

Texas Quarterly Apartment Report



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TEXAS A&M UNIVERSITY

Real Estate Center

TECHNICAL REPORT
2 2 4 2
FIRST QUARTER 2020

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Texas Quarterly Apartment Report: 1st Quarter 2020

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OVERALL	91.7% ▼	3.5% ▬
CLASS A	88.2% ▬	3.2% ▬

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OVERALL	91.6% ▼	3.7% ▼
CLASS A	88.4% ▼	3.7% ▼

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OVERALL	90.6% ▬	2.1% ▼
CLASS A	89.8% ▲	1.0% ▼

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OVERALL	90.2% ▼	2.4% ▼
CLASS A	88.6% ▼	1.9% ▼

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

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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* is a summary of important economic indicators that help discern apartment real estate trends in the major four Texas 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. Furthermore, graphs are also trend cycle adjusted, which provides a clearer, less volatile view of upward and downward movements. Both enrich the 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 uses 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, Clare Losey, Trenton Forbes, Caleb Smoot, and Samuel Woolsey

Texas Economic Overview

First quarter 2020 started strong until the COVID-19 pandemic shut down the economy in the last weeks of March. The shutdown caused a significant decrease in economic activity, reflected in a steep decline in hiring and a related surge in unemployment. Initial unemployment insurance claims ballooned to unprecedented levels, signaling even higher joblessness in the second quarter. The manufacturing and service sectors had huge slowdowns in business activity according to survey data. Export values fell nearly 10 percent due to supply-chain disruptions and falling consumer demand. Home sales contracted 4 percent amid reduced buyer and seller confidence, the negative employment shock, and growing wariness of visiting and showing homes for sale. The shelter-in-place order effectively stopped tenant relocations and movement.

Texas' energy sector struggled with decades-low oil prices due to diminished global demand during the pandemic, a sharp contrast to its role during the Great Recession. While preliminary coronavirus effects were visible in the March economic data, even more severe impacts are expected in the second quarter. The severity of the economic shock will likely result in losses greater than those from the 2008-09 financial crisis, at least in the short run. For additional commentary and statistics, see [Outlook for the Texas Economy](https://recenter.tamu.edu/outlook-for-the-texas-economy) at recenter.tamu.edu.

Contemporaneous and anticipated construction levels fell in March after reaching post-recessionary highs the prior month, signaling a coronavirus-induced downturn. The Texas Residential Construction Cycle (Coincident) Index, which measures current construction levels, declined due to industry wage and employment cuts (Figure 1). Decreased building permits and housing starts offset falling interest rates, pulling the Residential Construction Leading Index down. The Austin and DFW leading indexes point toward lesser activity in the future, and San Antonio's leading index reaching a peak means it is likely to follow that trend (Figure 2). Meanwhile, Houston's leading index exhibited a positive trend, indicating a possible uptick in activity in the future before feeling the complete impact of COVID-19. Overall market trends changed in March, as some Metropolitan Statistical Areas (MSAs) started to register year-over-year negative changes in occupancy rates like Houston and Fort Worth. Due to the difficulties facing the oil industry, the apartment markets in Midland and Odessa continued to struggle during March, registering negative rent growth. Additionally, Victoria recorded negative numbers.

In March, Texas' initial unemployment insurance claims soared in a two-week span to 567,500, with a significant number of people expected to file for unemployment in coming months. Using data from the Department of Labor (DOL) and the Employment and Training Administration, the Real Estate Center estimates that from March 21 to March 28 nearly 123,900 seasonally adjusted claims were filed in Dallas-Fort Worth. That is the highest of Texas'

major metros. In Houston, Austin, and San Antonio, an estimated 107,900, 44,500, and 41,200 claims were filed during that time, respectively.

The fall in the ten-year yield at the end of 2019 continued during 1Q2020 (Figure 3), causing the spread in multifamily capitalization rates to increase and indicating increased risk and profitability in apartment real estate (Figure 3). The increase in the spread is projected to continue in 2020 as commercial real estate risks increase further due to the pandemic.

Overall apartment cap rates for Houston and San Antonio remain the highest, followed by Austin and DFW. The spread with the ten-year Treasury bill has increased during 1Q2020. Austin has become the least risky and lowest return market for multifamily real estate based on its spread with the ten-year Treasury bill (Figure 3). ALN Apartment Data provides a snapshot of all Texas MSAs (Figure 4).

Due to the domestic coronavirus outbreak, the Federal Reserve cut interest rates a total of 150 basis points in March, taking the targeted federal funds rate to 0-0.25 percent. It also cut the discount window rate by 150 basis points and promised unlimited, open-ended asset purchases (quantitative easing). The liquidity injection by the Federal Reserve to financial markets, in conjunction with gloomy future growth expectations and low inflation expectations, caused interest rates to fall dramatically. In addition, capital flows seeking positive returns and low risk have flooded the Treasury market, pushing the ten-year Treasury bill further down to 0.9 percent in March. Even with the presence of COVID-19, multifamily loans registered positive growth during 1Q2020 due to positive expectations of both population and economic growth prior to the pandemic (Figure 5). The Real Estate Center expects a decline in the loan volume in 2Q2020, ending the strong positive growth observed in 2019.

The initial coronavirus-induced layoffs resulted in Texas' nonfarm employment shedding 50,900 jobs in March, the steepest decline since the Great Recession. Meanwhile, the unemployment rate increased to 4.7 percent, a three-year high. State and metropolitan joblessness rose more than 1 percentage point with Texas and every major locale except Fort Worth reporting an unprecedented jump in unemployment. Hit particularly hard by critically low oil prices, Houston's metric climbed to 5.2 percent. Dallas and Fort Worth unemployment increased to 4.3 and 4.4 percent, respectively, while San Antonio posted 4.2 percent. Austin fared relatively better with joblessness of 3.6 percent. The unemployment rate is important because of the strong relationship it has with multifamily real estate vacancy rates. As the unemployment rate rises (decreases) generally, so will overall apartment vacancy rates (Figures 6-9). Unemployment rates are expected to increase in second quarter 2020, pushing up vacancy rates in the major metros.

Every major metro reported net layoffs in March, but Fort Worth shed a record-breaking 19,900 jobs for a percentage loss of 1.8 percent. Nearly all the subsectors had cutbacks except for manufacturing and government, which posted negligible increases. The Central Texas MSAs

registered their worst month in series history, contracting by 8,400 jobs in Austin and 5,500 in San Antonio, marking the metro areas' second consecutive month of negative growth. Similar to Dallas employment, which decreased by 11,100 positions, leisure/hospitality accounted for most of the total reductions, especially in San Antonio.

In Houston, the leisure/hospitality, construction, and manufacturing industries were mainly responsible for the overall 18,200 jobs contraction. Counterintuitive to plummeting oil prices, mining/logging expanded by 1,400 jobs. However, this may be a slight correction to a ten-month decline. Houston's energy-related employment is expected to fall if oil prices remain in the \$20-\$30 per barrel range, because Houston has only partially recovered from the 2015-16 oil bust. There simply is not an abundance of excess positions employers can eliminate with sweeping, extended layoffs.

The ability of a metro's labor force to work remotely is a factor in job losses during this recession; the more remote-compatible an occupation is, the greater chance workers will continue to work during the shelter-in-place. The Dallas Fed estimates Texas' Urban Triangle has a greater proportion of workers who can work remotely than other areas in the state (28 percent). Austin leads the major metros with 48 percent of its workers who can work remotely, followed by DFW and Houston with 42 and 40 percent, respectively. San Antonio lags with 37 percent. Of individuals whose income is less than \$60,000, only 27 percent can work from home. The vast majority of individuals with these characteristics are renters, and this will likely have negative implications on the apartment sector.

Future Impact of COVID-19 on Multifamily

- With the strong relationship between multifamily vacancies and unemployment, higher unemployment rates mean higher vacancy rates. The duration of high unemployment rates will translate into higher vacancy rates and a decrease in effective rents.
- Low-skill/less educated and low-wage/income earners were hit hardest by the pandemic.
 - Service industries including arts, entertainment, and recreation, accommodation and food services, and administrative and waste management were hit particularly hard.
 - The majority are renters, resulting in a negative impact on multifamily during 2020.
- The number of tenants who will be able to pay rent going forward is unknown since it depends on them being employed and earning wages.
- There is no government forbearance for renters; in some cases, some landlords have offered temporary rent reductions and repayment plans.
- Some renters have used unemployment benefits and credit cards to help with rent payments.
- Federal Pandemic Unemployment Compensation (FPUC), which adds an additional \$600 per week for unemployment, is expected to end in July 2020.
- Pandemic Unemployment Assistance (PUA), which extends length of unemployment benefits by 13 weeks and provides benefits to workers who are not traditionally eligible, ends in December 2020.
- Outstanding rent payments have not been forgiven and will have to be paid. This is another negative element affecting multifamily during 2020 and possibly 2021.
- When local eviction moratoriums end for renters, a wave of evictions could lead to higher vacancy rates in 2020.
- If tenants don't pay rent and landlords don't pay mortgage payments, apartment development becomes costlier and riskier, potentially deteriorating future supply of available rental units.
- The second half of 2020 could see people moving from Class A apartments to Class B and C as they adjust to lower incomes, a higher debt burden, or both.
- People still need a place to live, and income constraints play an important role. A drop in first-time homebuyers and single-family home renters due to the pandemic will benefit the multifamily market going forward.
- The supply could be negatively affected in the short-run, but a massive migration out of apartments is not likely (e.g., after 9/11, some expected a massive movement out of the city and apartment life, which did not happen.)
- Residual fear about COVID-19 and/or future viruses and the close, clustering effect of living in an apartment complex could hamper future apartment demand.
- In the long-run, expect a movement to more amenities and less density (e.g., better communal spaces, storage units, fewer than 40 apartments per development).
- The trend toward mixed-use commercial developments that include office, retail, and multifamily should continue as they offer quality amenities and less density, and are often in the suburbs or the urban fringe.

Overall Apartment Sector

Austin (See Figures 10-13):

The Austin apartment market was strong in 2019. Although actual vacancy trended upward through the year to 7.9 percent, it remained below natural vacancy (8.3 percent), bolstering growth in effective rents (4.9 percent). However, actual vacancy continued to grow in 1Q2020, surpassing natural vacancy (8.3 percent) and climbing to 8.5 percent. Additionally, effective rent growth slowed to 3.7 percent. As the effects of COVID-19 continue to be realized, actual vacancy rates will likely increase further, and effective rent growth will likely continue to decline.

Before the pandemic, net absorption remained strong, despite the uptick in deliveries, suggesting strong demand for apartments. After a pronounced increase over the first half of 2019, construction starts slowed during its latter half, registering a significant slowdown in first quarter 2020. This trend will likely continue in the wake of COVID-19. Although Austin's workforce is better prepared to work from home due to its mix of high-tech jobs, the apartment sector will likely not be saved from the pandemic given the number of individuals becoming unemployed. Austin's Residential Leading Index shows a significant downturn, which does not bode well for the rest of the year

Dallas-Fort Worth (See Figures 14-17):

DFW's apartment market performed strong in 2019. Actual vacancy, which averaged 8.2 percent, remained lower than natural vacancy (8.5 percent). In 1Q2020, while actual vacancy rose slightly to 8.3 percent and construction starts and deliveries declined, strong demand caused effective rent growth to hold steady at 3.5 percent. Due to the COVID-19 pandemic, expect vacancy rates will increase and rent growth will decline during 2020, possibly registering zero growth and negative values in some cases.

First quarter recorded a continued decline in construction starts and the amount of square footage under construction, leading to a downtick in deliveries. Given the significant decrease in construction activity over the past two years, the DFW apartment market should be poised better than other Texas MSAs to weather the uncertainties of the COVID-19 crisis.

Houston (See Figures 18-21):

Houston's apartment market posted moderate gains in 2019. Actual vacancy, which averaged 9.3 percent, hovered directly above the natural vacancy of 9.2 percent. In 1Q2020, despite the decline in construction starts, the precipitous rise in deliveries pushed net absorption down slightly. In addition, actual vacancy spiked to 9.8 percent. Growth in effective rents declined slightly to 2.4 percent, proving that the uptick in deliveries (which, all things being equal, should

suppress rent growth) was a stronger force than the significant decline in construction starts (which, all things again being equal, should push rents upward).

In 1Q2020, before COVID-19, the multifamily market was expected to experience gains similar to 2019. However, these expectations have shifted as the Houston market reverberates from the implications of COVID-19 and significant hits to the oil and gas economy. Vacancy will likely continue to increase in response to the effects on Houston's broader economy, though it may take time for this trend to be realized. During 1Q2020, effective rent growth declined while construction activity was stagnant. The uptick in deliveries, coupled with the health crisis, could indicate a difficult road ahead for multifamily. Rent growth in 2020 has the potential to fall to near zero levels, and vacancy will likely continue to rise.

San Antonio (See Figures 22-25):

San Antonio's apartment market showed stagnating gains in 2019. Actual vacancy averaged 9.3 percent throughout the year, exceeding the natural vacancy of 8.5 percent. On the other hand, the market's strong growth in effective rents indicated the market was at a crossroads. First quarter 2020 was less favorable, with actual vacancy climbing slightly to 9.4 percent, effective rent growth falling to 2.1 percent, and net absorption continuing to decrease.

Although deliveries declined in 1Q2020, rising construction starts suggested a continued decline in effective rent growth even before the effects of the COVID-19 shutdown. Previous anticipations for growth, as indicated by the rise in construction starts, may be extinguished by COVID-19's economic impact. The rise in construction starts will likely soon translate into a rise in deliveries, which the local apartment market may not be able to absorb.

Class A Apartment Sector

Austin-Round Rock (See Figures 26-29):

Austin's Class A market posted a positive performance in 2019. After increasing precipitously in 2018, effective rent growth tapered slightly in 2019, falling from 4.9 percent in 1Q2019 to 3.7 percent in 1Q2020. In addition, actual vacancy increased to 11.6 percent in 1Q2020, and units under construction and deliveries declined.

Under normal circumstances, one could reasonably expect a supply decrease to cause a decrease in vacancy and an increase in effective rent. However, the full effects of the COVID-19 pandemic have yet to be realized. With so much uncertainty related to unemployment and demand for Class A apartments, it is likely that vacancy rates will continue to increase, and rent growth will continue to decline.

Dallas-Fort Worth (See Figures 30-33):

DFW's Class A market posted strong gains in 2019. Effective rent growth increased nearly 2 percentage points, from 1.4 percent in the first quarter to 3.3 percent in the fourth quarter (effective rent growth averaged 2.4 percent over 2019). Although the year ended with actual vacancy at 11.6 percent, well surpassing the natural vacancy rate of 9.1 percent, the continued decline in units under construction contributed to positive net absorption throughout 2019.

Prior to the COVID-19 pandemic, DFW was poised to deliver strong rent growth and a slight downtick in actual vacancy. In the first quarter, effective rent growth measured 3.1 percent, actual vacancy measured 11.8 percent, and deliveries decreased. Due to the pandemic, however, higher vacancy and declining rent growth are likely during 2020.

Houston (See Figures 34-37):

Houston's Class A market had a mediocre 2019. The sharp climb in deliveries over 2018 and 2019 moderated growth in effective rents, which averaged 1.4 percent in 2019. Meanwhile, actual vacancy ticked upward, ending the year at 10.6 percent, higher than the natural vacancy of 9.7 percent. The double-fold increase in units under construction and deliveries over 2019 contributed to the rise in natural vacancy.

In 1Q2020, prior to the COVID-19 crisis effects, the Class A market was poised to have moderate gains in 2020. While actual vacancy climbed slightly to 11.2 percent, rent growth hovered around 2.0 percent and net absorption increased.

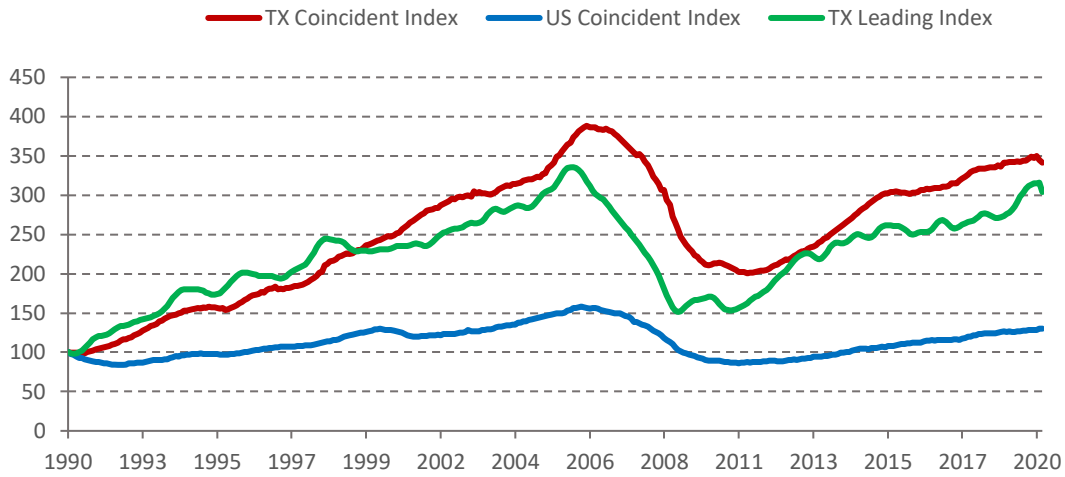
Deliveries will likely continue to increase over the near term due to the precipitous rise in construction starts in 2018 and 2019. As deliveries continue to increase, actual vacancy will also increase and rent growth will continue to decrease, problems that will be exacerbated by problems in the energy sector and the effects of COVID-19.

San Antonio (See Figures 38-41):

Throughout 2019, San Antonio's Class A apartment market had strong gains in effective rent growth, averaging 2.8 percent. The substantial decline in deliveries since 2017 likely contributed to the growth in effective rents and gradual decline in actual vacancy over 2019. First quarter 2020 saw a sharp slowdown in effective rent growth to 1.0 percent but a decrease in actual vacancy to 10.2 percent, closing in on the natural vacancy rate of 10.0 percent. In addition, net absorption increased, indicating strong demand.

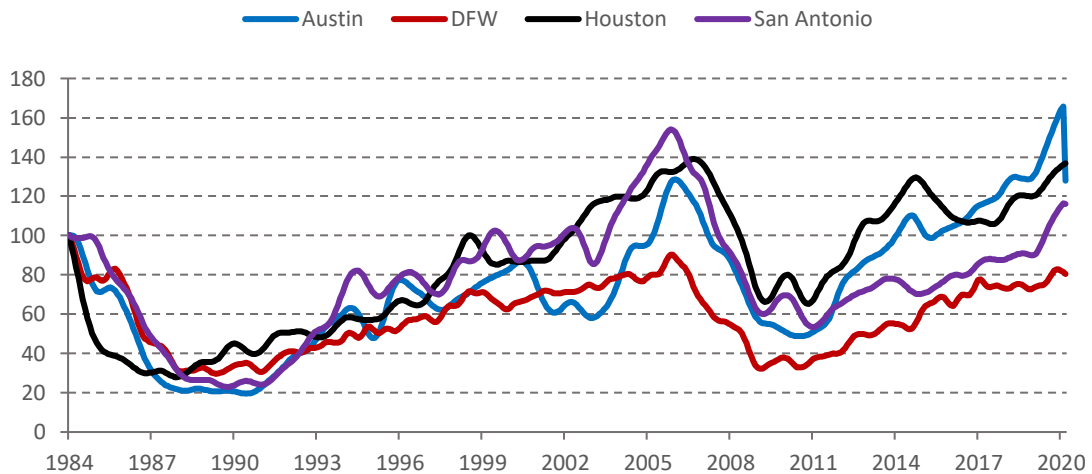
Expectations were strong in 2020 for the city's Class A market prior to the COVID-19 pandemic, but the health crisis has shifted those expectations to growing vacancy rates and a continued decrease in effective rent growth. Over the past year, the number of units under construction has remained relatively stable, signaling limited volatility in the future of vacancy rates and rent growth. However, the pandemic could cause a spike in actual vacancy and a downtick in effective rent growth.

Figure 1. Texas Residential Construction Index
(Index Oct 1990 = 100)



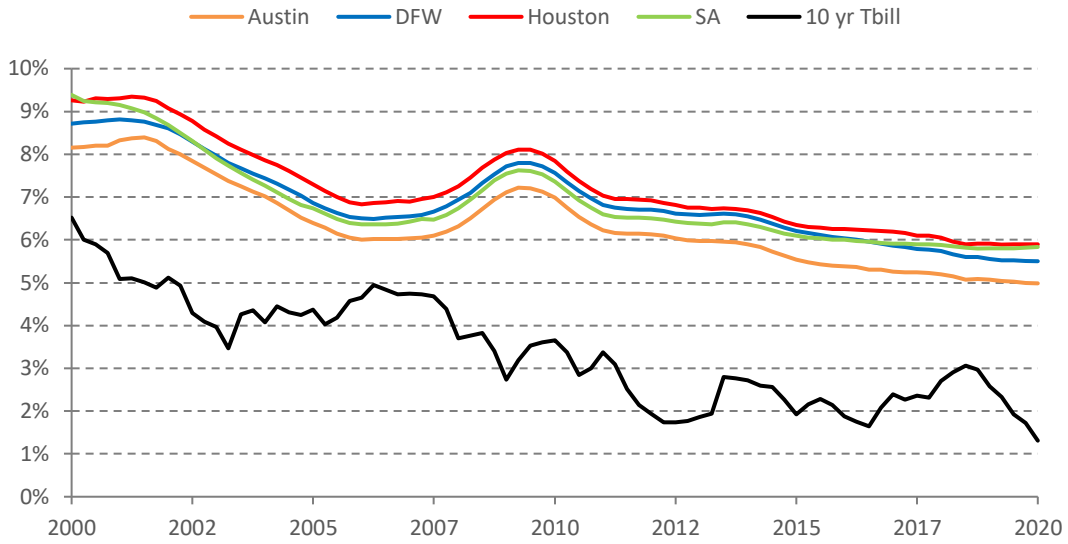
Source: Real Estate Center at Texas A&M University

Figure 2. Major MSAs' Residential Construction Leading Index
(Index Jan 1984 = 100)



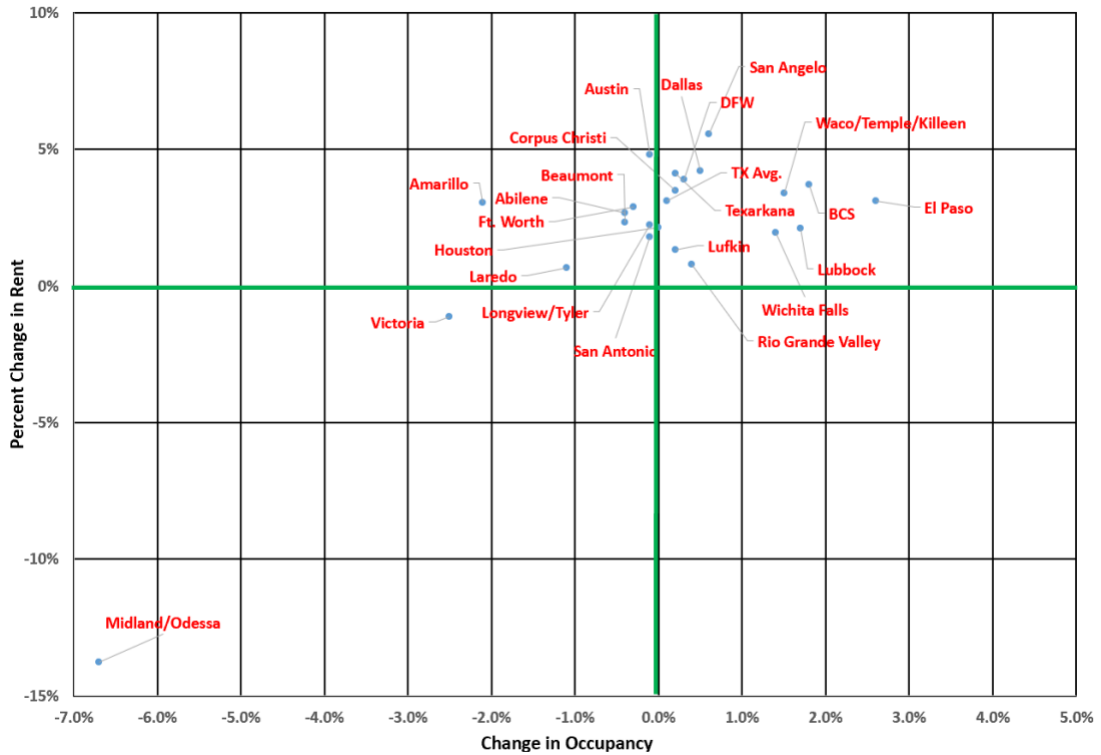
Source: Real Estate Center at Texas A&M University

Figure 3. Capitalization Rates v. Ten-Year Treasury Bills



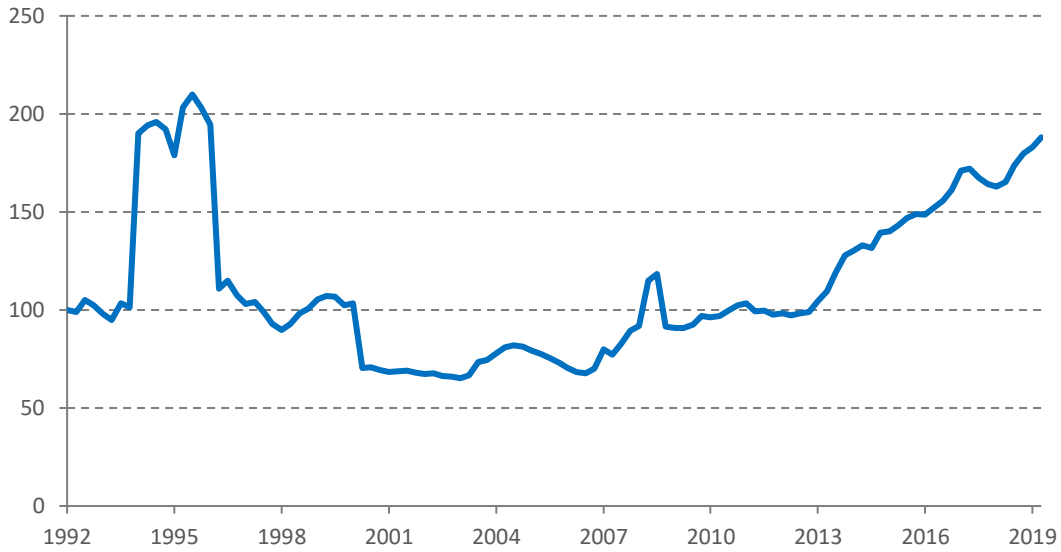
Source: Real Estate Center at Texas A&M University

Figure 4. Overall Apartment Market Y-O-Y Percent Changes in Effective Rent and Occupancy As of March 2020



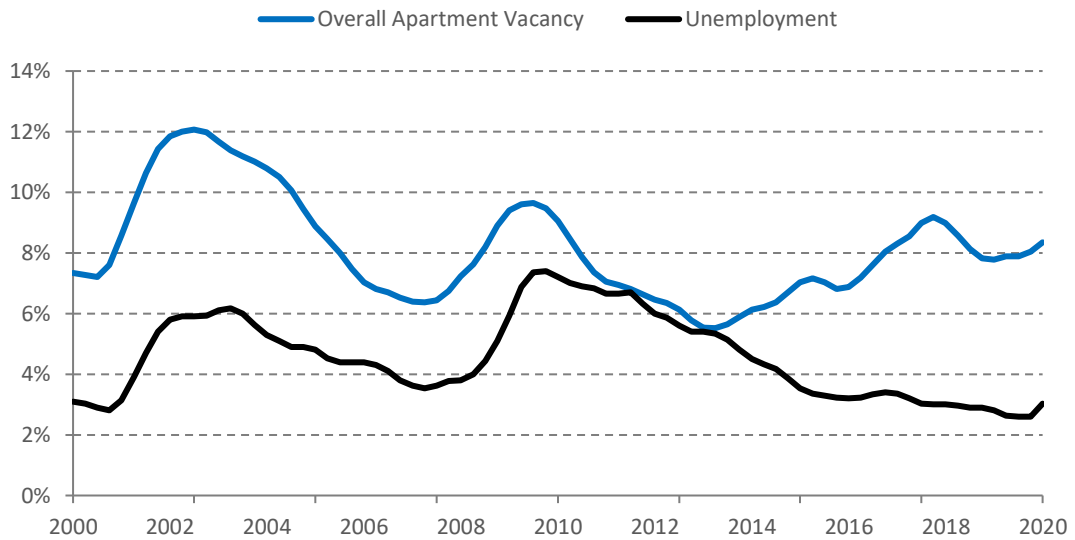
Sources: ALN Apartment Data and Real Estate Center at Texas A&M University

Figure 5. Real Multifamily Domestic Loans (SA)
(Index 1992Q4=100)



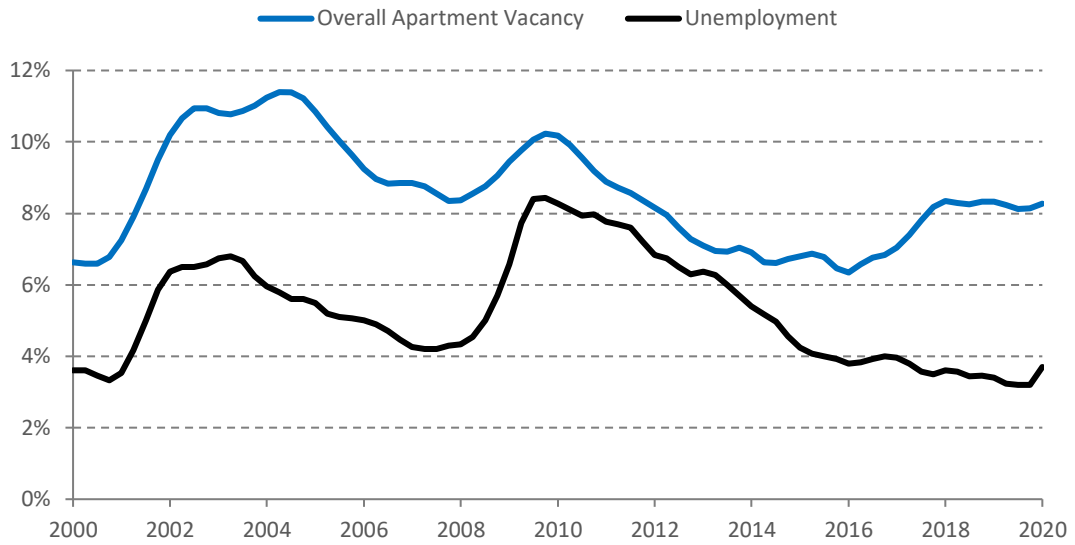
Note: Seasonally adjusted and inflation adjusted.
Source: Federal Deposit Insurance

Figure 6. Austin Apartment Vacancy Rates and Unemployment (SA)



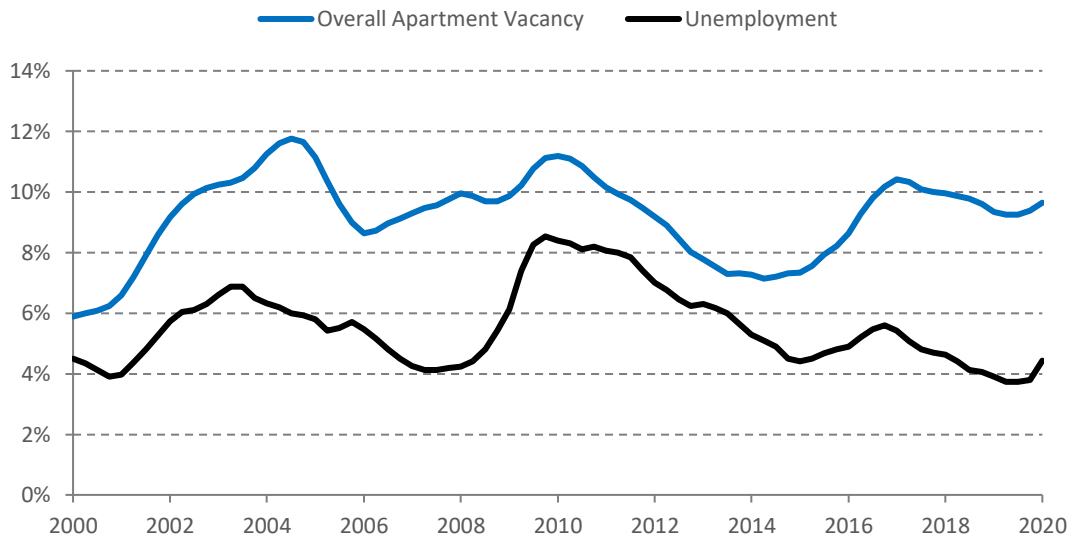
Note: Seasonally adjusted component.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 7. DFW Apartment Vacancy Rates and Unemployment (SA)



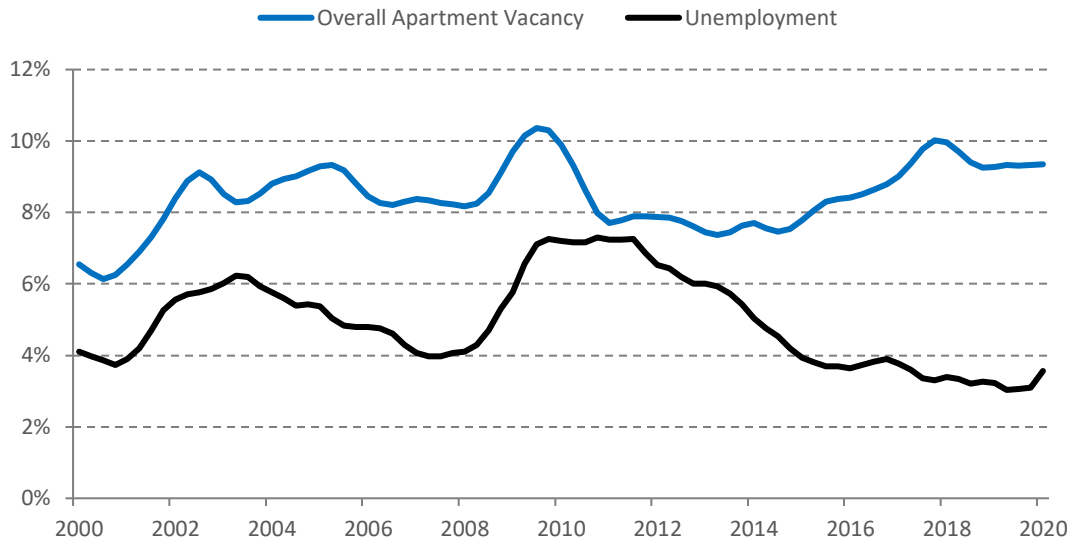
Note: Seasonally adjusted component.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 8. Houston Apartment Vacancy Rates and Unemployment (SA)



Note: Seasonally adjusted component.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 9. San Antonio Apartment Vacancy Rates and Unemployment (SA)



Note: Seasonally adjusted component.

Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Austin Overall

OCCUPANCY RATE
▼ 91.6%

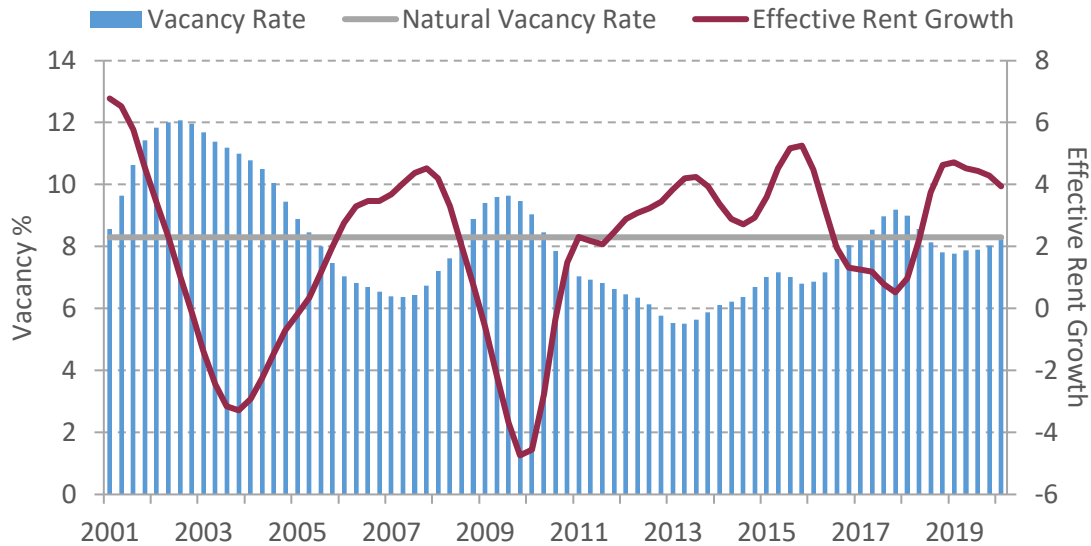
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 3.7%

NET ABSORPTION (UNITS)
▼ 1,766

CONSTRUCTION STARTS
▼

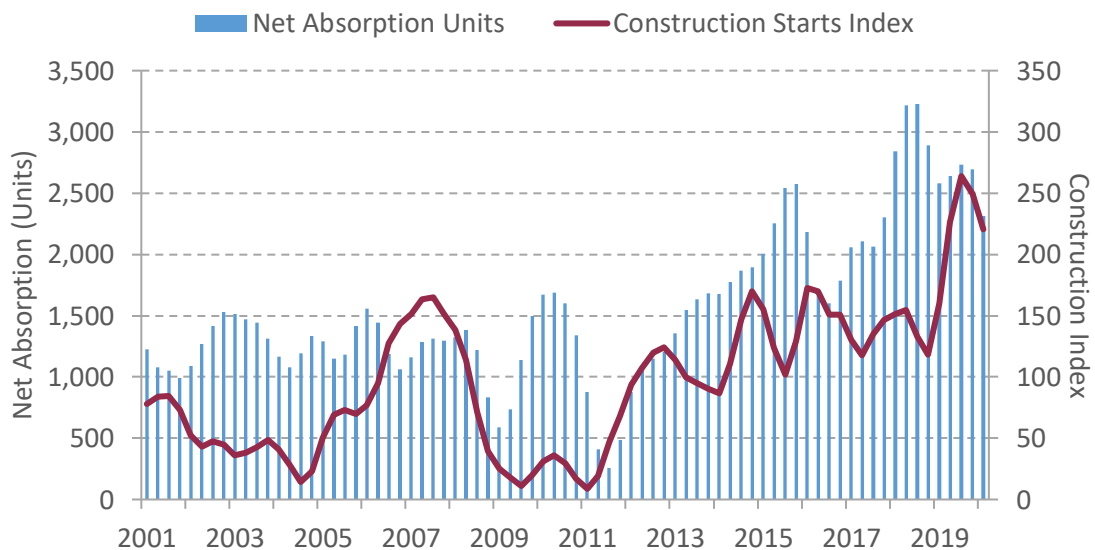
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 10. Austin Overall Vacancy and Effective Rent Growth (SA and TC)



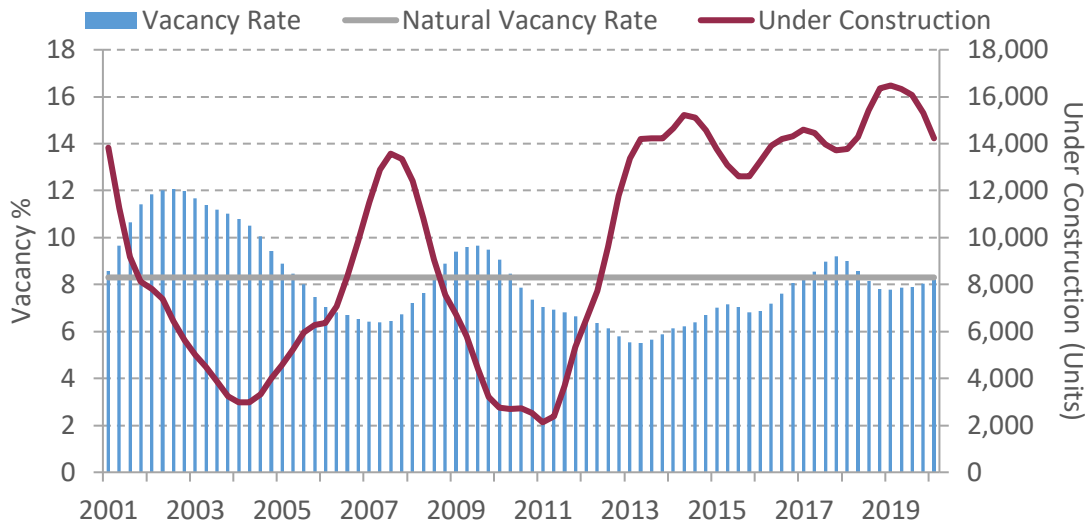
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 11. Austin Overall Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



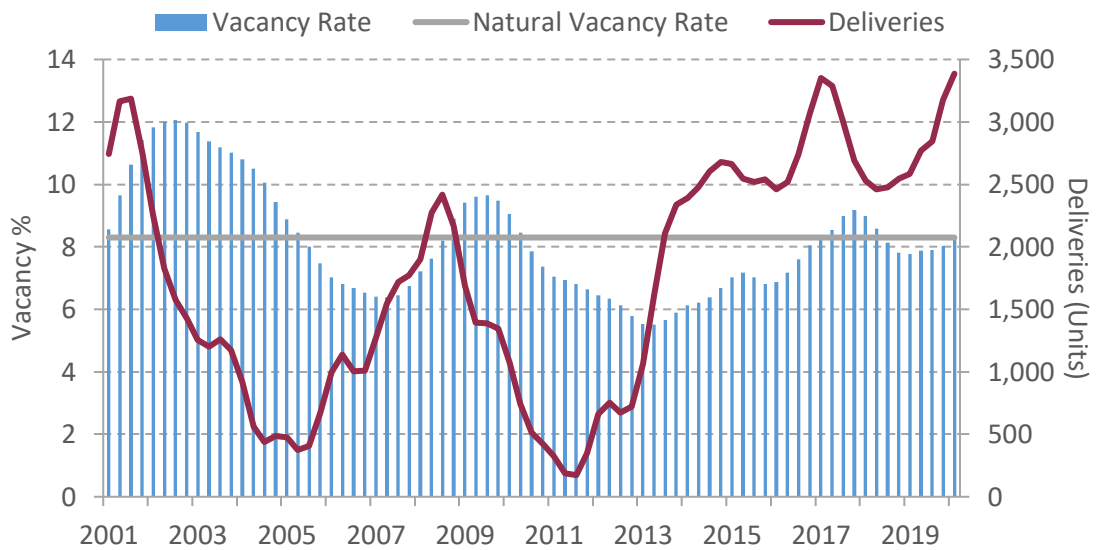
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 12. Austin Overall Vacancy and Units Under Construction (SA and TC)



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

Figure 13. Austin Overall Vacancy and Deliveries in Units (SA and TC)



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

Dallas-Fort Worth Overall

OCCUPANCY RATE
▼ 91.7%

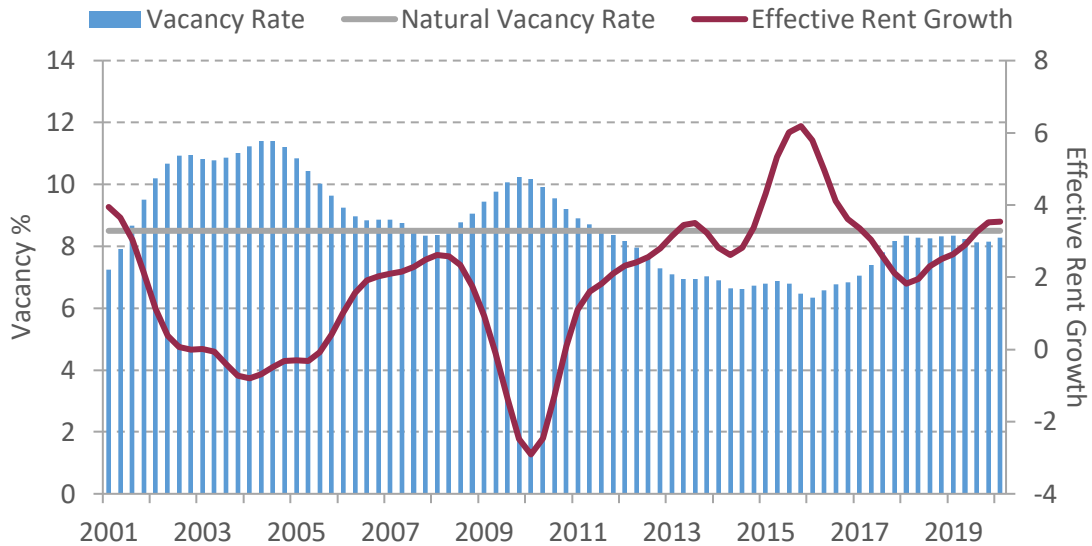
EFFECTIVE RENT GROWTH (PER UNIT)
▬ 3.5%

NET ABSORPTION (UNITS)
▼ 4,529

CONSTRUCTION STARTS
▼

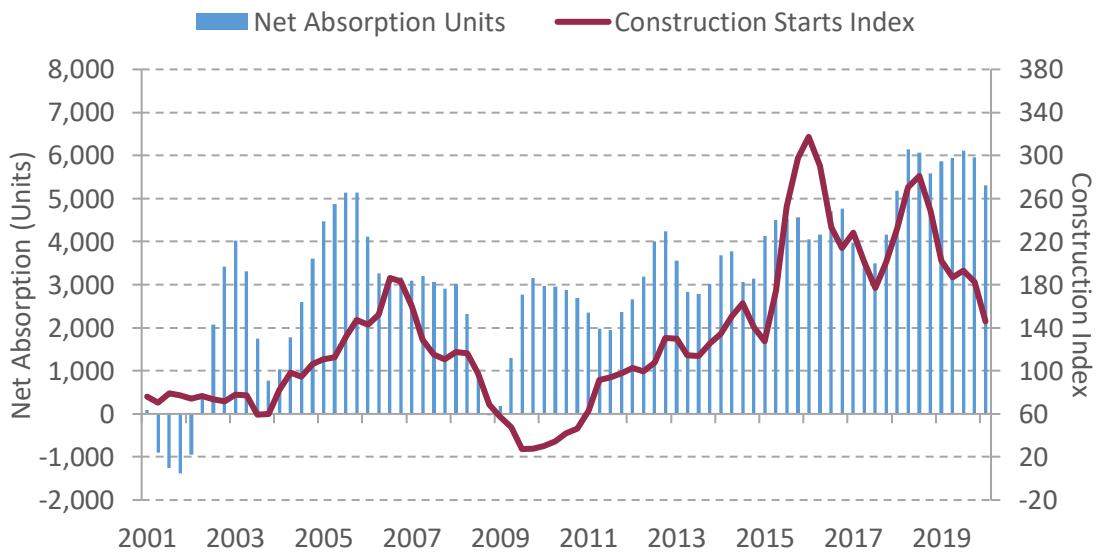
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 14. DFW Overall Vacancy and Effective Rent Growth (SA and TC)



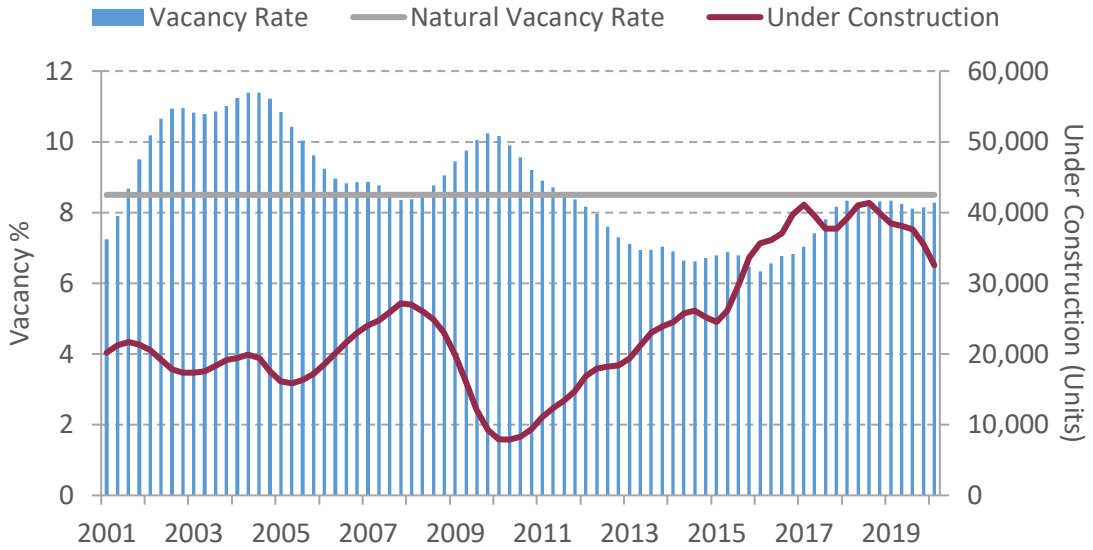
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 15. DFW Overall Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



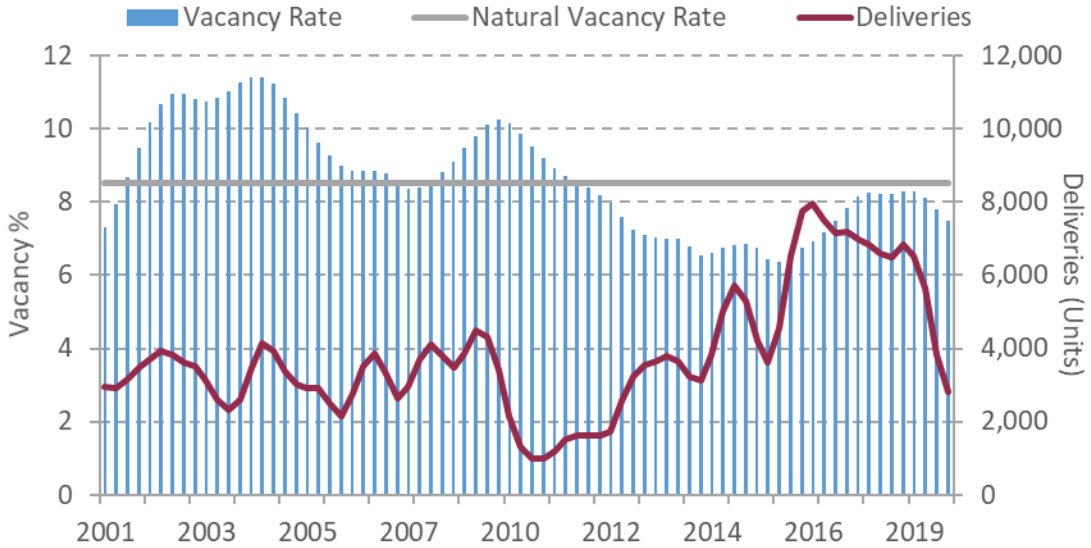
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 16. DFW Overall Vacancy and Units Under Construction (SA and TC)



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

Figure 17. DFW Overall Vacancy and Deliveries in Units (SA and TC)



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

Houston Overall

OCCUPANCY RATE
▼ 90.2%

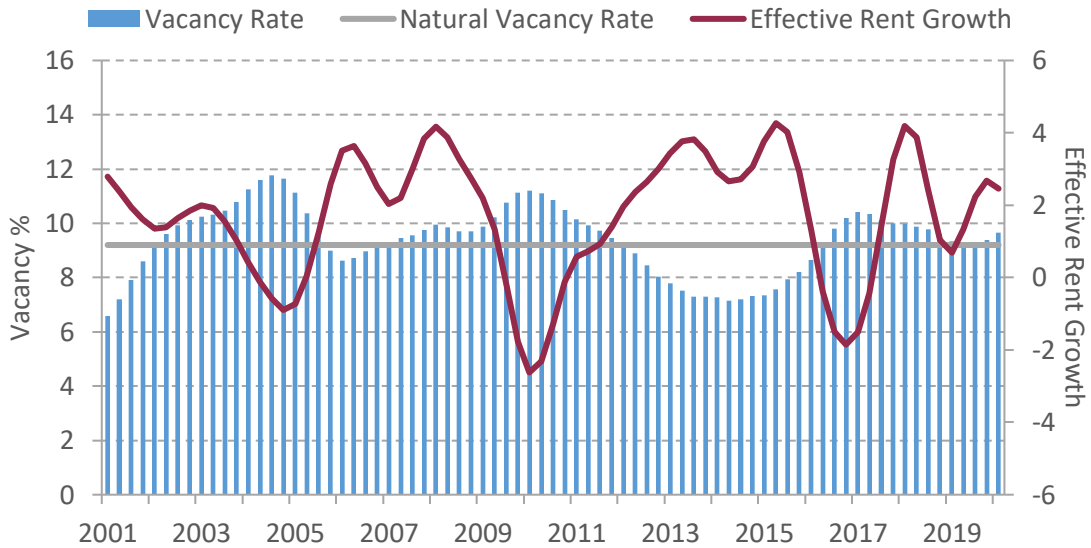
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 2.4%

NET ABSORPTION (UNITS)
▼ 2,310

CONSTRUCTION STARTS
▼

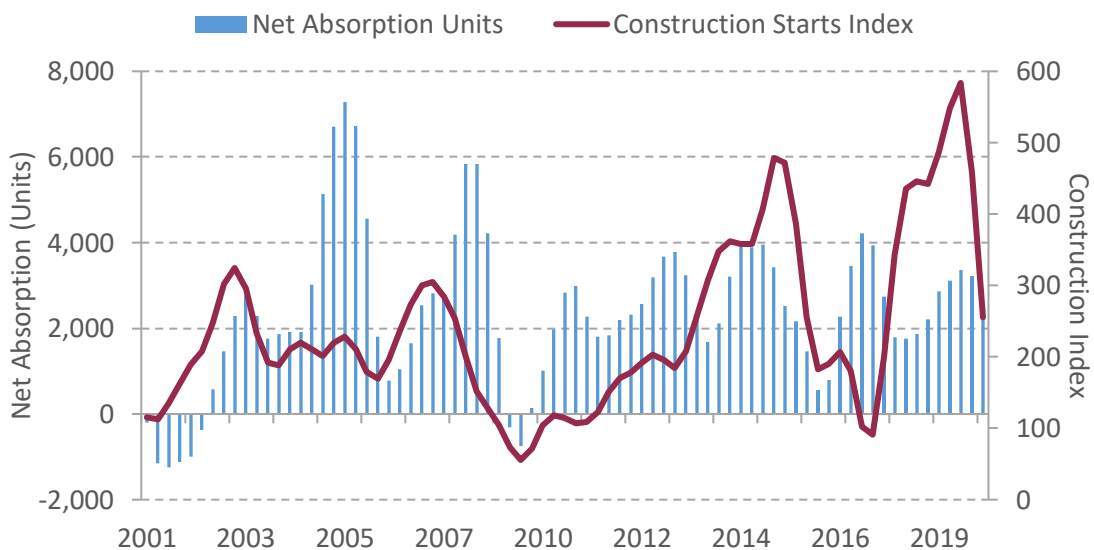
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 18. Houston Overall Vacancy and Effective Rent Growth (SA and TC)



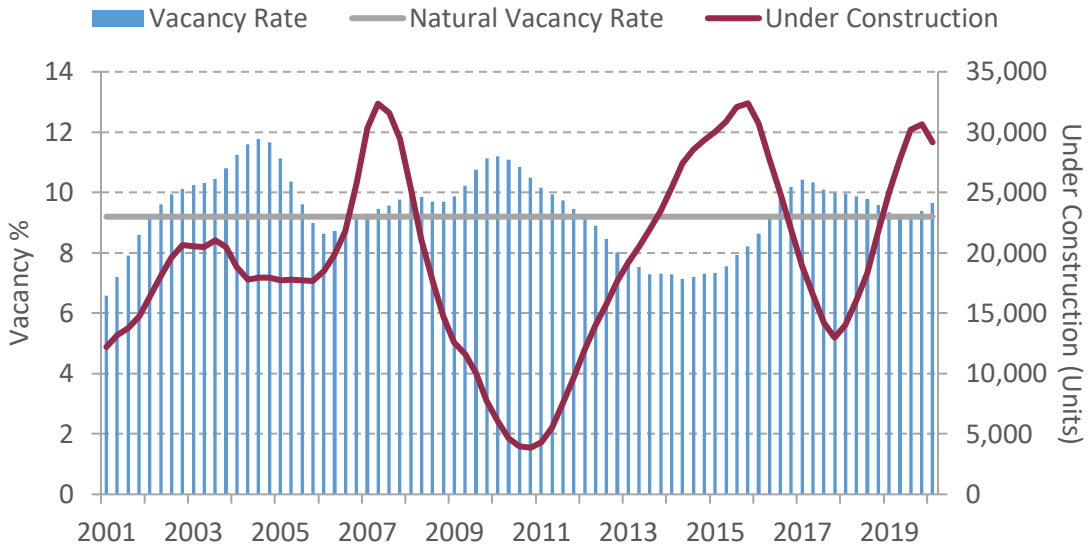
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 19. Houston Overall Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



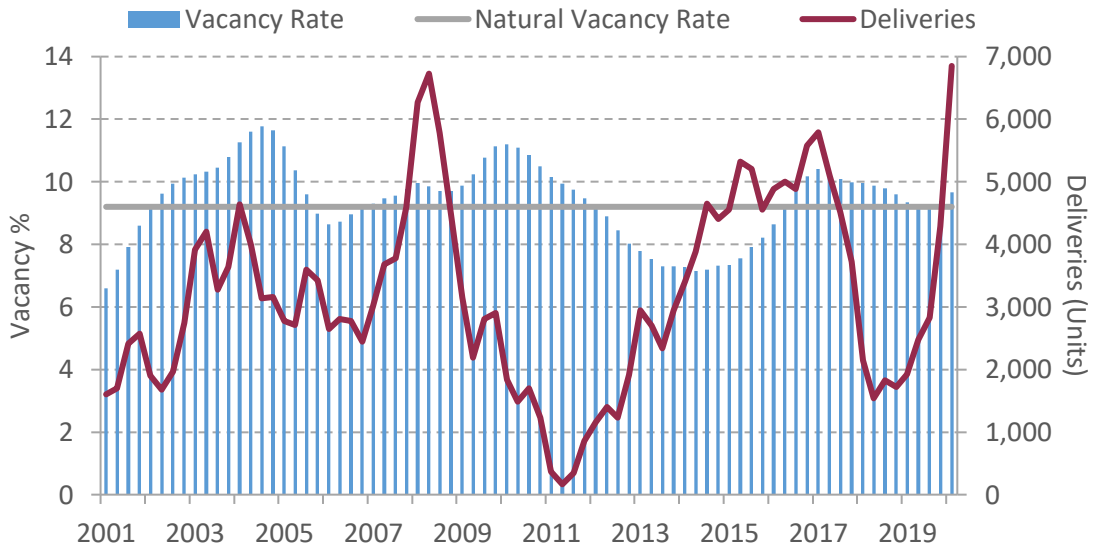
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 20. Houston Overall Vacancy and Units Under Construction (SA and TC)



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

Figure 21. Houston Overall Vacancy and Deliveries in Units (SA and TC)



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

San Antonio Overall

OCCUPANCY RATE
 90.6%

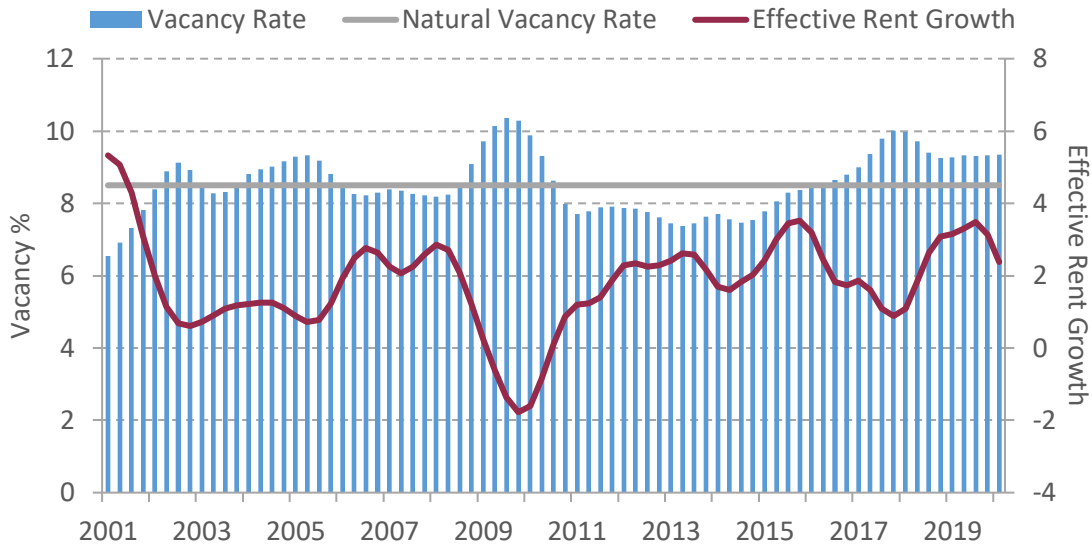
EFFECTIVE RENT GROWTH (PER UNIT)
 2.1%

NET ABSORPTION (UNITS)
 761

CONSTRUCTION STARTS

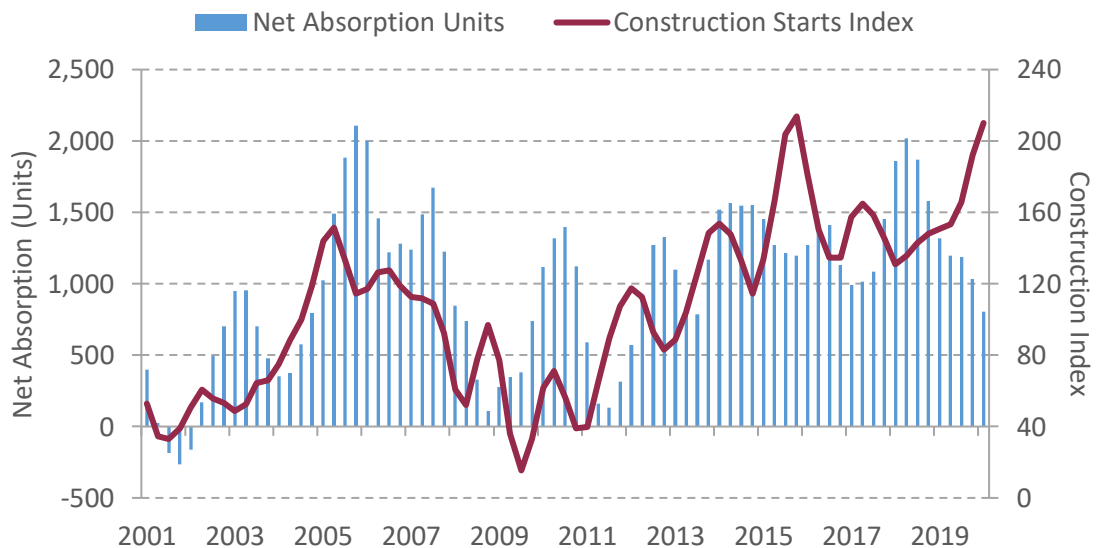

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
 Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 22. San Antonio Overall Vacancy and Effective Rent Growth (SA and TC)



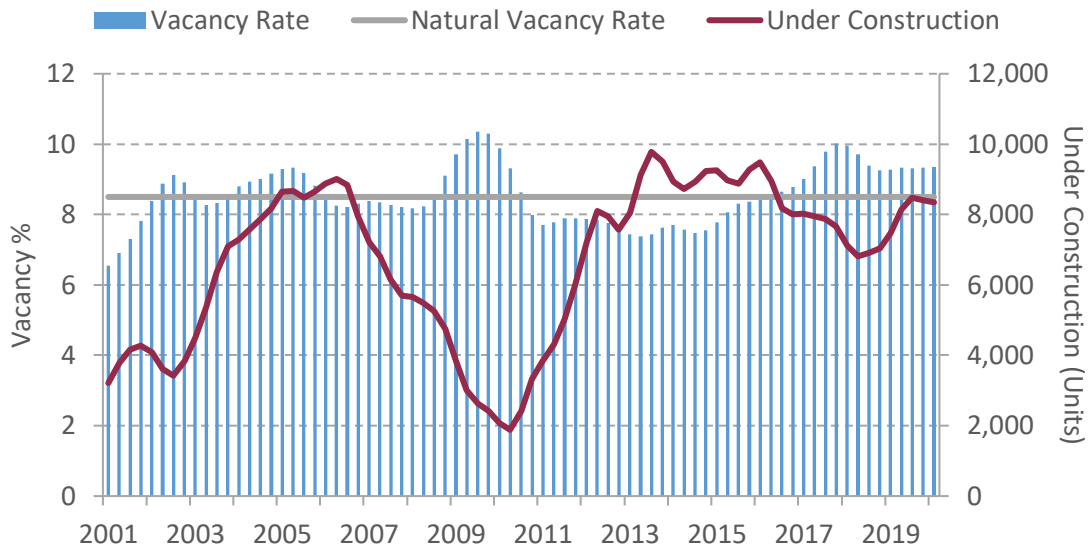
Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar and Real Estate Center at Texas A&M University

Figure 23. San Antonio Overall Net Absorption and Construction Starts Index (SA and TC)
 (Index 2000 Q1 = 100)



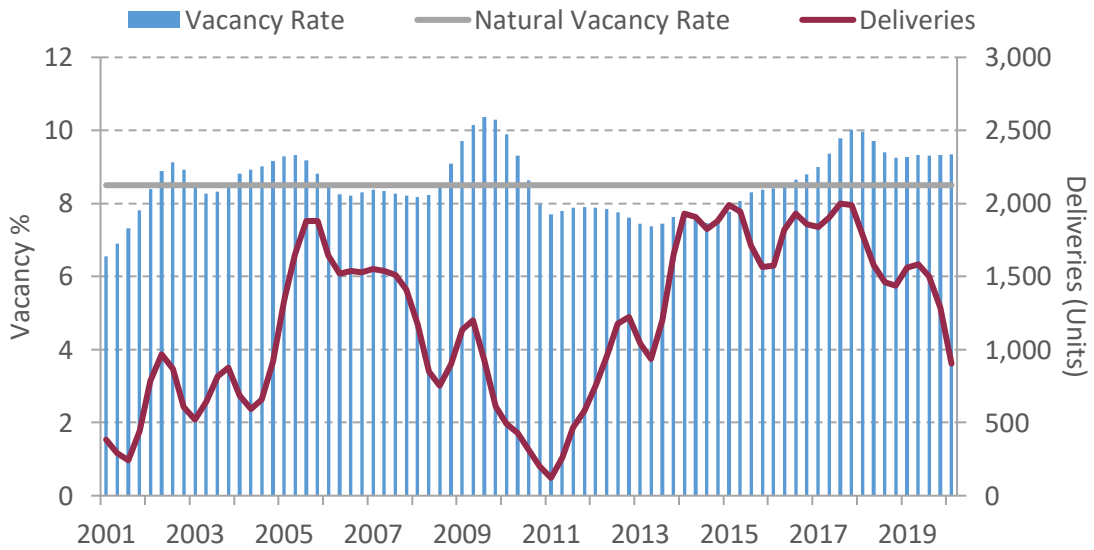
Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 24. San Antonio Overall Vacancy and Units Under Construction (SA and TC)



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

Figure 25. San Antonio Overall Vacancy and Deliveries in Units (SA and TC)



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

Austin Class A

OCCUPANCY RATE
▼ 88.4%

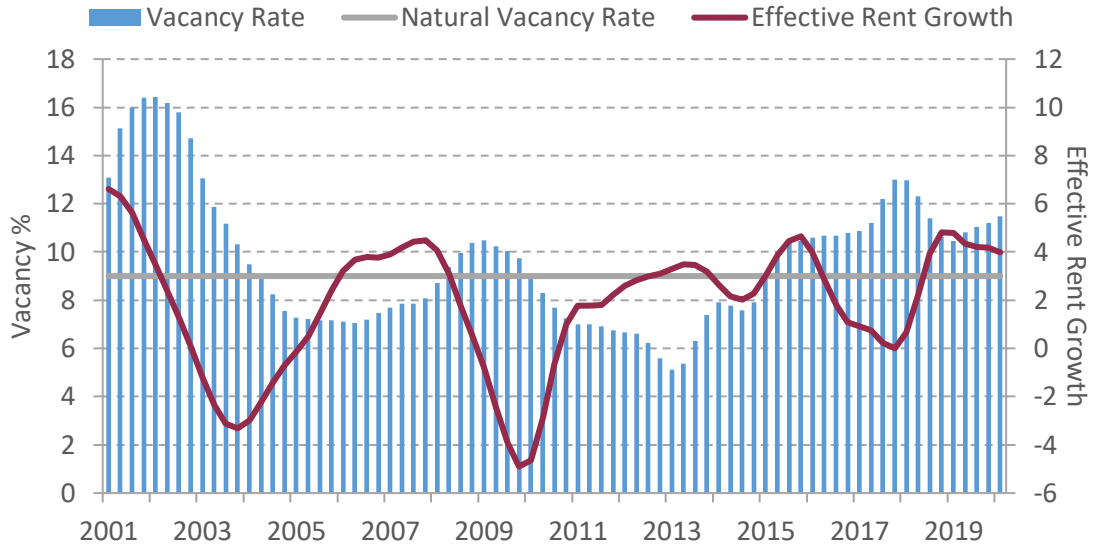
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 3.7%

NET ABSORPTION (UNITS)
▼ 1,652

CONSTRUCTION STARTS
▼

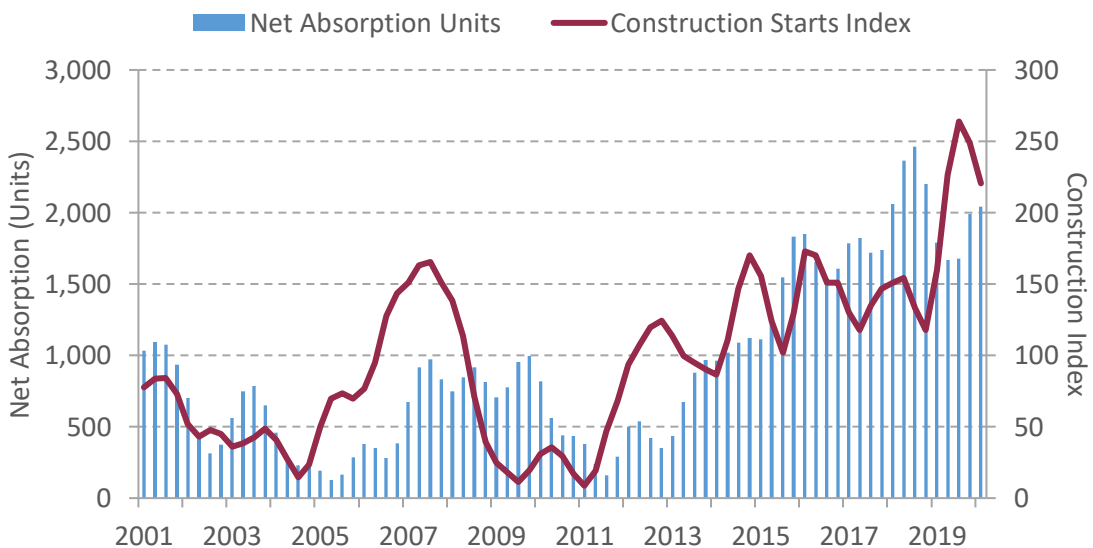
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 26. Austin Class A Vacancy and Effective Rent Growth (SA and TC)



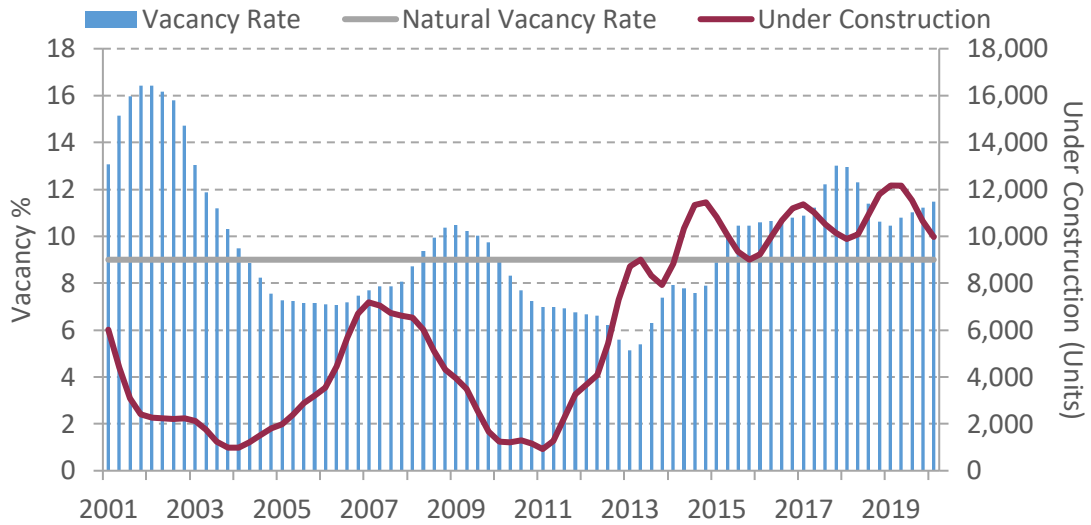
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 27. Austin Class A Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



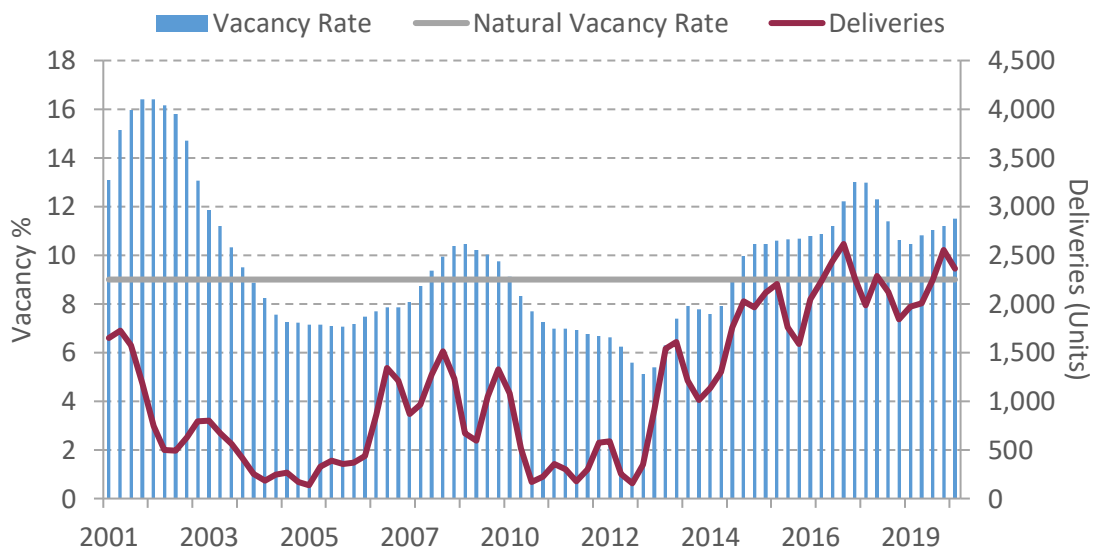
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 28. Austin Class A Vacancy and Units Under Construction (SA and TC)



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

Figure 29. Austin Class A Vacancy and Deliveries in Units (SA and TC)



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

Dallas-Fort Worth Class A

OCCUPANCY RATE
 88.2%

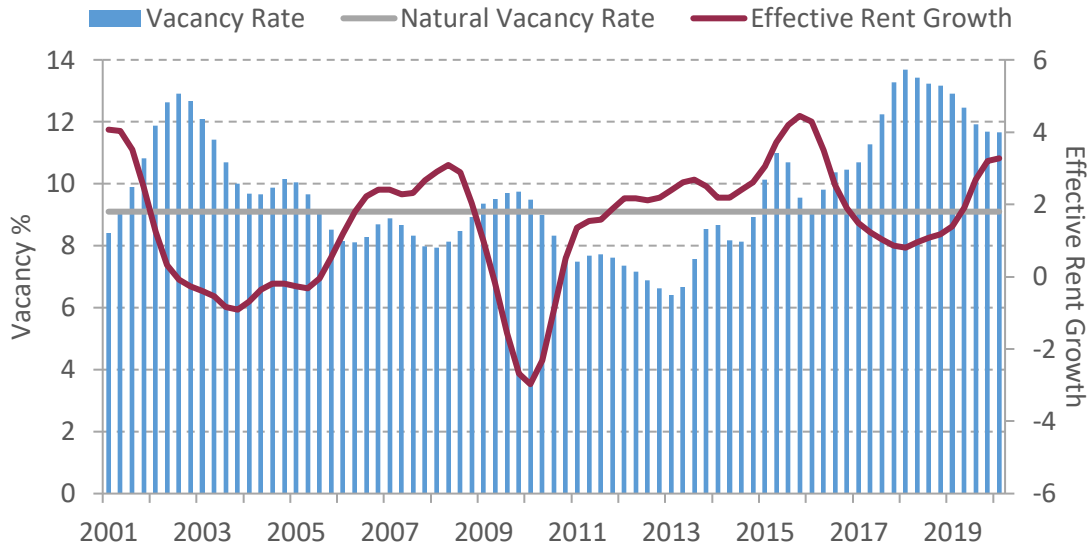
EFFECTIVE RENT GROWTH (PER UNIT)
 3.2%

NET ABSORPTION (UNITS)
 5,043

CONSTRUCTION STARTS

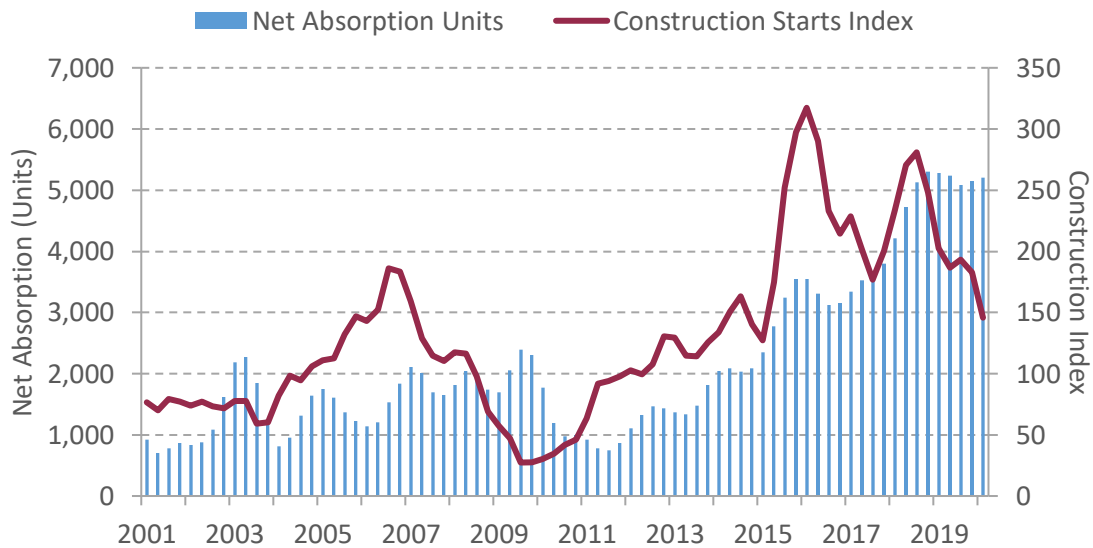

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
 Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 30. DFW Class A Vacancy and Effective Rent Growth (SA and TC)



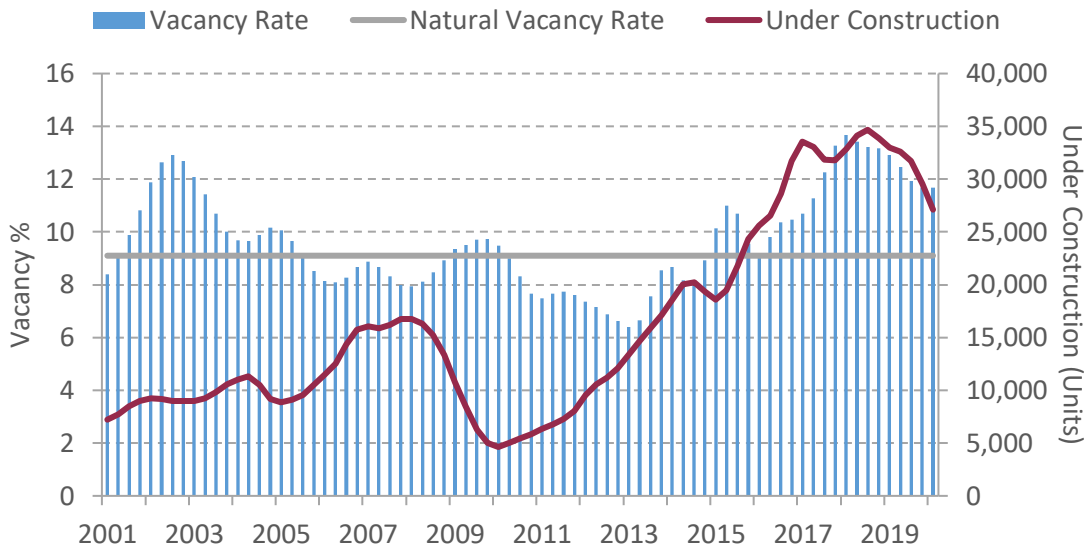
Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar and Real Estate Center at Texas A&M University

Figure 31. DFW Class A Net Absorption and Construction Starts Index (SA and TC)
 (Index 2000 Q1 = 100)



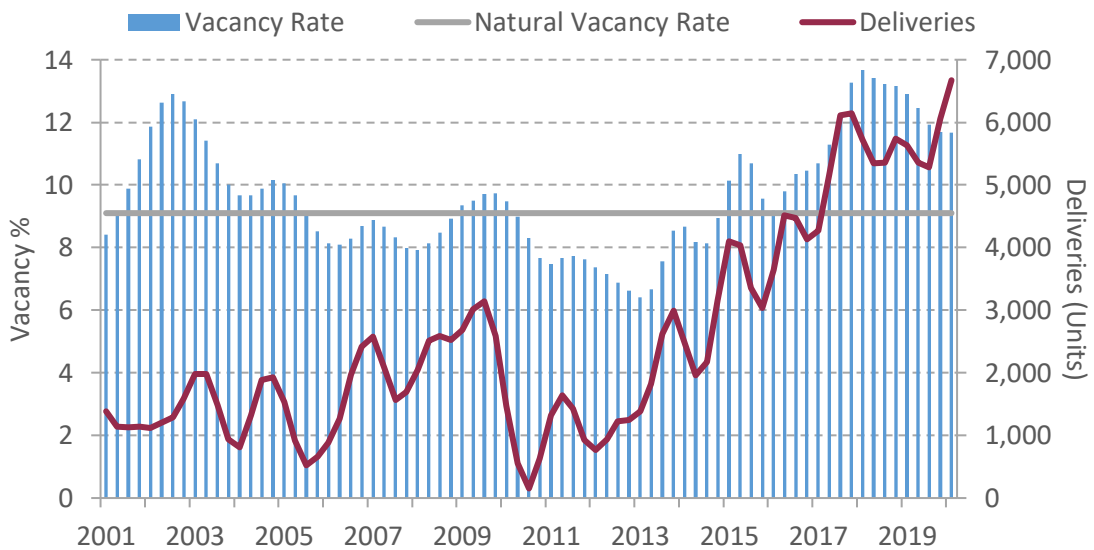
Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 32. DFW Class A Vacancy and Units Under Construction (SA and TC)



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

Figure 33. DFW Class A Vacancy and Deliveries in Units (SA and TC)



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

Houston Class A

OCCUPANCY RATE
▼ 88.6%

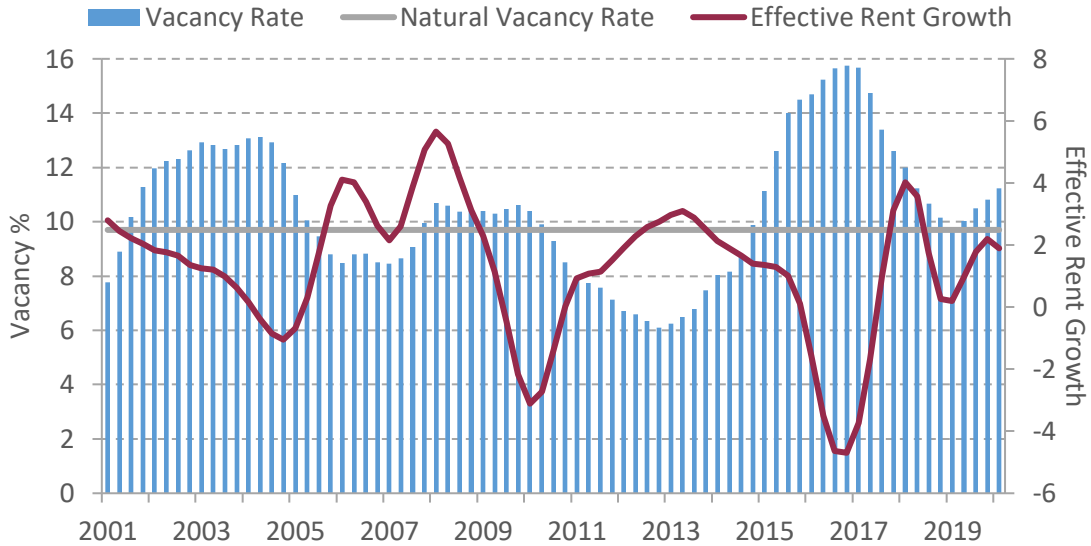
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 1.9%

NET ABSORPTION (UNITS)
▲ 2,971

CONSTRUCTION STARTS
▼

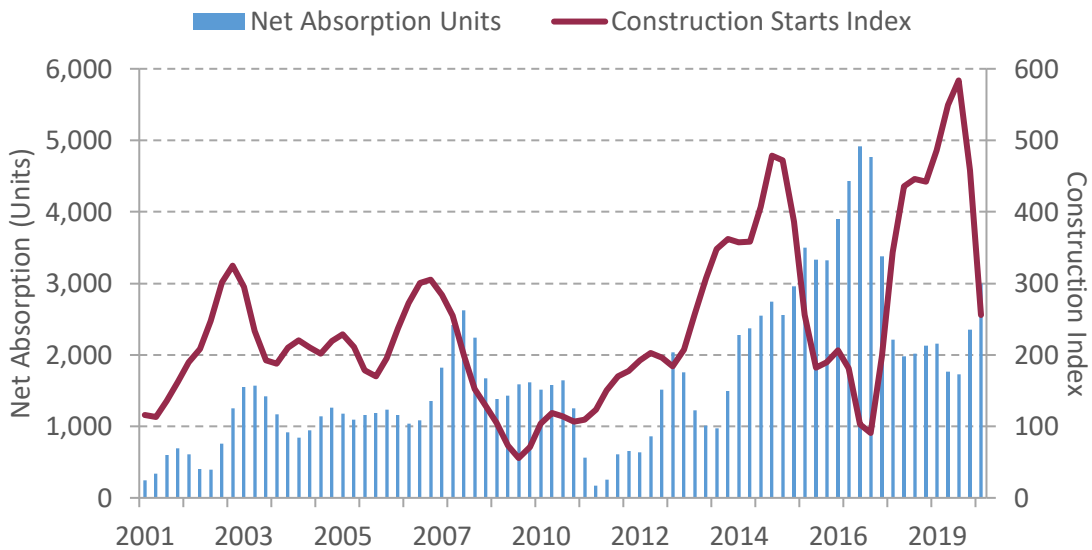
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 34. Houston Class A Vacancy and Effective Rent Growth (SA and TC)



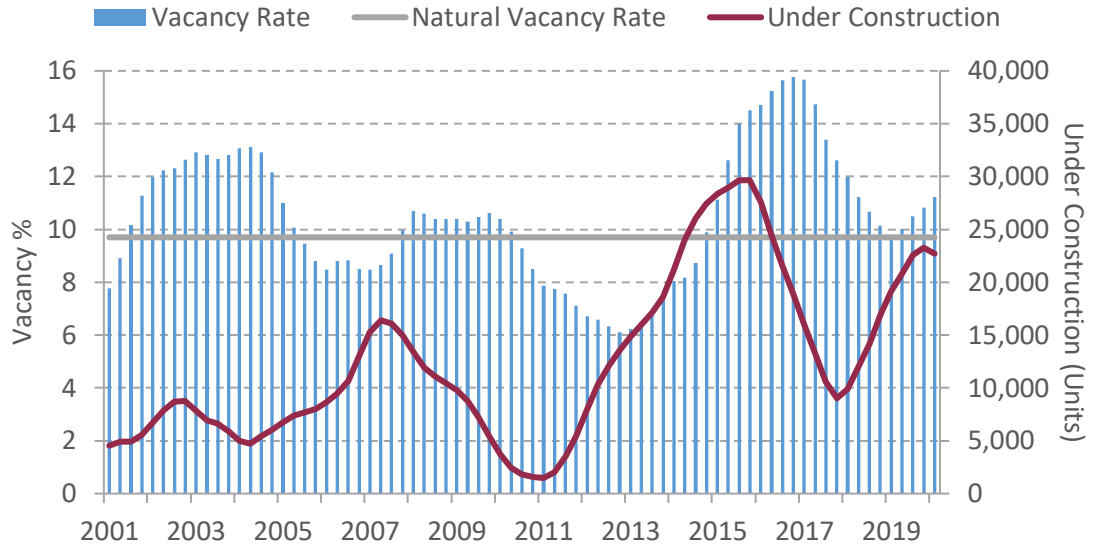
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 35. Houston Class A Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



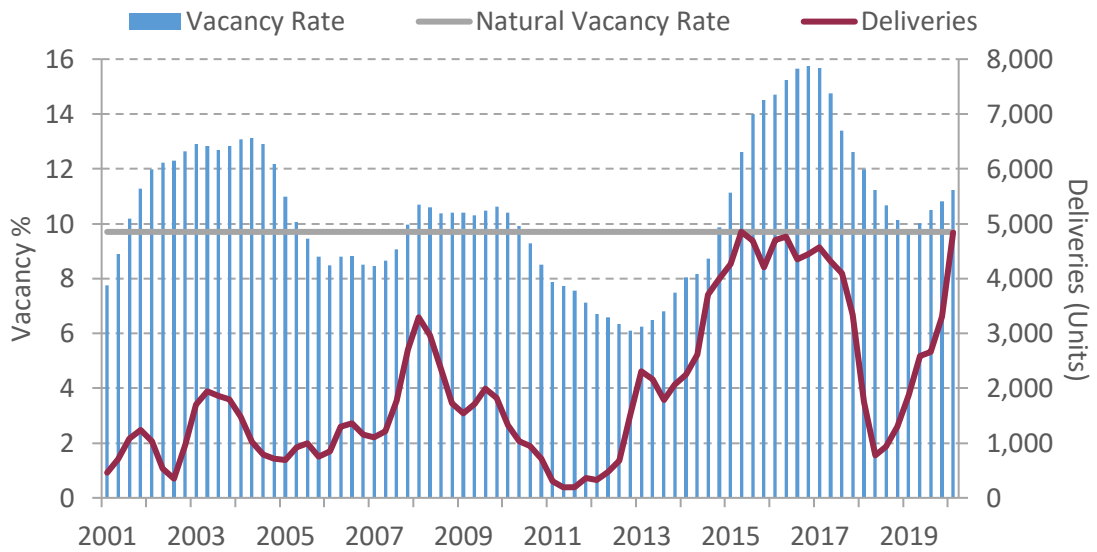
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 36. Houston Class A Vacancy and Units Under Construction (SA and TC)



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

Figure 37. Houston Class A Vacancy and Deliveries in Units (SA and TC)



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

San Antonio Class A

OCCUPANCY RATE
▲ 89.8%

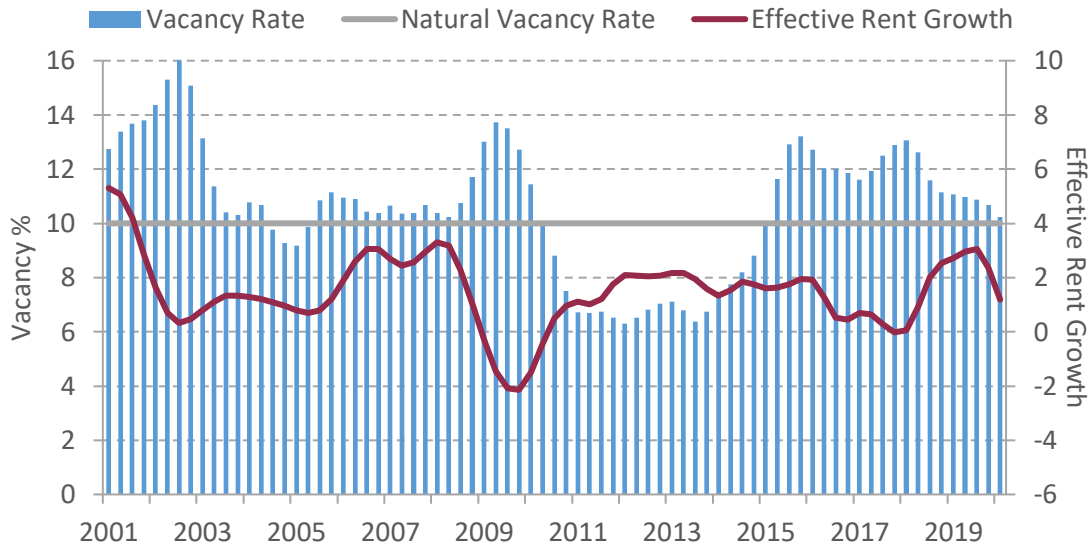
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 1.0%

NET ABSORPTION (UNITS)
▲ 832

CONSTRUCTION STARTS
▼

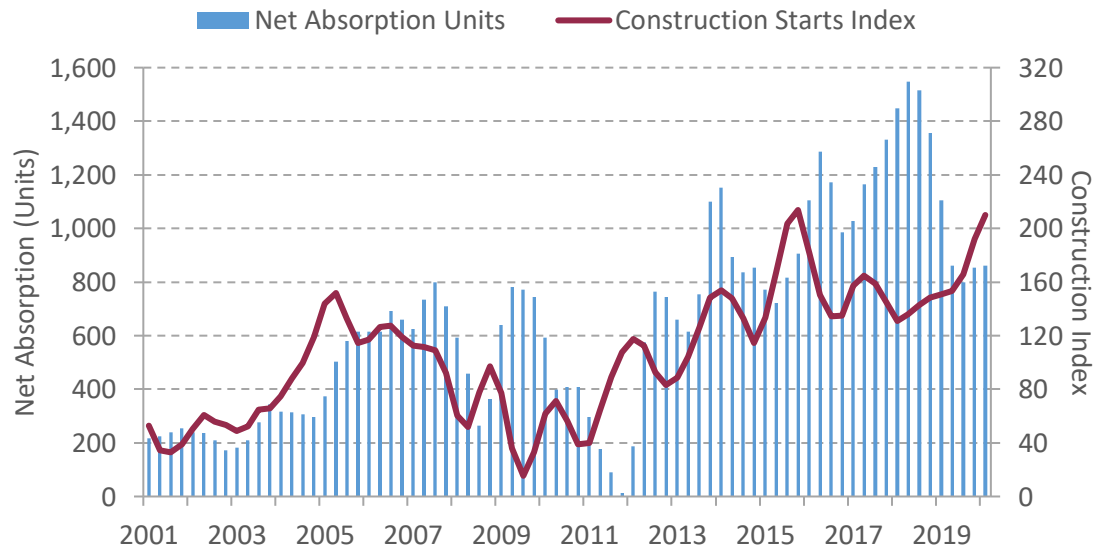
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

Figure 38. San Antonio Class A Vacancy and Effective Rent Growth (SA and TC)



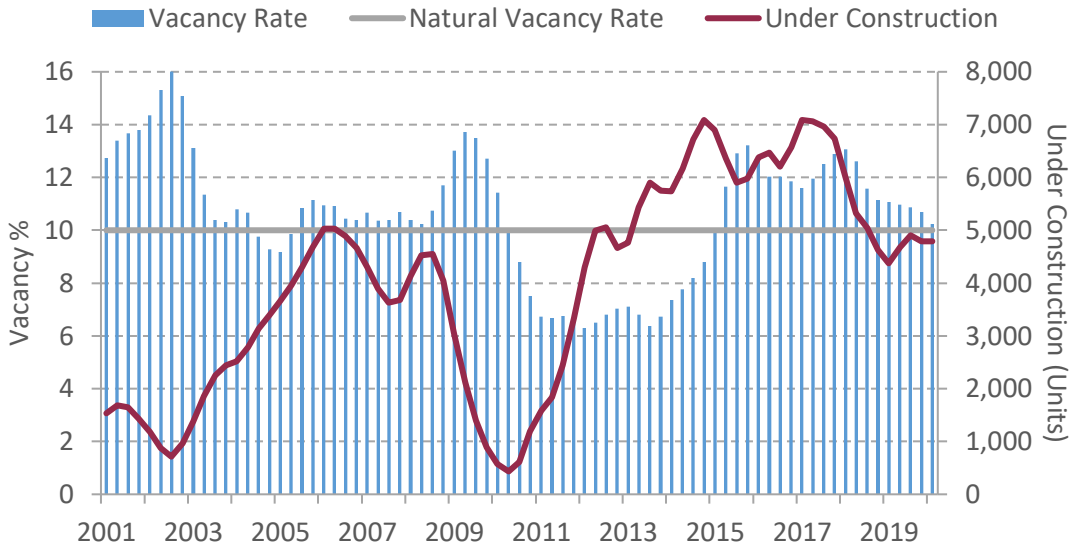
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 39. San Antonio Class A Net Absorption and Construction Starts Index (SA and TC)
(Index 2000 Q1 = 100)



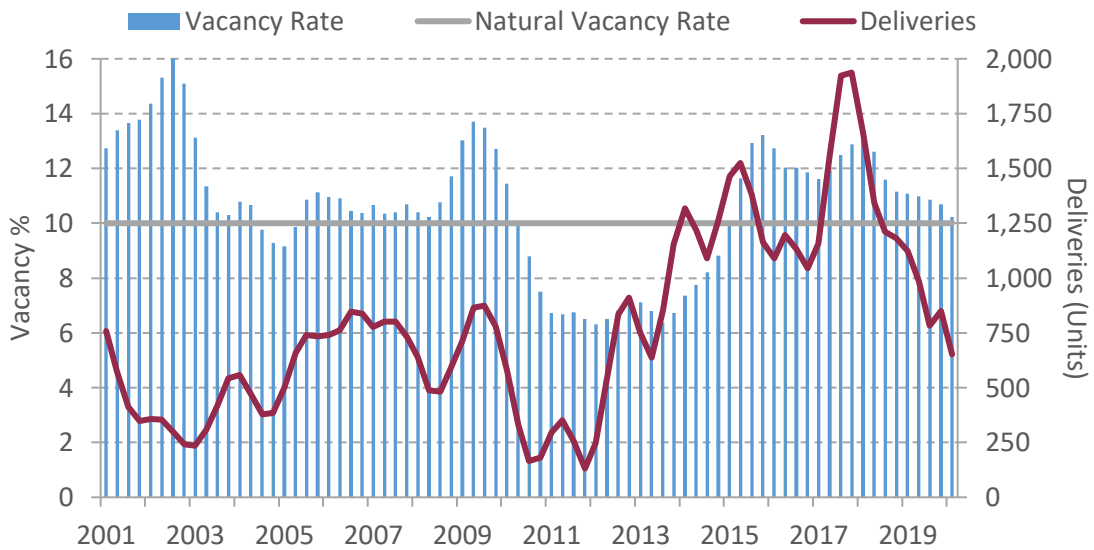
Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 40. San Antonio Class A Vacancy and Units Under Construction (SA and TC)



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

Figure 41. San Antonio Class A Vacancy and Deliveries in Units (SA and TC)



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

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 owners 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 that some real estate professionals may question whether calling the total dollars to be spent on a project’s “construction value” actually 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 future 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 provide indication of 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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