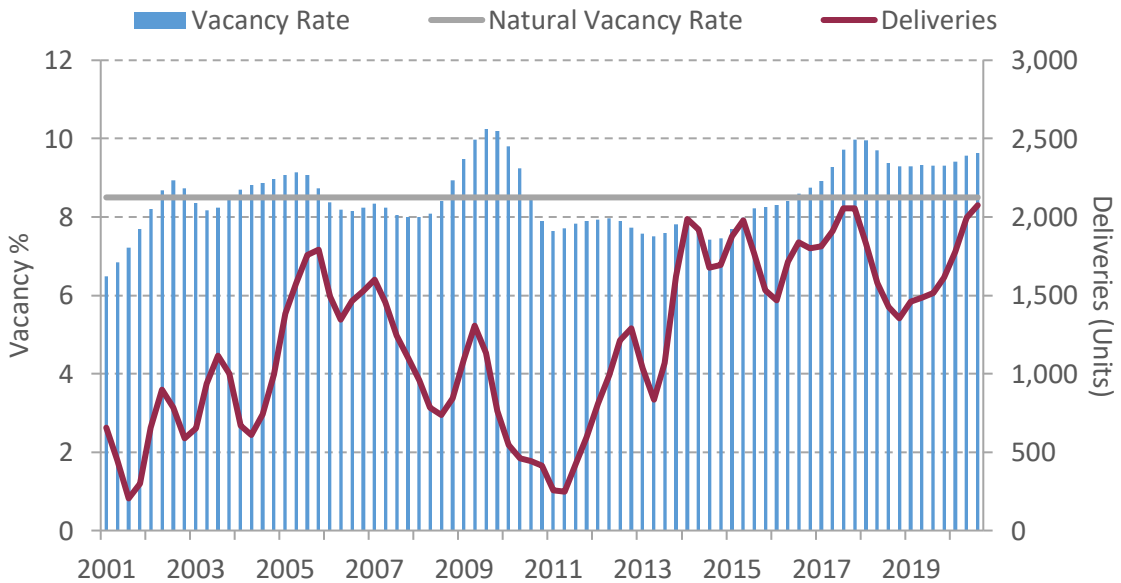**(Index 2000 Q1 = 100)**
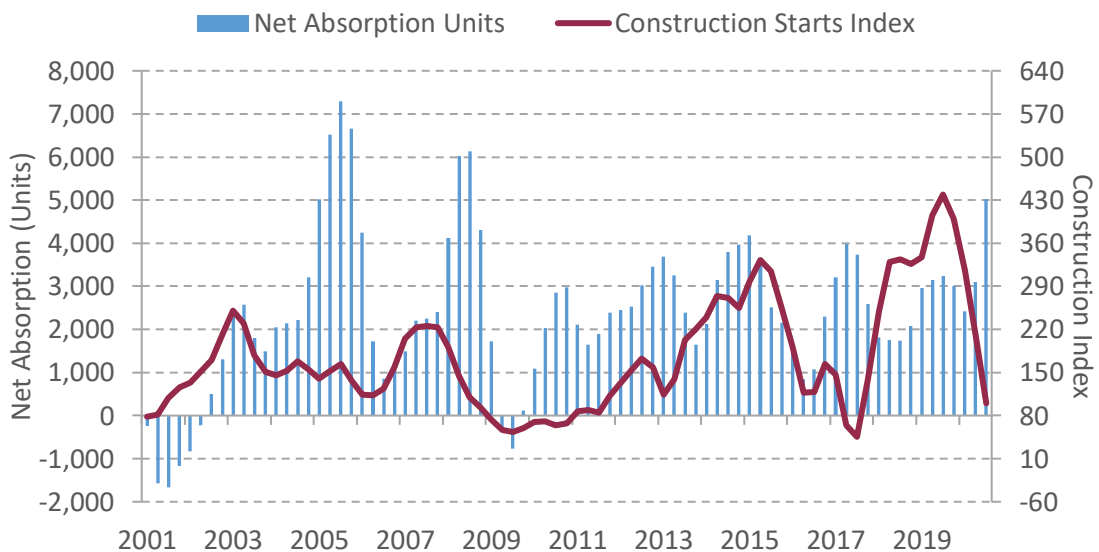
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 19. Houston Overall Vacancy and Units Under Construction

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

Figure 20. Houston Overall Vacancy and Deliveries in Units

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

San Antonio Overall

OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
▬ 90.4%	▼ -0.1%	▲ 2,525	▲

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

Figure 21. San Antonio Overall Vacancy and Effective Rent Growth

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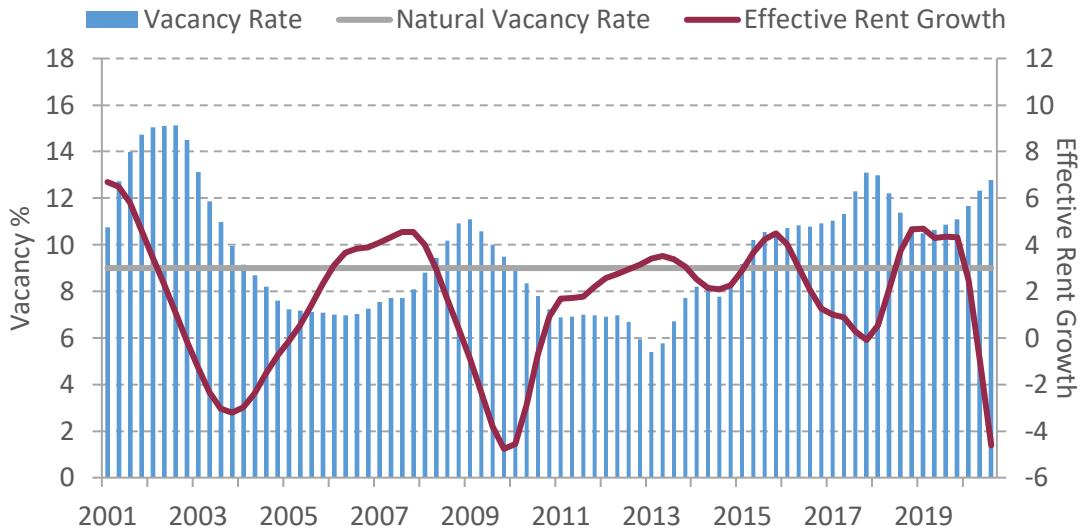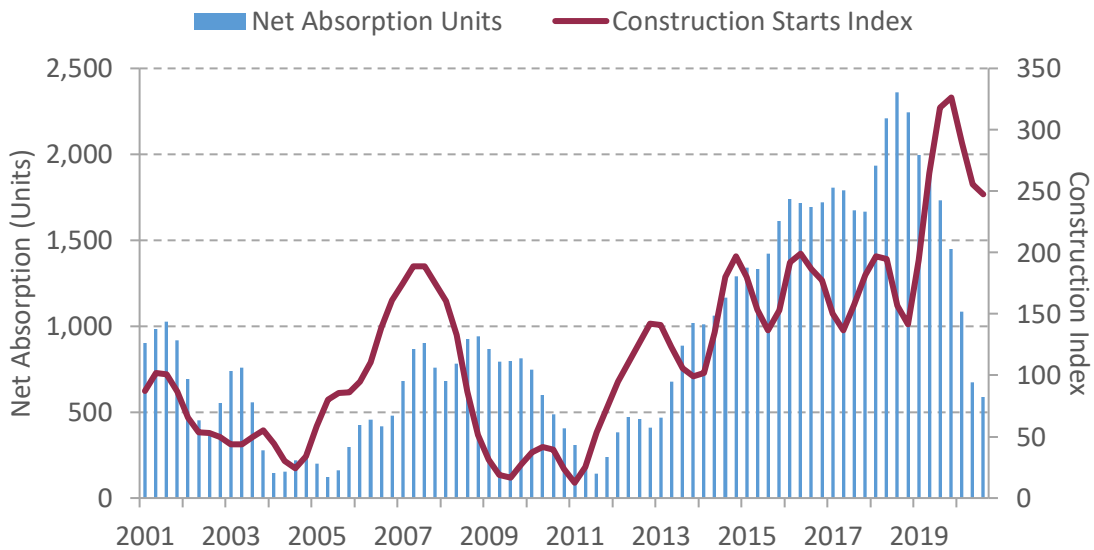Sources: CoStar and Real Estate Center at Texas A&M University

Figure 22. San Antonio Overall Net Absorption and Construction Starts Index
(Index 2000 Q1 = 100)
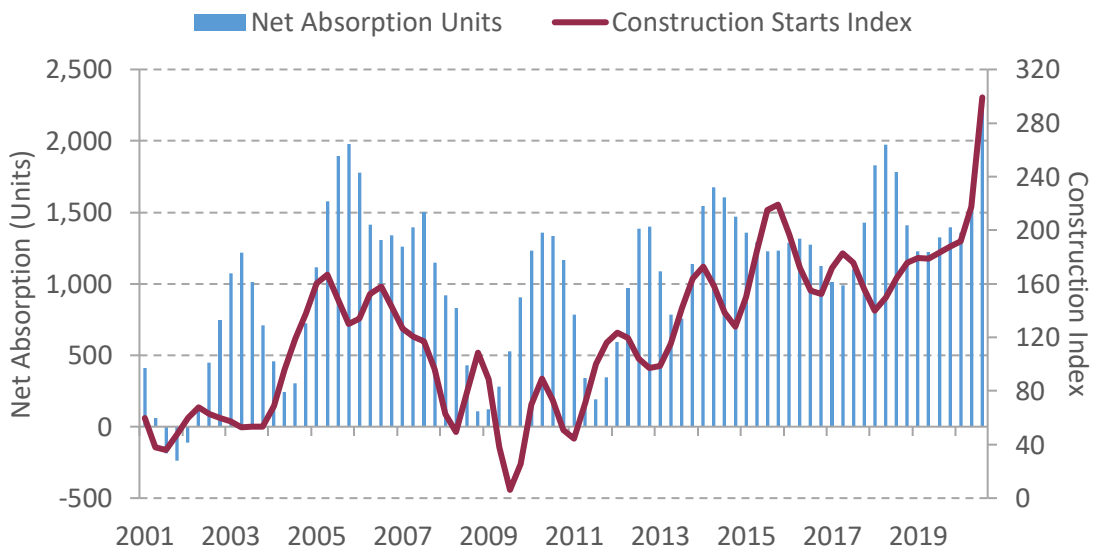
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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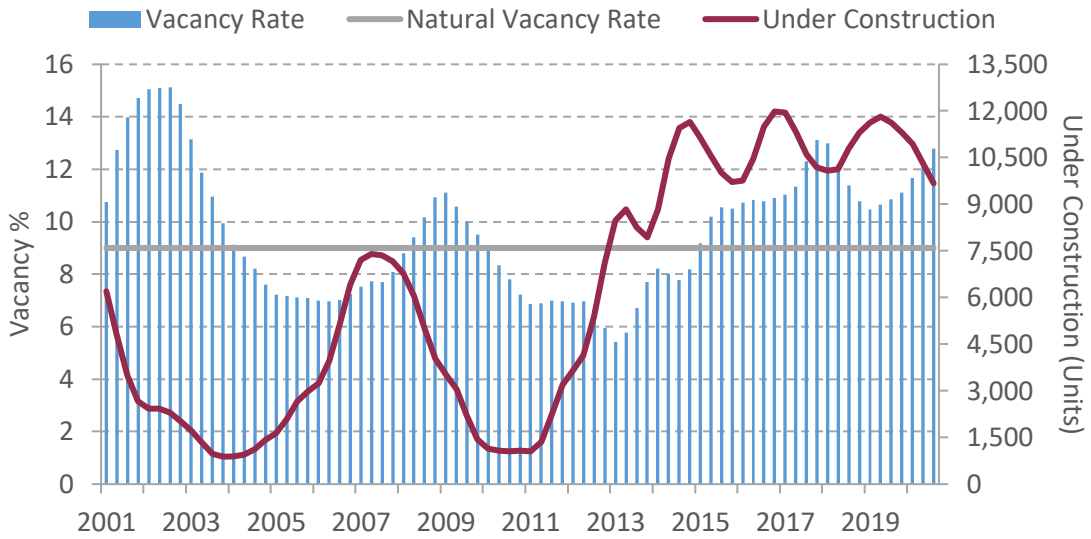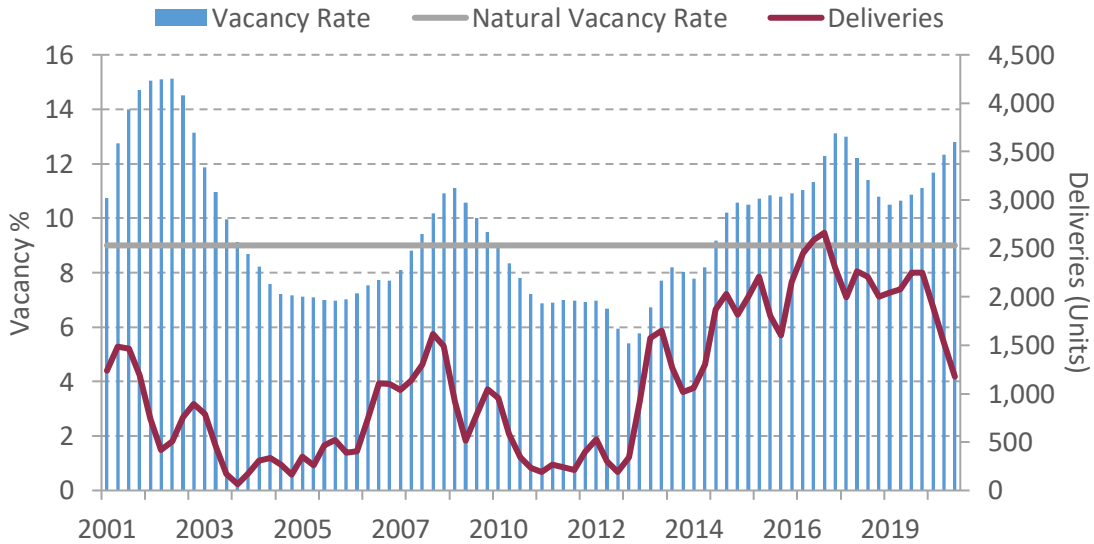**Figure 23. San Antonio Overall Vacancy and Units Under Construction**

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

Figure 24. San Antonio Overall Vacancy and Deliveries in Units

Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate 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
▲ 87.4%	▼ -3.7%	▼ 604	▲

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

Figure 25. Austin Class A Vacancy and Effective Rent Growth

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

Figure 26. Austin Class A Net Absorption and Construction Starts Index
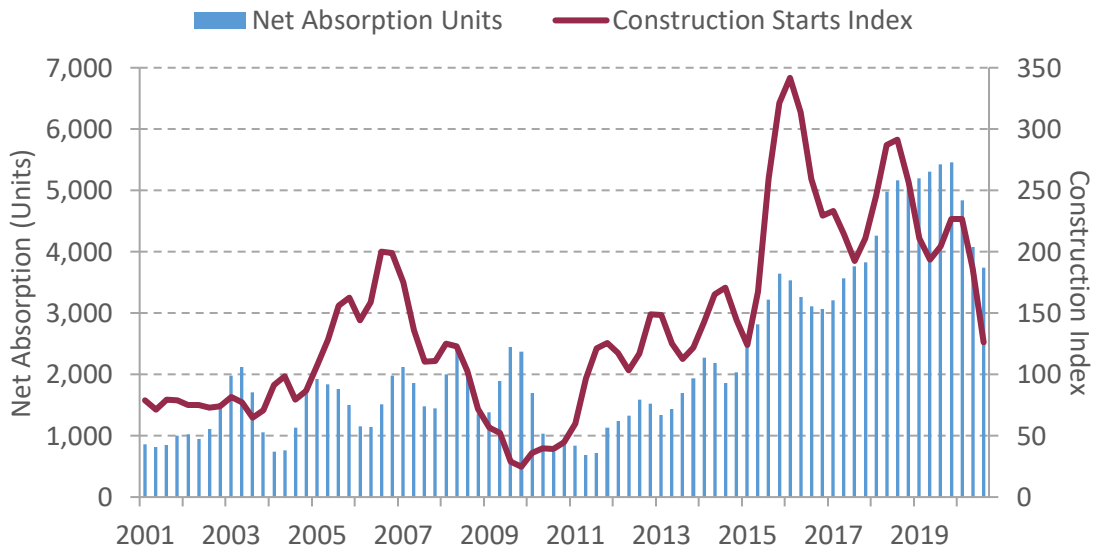**(Index 2000 Q1 = 100)**

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 27. Austin Class A Vacancy and Units Under Construction

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

Figure 28. Austin Class A Vacancy and Deliveries in Units

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

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Dallas-Fort Worth Class A

OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
= 87.4%	▼ -1.4%	▲ 5,296	▼

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University
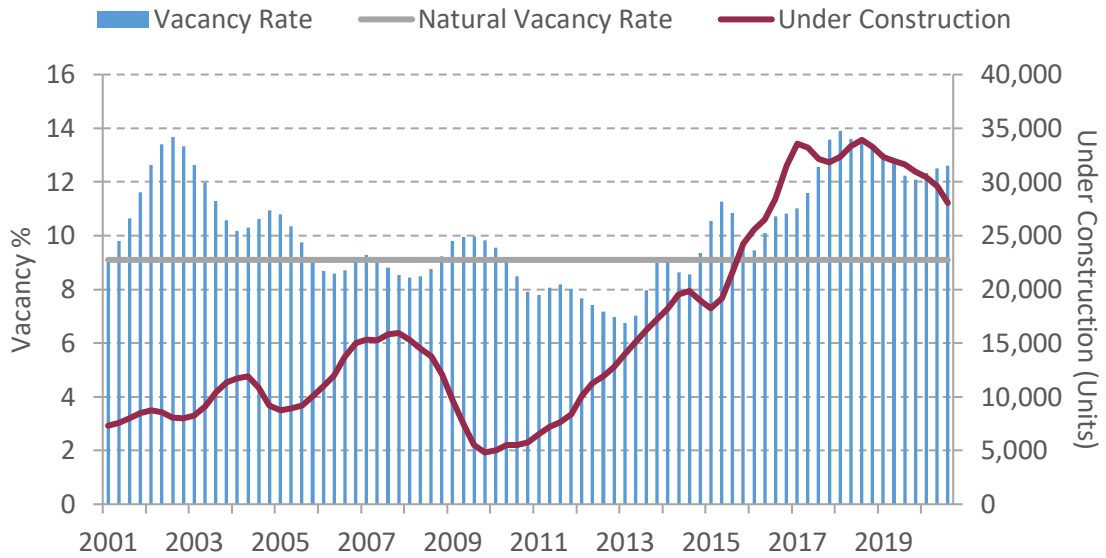
Figure 29. DFW Class A Vacancy and Effective Rent Growth
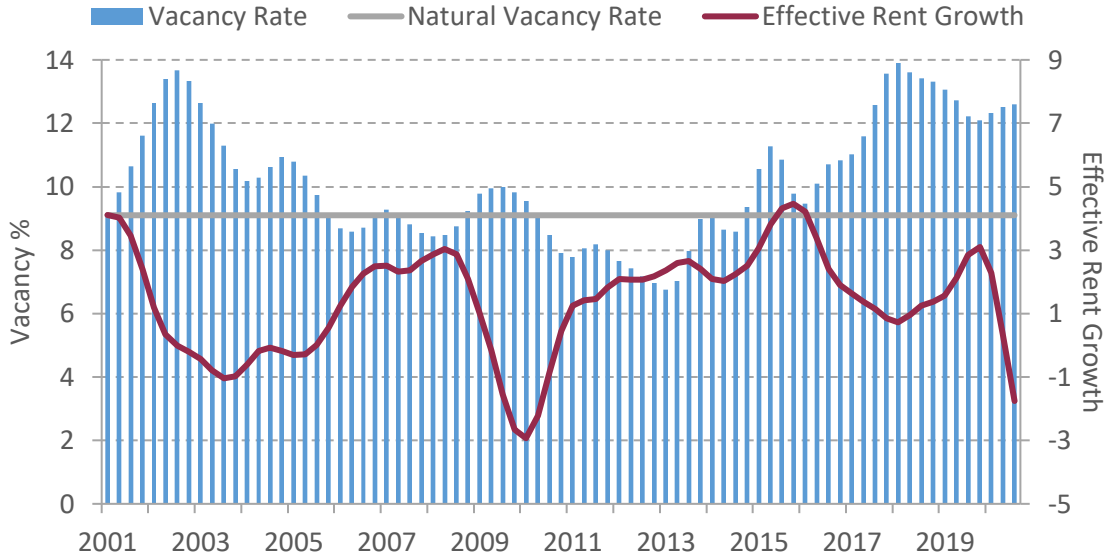
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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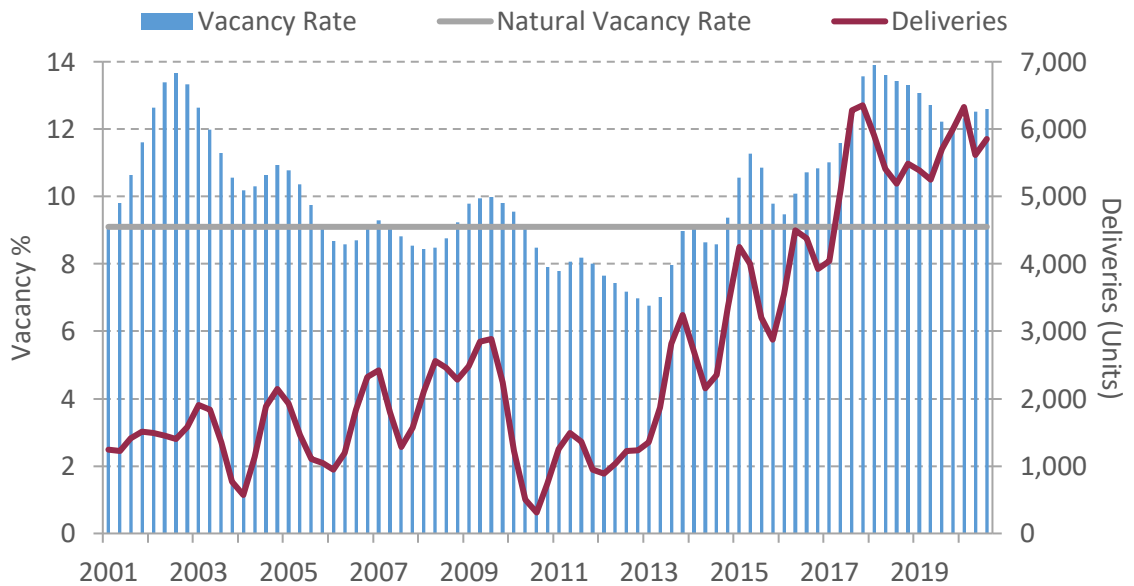**(Index 2000 Q1 = 100)**

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 31. DFW Class A Vacancy and Units Under Construction

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

Figure 32. DFW Class A Vacancy and Deliveries in Units

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

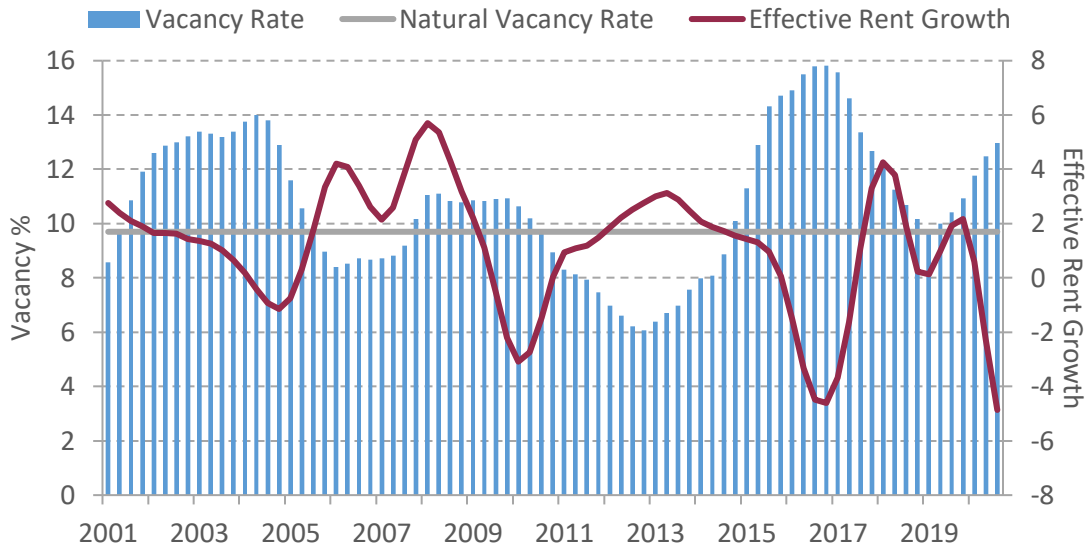# Houston Class A

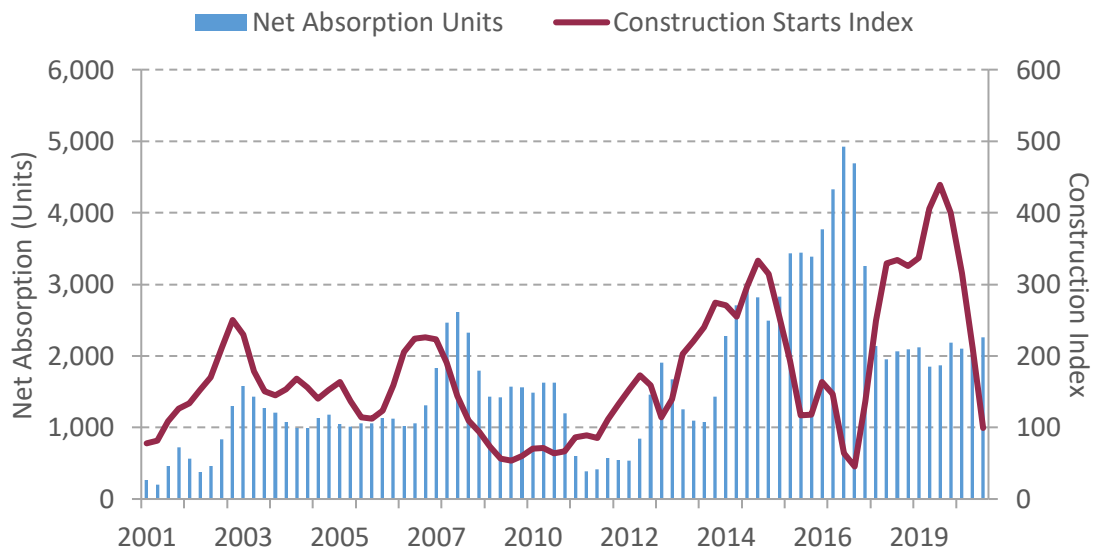| OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
▼ 87.0%	▼ -4.9%	▲ 2,605	▼

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

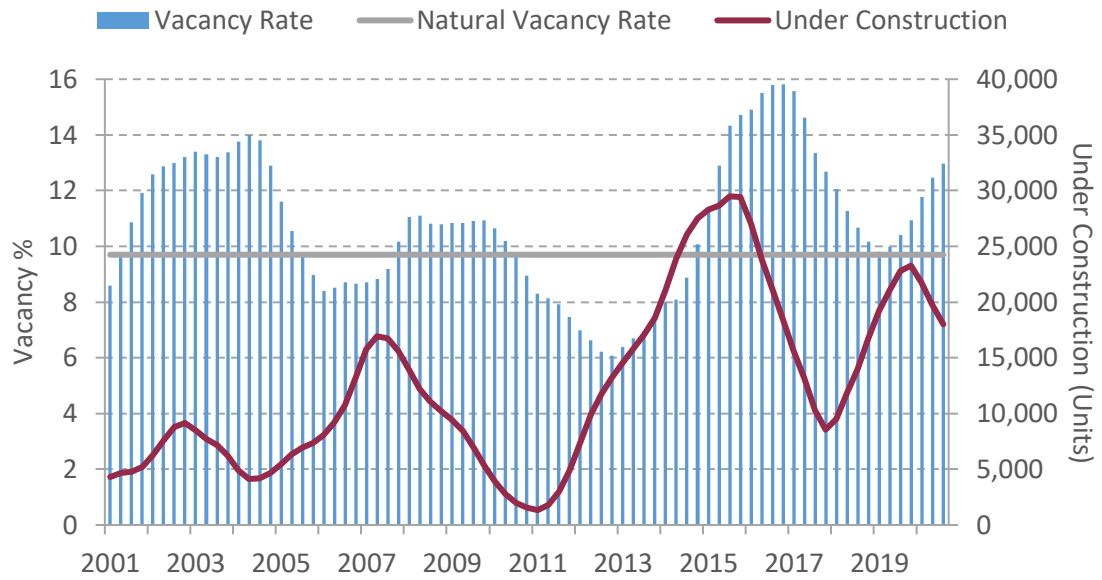### Figure 33. Houston Class A Vacancy and Effective Rent Growth

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

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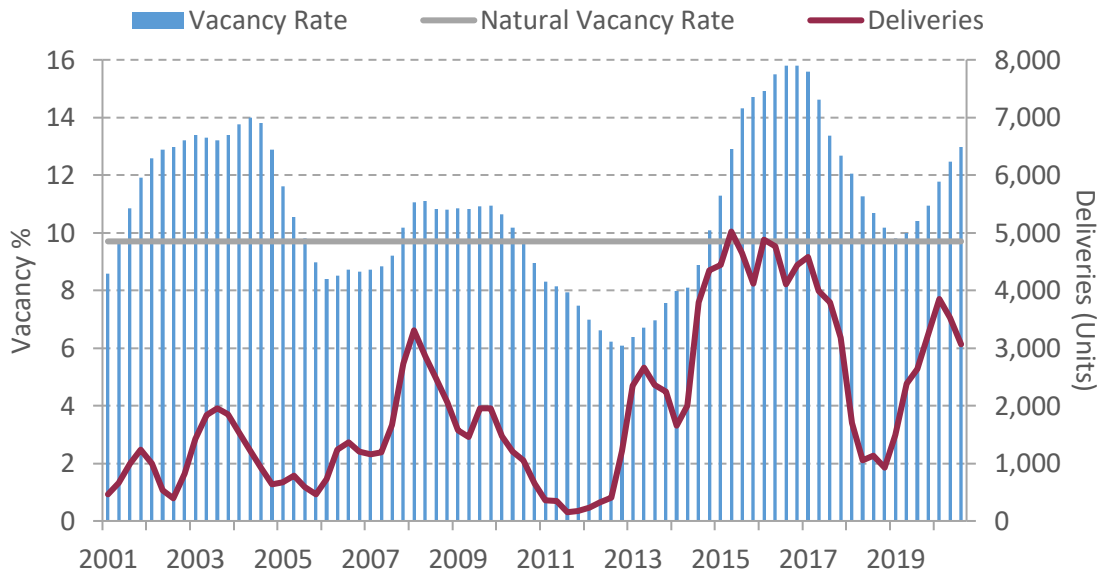**(Index 2000 Q1 = 100)**

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 35. Houston Class A Vacancy and Units Under Construction

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

Figure 36. Houston Class A Vacancy and Deliveries in Units

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

San Antonio Class A

| OCCUPANCY RATE	EFFECTIVE RENT GROWTH (PER UNIT)	NET ABSORPTION (UNITS)	CONSTRUCTION STARTS
▬ 88.4%	▼ -2.1%	▲ 983	▲

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

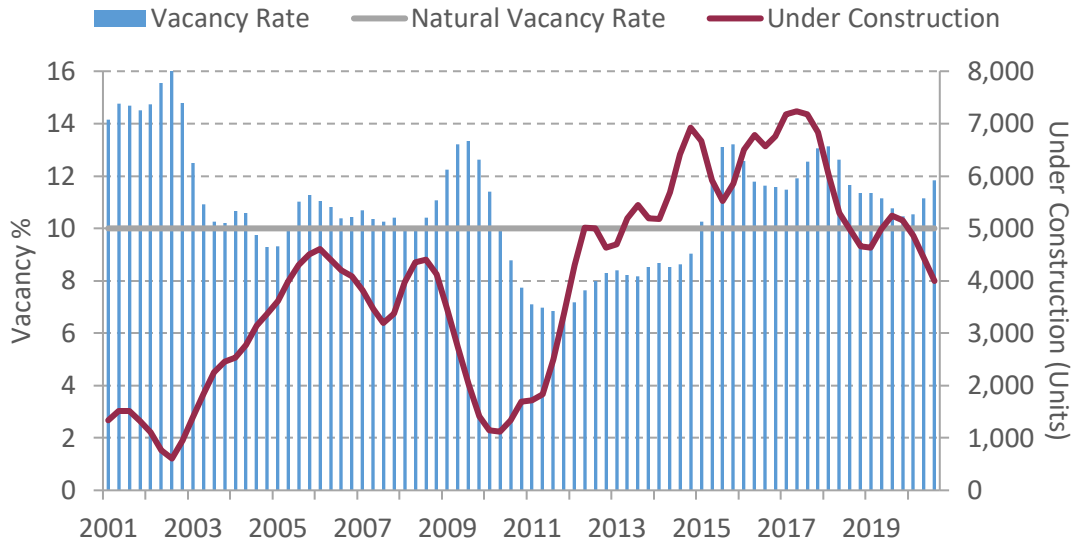### Figure 37. San Antonio Class A Vacancy and Effective Rent Growth
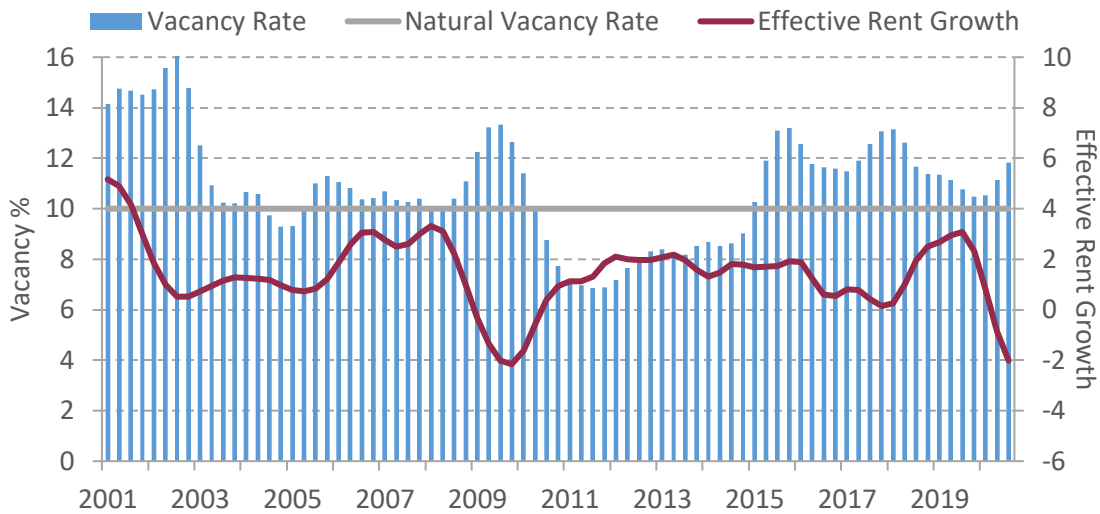
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 38. San Antonio Class A Net Absorption and Construction Starts Index
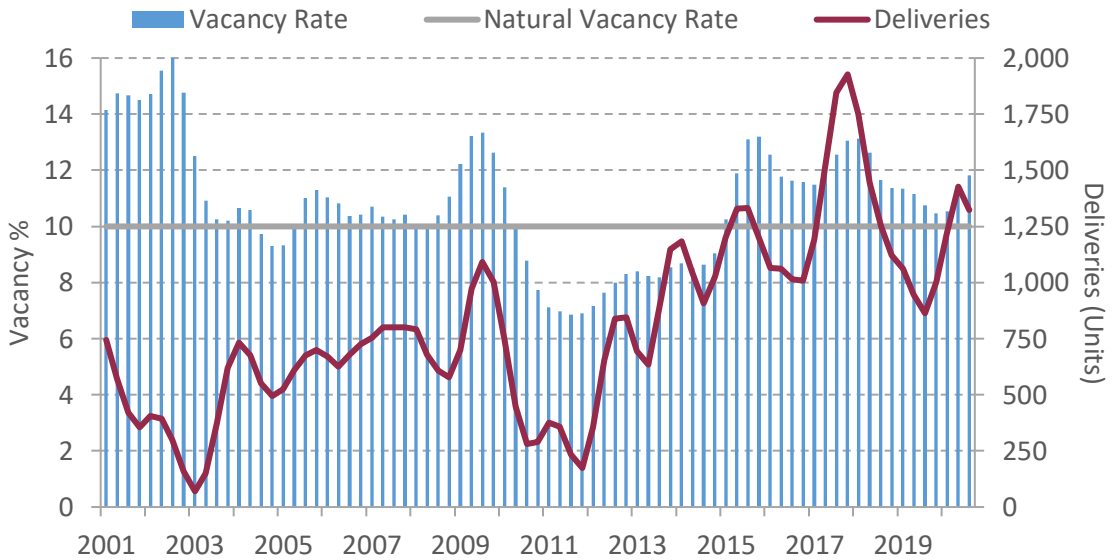**(Index 2000 Q1 = 100)**
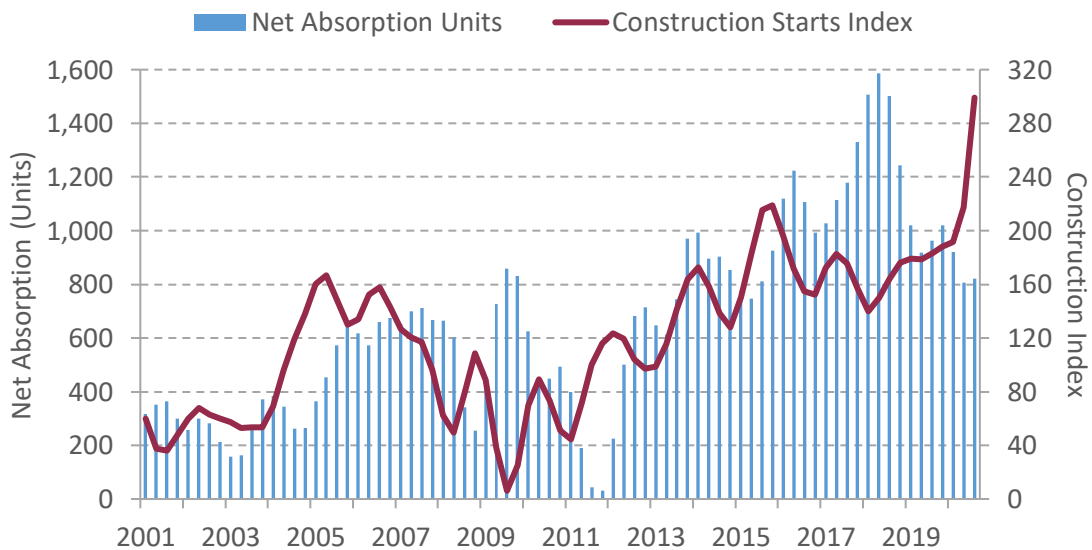
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 39. San Antonio Class A Vacancy and Units Under Construction

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

Figure 40. San Antonio Class A Vacancy and Deliveries in Units

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

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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