

Texas Quarterly Apartment Report



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TEXAS A&M UNIVERSITY

Real Estate Center

TECHNICAL REPORT
2 2 4 2
SECOND QUARTER 2020

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Texas Quarterly Apartment Report: 2nd Quarter 2020

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OVERALL	91.4% ▬	1.6% ▼
CLASS A	87.4% ▼	0.4% ▼

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OVERALL	90.2% ▼	-0.7% ▼
CLASS A	86.7% ▼	-1.7% ▼

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OVERALL	89.8% ▼	1.3% ▼
CLASS A	88.1% ▼	-0.5% ▼

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OVERALL	89.7% ▼	0.6% ▼
CLASS A	87.4% ▼	-1.8% ▼

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* 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, Caleb Smoot, Samuel Woolsey, and Garret Newman

Texas Economic Overview

Economic activity contracted sharply in second quarter 2020 due to COVID-19 shelter-in-place restrictions, but then rebounded as the economy re-opened during May and June. Putting the health crisis in a historical context, neither the Great Depression nor the Great Recession nor any other recession over the past two centuries caused such a steep, sudden economic decline. The strength and pace of the recovery are unknown because they depend on health outcomes that allow or impede the complete re-opening of the economy. Barring a second wave of the virus and another economic shutdown, 2Q2020 should represent the worst of the economic slump.

The Texas Residential Construction Cycle (Coincident) Index, which measures current construction levels, dipped slightly as construction values fell and hiring slowed (Figure 1). On the other hand, the Residential Construction Leading Index almost reached the post-recessionary high from December as interest rates continued to decrease and permits and housing starts picked up, suggesting positive momentum in the next few months. At the metropolitan level, Austin was the only major Texas metro where the leading index decreased, pulled down by multifamily building permits (Figure 2).

Overall market trends continued to change during June as more Metropolitan Statistical Areas (MSAs) like Austin and Dallas started to register year-over-year negative changes in occupancy rates. Due to the difficulties facing the oil industry, Midland-Odessa's apartment market continued to struggle significantly during June, registering lower change in occupancy rates and negative rent growth. Additionally, Victoria continued to register significantly lower occupancy (Figure 3).

The Texas economy lost 1.4 million jobs between March and April but recovered 475,000 of those jobs between May and June. In June, although Texas nonfarm employment gained 225,200 jobs, hiring slowed from the prior month. Jobs remained 6.7 percent below year-end 2019 levels. Employment by sector in the major metros recovered in June at varying degrees, with the leisure/hospitality sector making up the lion's share of gains across the board.

Fort Worth and Austin ranked highest in percentage terms, adding around 30,000 positions each; however, the count remained at negative 6.0 and 6.9 percent YTD, respectively.

Job growth accelerated in Dallas where the workforce gained 63,300 employees. San Antonio payrolls were down 5.6 percent YTD despite expanding by 28,500 jobs. Houston recouped 46,900 positions, but the rate of increase slowed in June, leaving employment 6.8 percent below year-end levels.

The upsurge in COVID-19 cases hindered Texas' economic recovery in June. Further waves of infections could reverse increased mobility and spending, affecting future recovery. For additional commentary and statistics, see [Outlook for the Texas Economy](#).

Texas' goods-producing sector shed 3,400 positions in June, although data revisions revealed 7,200 rather than 4,100 jobs were added the previous month. The mining/logging industry decreased by 6,400 workers, but the decline continued to slow. Market expectation for the oil industry in 2020 continue to be weak, with production expected to continue falling through the end of the year. Oil prices are expected to range between \$40 and \$45 per barrel through much of 2021. Hiring in nondurable goods manufacturing stalled, while the durable-goods sector laid off 500 employees. Only the construction industry expanded goods-producing payrolls, albeit modestly, hiring 3,500 workers.

Services-providing employment decelerated, adding 228,600 jobs but falling 14,000 short of the prior month. Most of the slowdown is attributed to ambulatory health care services and food services/drinking places. On the other hand, arts/entertainment/recreation payrolls expanded by 28,500 after three monthly decreases and a standstill in May. On the bright side, 42,000 retail employees were called back to work, an improvement over the previous month. Recovery was widespread with only miscellaneous store retailers and nonstore retailers taking a step back after modest increases in May.

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 yield widened at the end of 2019. Spreads have continued to widen during the first half of 2020, indicating increased risk and profitability in apartment real estate (Figure 4). The wider spread is projected to continue through the remainder of 2020. Multifamily real estate risks could increase even 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. 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).

Even with the recovery slowing in June, the unemployment rate still fell to 8.6 percent after reaching a high of 13.5 percent in April. Joblessness in each major metro fell by more than 4 percentage points. Austin's metric was the lowest at 7.3 percent, while unemployment sank to 8.2 and 8.4 percent in Dallas and Fort Worth, respectively. San Antonio's jobless rate was 8.3 percent. Only Houston exceeded the state average with 9.6 percent unemployment. The fall in unemployment is important for multifamily vacancies given the relationship between unemployment rates and vacancy rates. The longer unemployment lasts, the stronger the negative impact on vacancies and rents. As expected, the increase in the unemployment rate during 2Q2020 pushed up vacancy rates in the major metros (Figures 5-8).

UNCERTAIN OUTLOOK FOR MULTIFAMILY DUE TO COVID-19

- About one-third of the country's renters were protected by an eviction moratorium covering properties with federally insured mortgages.
 - ✓ Comment: Expired July 25.
- Many renters are jobless, depending on federal supplemental weekly unemployment benefits of \$600.
 - ✓ Comment: Expired July 31.
- The number of tenants able to pay rent going forward is unknown.
 - ✓ Comment: Depends on level of employment and wages.
- Based on the National Multifamily Housing Council (NMHC) rent payment tracker, 89.0 percent of apartment households paid rent during June.
 - ✓ Comment: Due to the federal government's initial bolstering of unemployment insurance and the foreclosure moratorium.
- The apartment market outlook is worrisome due to uncertainty surrounding the loss of federal unemployment benefits.

Overall Apartment Sector

Austin (Figures 9- 12):

Actual vacancy in the overall Austin apartment market continued to grow this quarter, reaching a high of 9.8 percent. Not only is this significantly higher than the natural vacancy rate of 8.3 percent, it is the highest the market has been since the dot-com bubble in the early 2000s. In this quarter, effective rent growth declined accordingly to nearly 0.0 percent, following its negative correlation with vacancy. Net absorption rebounded slightly from a low in 1Q2020, indicating moderate demand. Values of construction starts continued their two-quarter decline, though they are still relatively high. Similarly, units under construction dipped, while deliveries hit an all-time high.

The large number of deliveries is concerning because of the COVID-19 health crisis. Much of the MSA is currently under an eviction moratorium due to the pandemic. As a result, it is possible that in the coming months, after the moratorium has lifted, Austin could report an even greater spike in vacancy and a decline in effective rents.

Dallas-Fort Worth (Figures 13- 16):

In 2Q2020, actual vacancy increased minimally to 8.7 percent, causing little concern; however, it does represent the first time since the Great Recession actual vacancy has surpassed the natural vacancy rate of 8.5 percent. Unsurprisingly, effective rent growth and net absorption declined to Great Recession levels, with effective rent growth declining to 1.6 percent and net absorption remaining negative. The value of construction starts held steady this quarter, as did square feet under construction. Deliveries, however, fell significantly after a two-quarter period of highs.

As eviction moratoriums continue and are eventually lifted in the Dallas-Fort Worth MSA, how the overall apartment market will be completely affected remains unknown, though it will likely be through higher vacancy rates and an even greater decline in effective rent growth.

Houston (Figures 17- 20):

Actual vacancy rose to 10.3 percent during 2Q2020, surpassing the natural vacancy rate of 9.2 percent and signaling downward rent pressure going forward. The increase in the vacancy rate started before the pandemic during the second half of 2019 as apartment deliveries surged. The combination of deliveries reaching a historical high during the previous quarter, and the health crisis pushed net absorption negative. Growth in effective rent declined to 0.6 percent, driven down by the pandemic. Additionally, construction starts fell during the first half of 2020, another casualty of COVID-19.

Given the negative effects of COVID-19 on the economy and oil markets, Real Estate Center researchers expect a negative outlook for Houston's apartment market for the remainder of the year, with vacancy rates increasing, rent growth registering negative values, and net absorption continuing in negative territory.

San Antonio (Figures 21- 24):

Actual vacancy increased to 10.2 percent during 2Q2020, exceeding the natural vacancy of 8.5 percent, as the apartment market felt the negative effects of the pandemic combined with an upsurge in construction activity and deliveries in the previous two quarters. Effective rent growth slowed to 1.3 percent and is expected to register zero or negative growth going forward. The decrease in demand was due to an abrupt fall in net absorption that managed to remain positive.

Construction starts declined during 2Q2020 as the pandemic shut down the economy. Although deliveries declined that quarter, the levels remain high due to construction activity in the past six months. This suggests future downward pressure on rents, higher vacancy rates, and pushing absorption negative.

Class A Apartment Sector

Austin-Round Rock (Figures 25- 28):

Due to the COVID-19 pandemic, actual vacancy increased to 13.3 percent in 2Q2020, well above the natural vacancy rate of 9 percent. Effective rent growth turned negative, declining -1.7 percent. Reduced demand caused net absorption to decline abruptly.

Both deliveries and units under construction declined during 2Q2020, helping to mitigate the effects of the health crisis on the supply side. For the remainder of the year, it is likely vacancy rates will continue to increase, and rent growth will continue to be negative, resulting in downward pressures on net absorption turning negative.

Dallas-Fort Worth (Figures 29- 32):

During 2Q2020, DFW's Class A apartment market felt the negative effects of COVID-19. Effective rent growth decreased to 0.4 percent during 2Q2020. Actual vacancy rate increased to 12.6 percent, well surpassing the natural vacancy rate of 9.1 percent, as net absorption sharply declined.

Deliveries declined substantially during 2Q2020, but the number of units under construction increased. When combining the coming months' supply increase with the pandemic's negative effects on demand, higher vacancy rates and zero or negative rent growth are likely for the remainder of 2020.

Houston (Figures 33- 36):

Actual vacancy ticked upward during 2Q2020 to 12.6 percent, well above the natural vacancy of 9.7 percent, primarily due to the pandemic. Even before COVID-19, the sharp increase in units under construction and deliveries during 2019 and early 2020 had contributed to the rise in vacancy rates.

The COVID-19 health crisis accelerated the downward trend in effective rents observed in previous quarters, registering a decline of -1.8 percent during 2Q2020. Net absorption felt the effects of the pandemic and rising supply, falling but remaining positive.

Both deliveries and units under construction fell during 2Q2020, but the number of units under construction still remains high, signaling deliveries will likely continue to be high in the nearterm. Combining the effects of COVID-19 with the supply of new apartments, actual vacancy will likely increase while rent growth should continue to decrease.

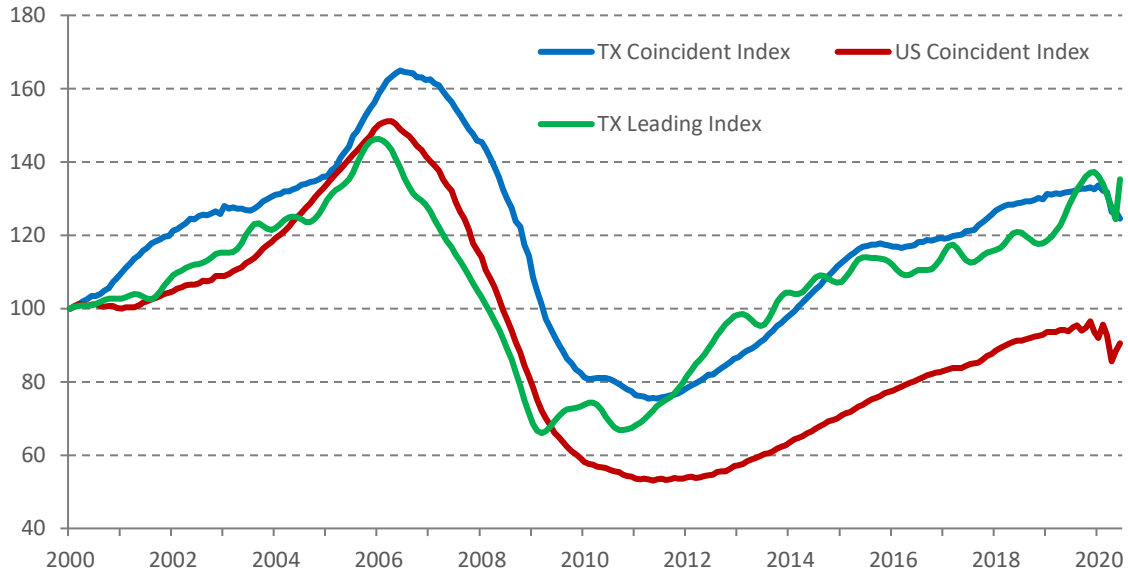
San Antonio (Figures 37- 40):

In 2Q2020, effective rent growth declined -0.5 percent while vacancy rates increased to 11.7 percent, exceeding the natural vacancy rate of 10 percent, as San Antonio's Class A apartment market felt the negative effects of COVID-19. Deliveries increased considerably during the second quarter, contributing to the increase in vacancies and the decrease in rents. In addition, net absorption decreased, reflecting the softening of demand in the market due to the pandemic.

The number of units under construction fell during 2Q2020 as the economy shut down due to the health crisis, but supply remains high putting future pressure on vacancies and rents. The COVID-19 pandemic combined with new supply has the potential to cause a spike in actual vacancy. Effective rent growth should remain negative for the remainder of 2020.

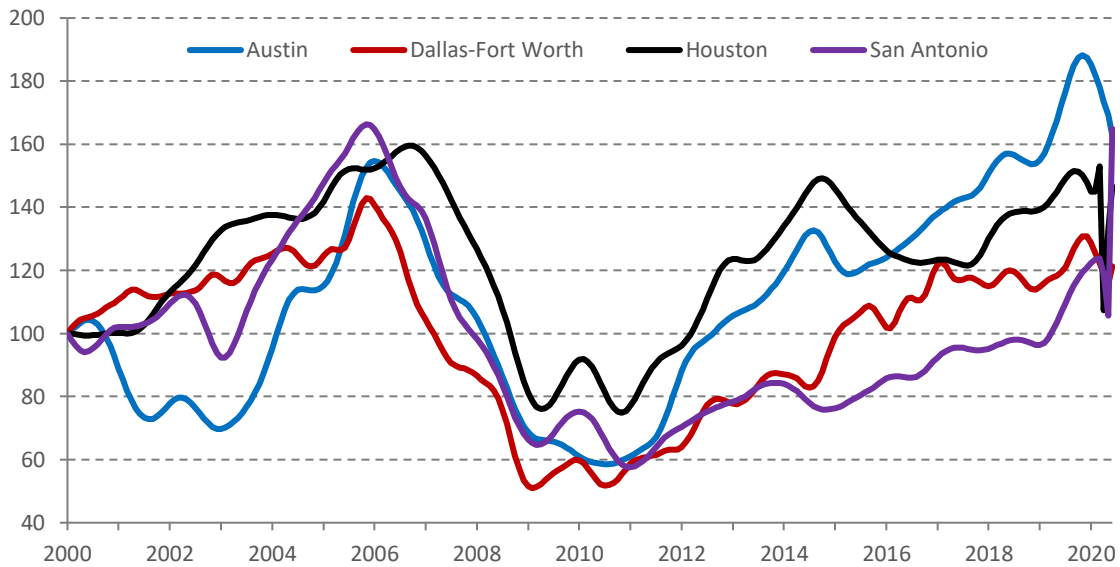
Figures

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



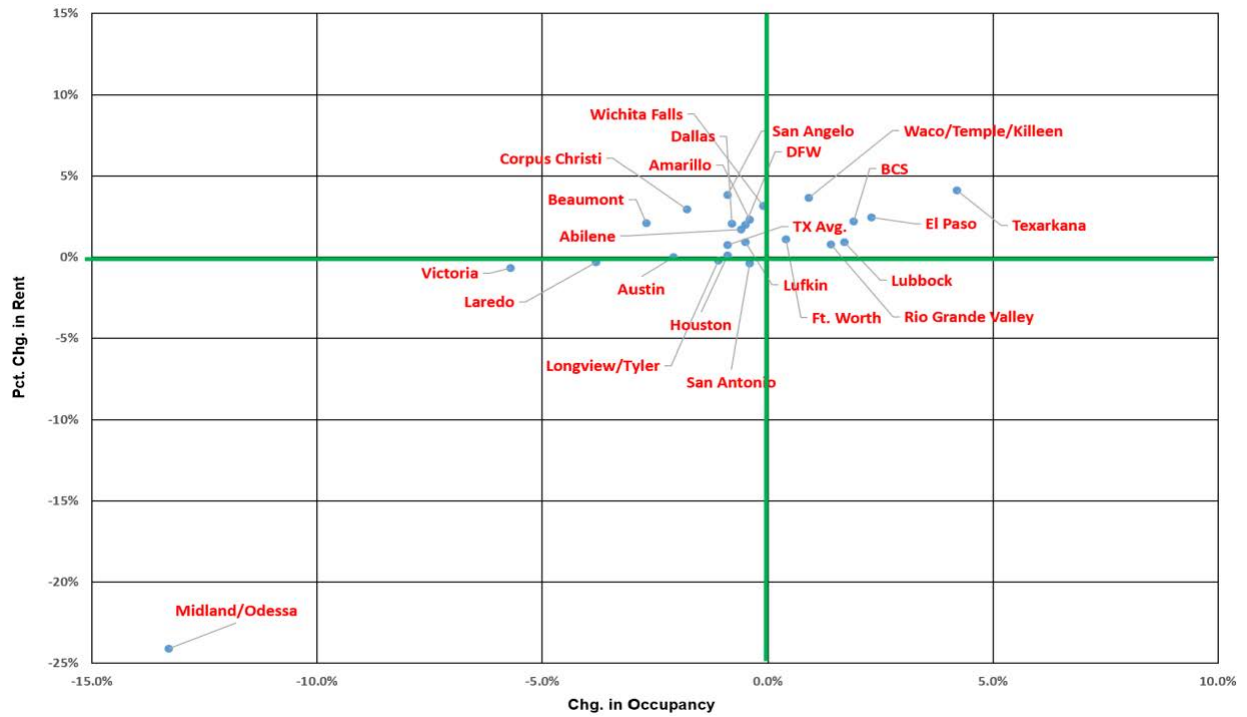
Source: Real Estate Center at Texas A&M University

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



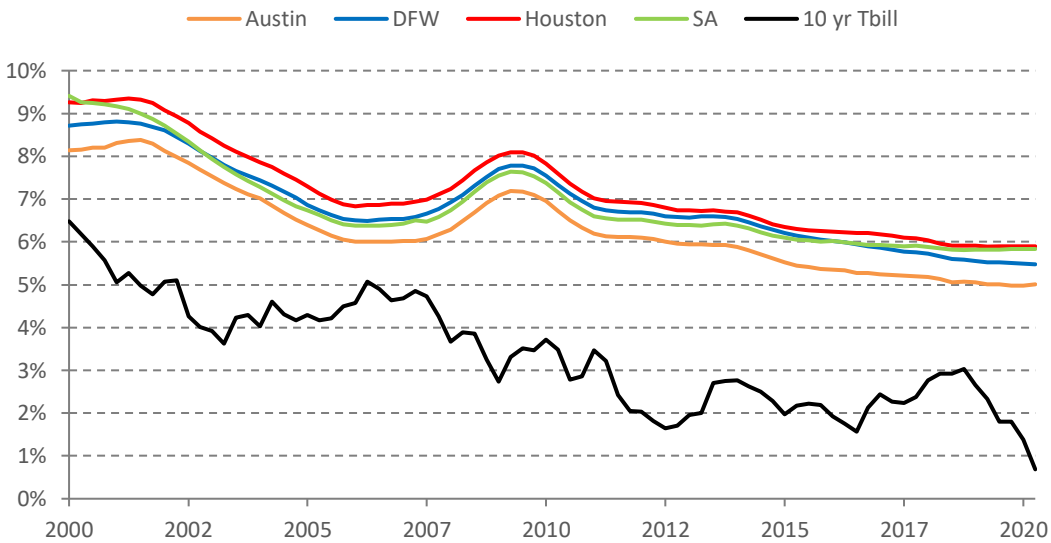
Source: Real Estate Center at Texas A&M University

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



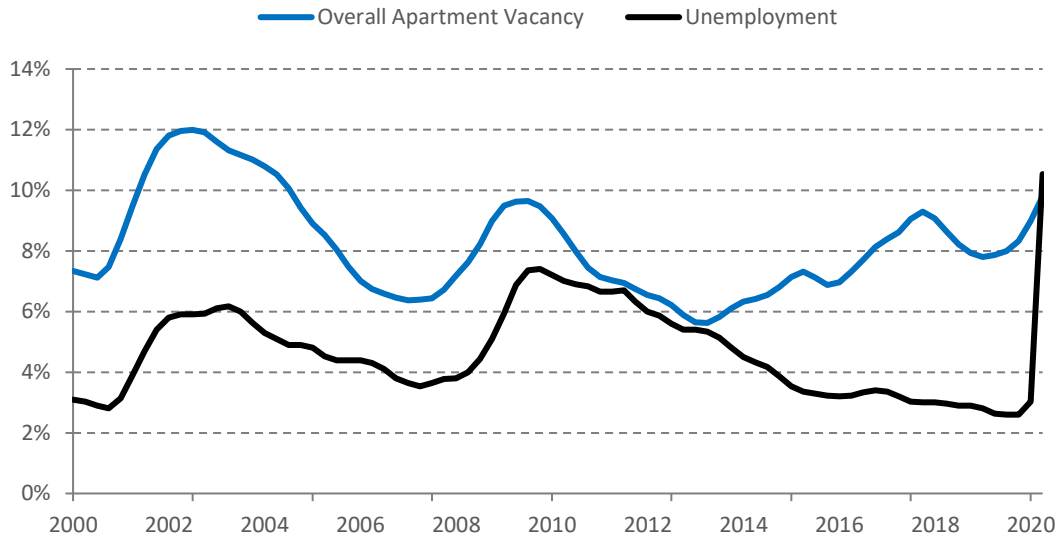
Sources: ALN Apartment Data and Real Estate Center at Texas A&M University

Figure 4. Capitalization Rates v. Ten-year Treasury Bills



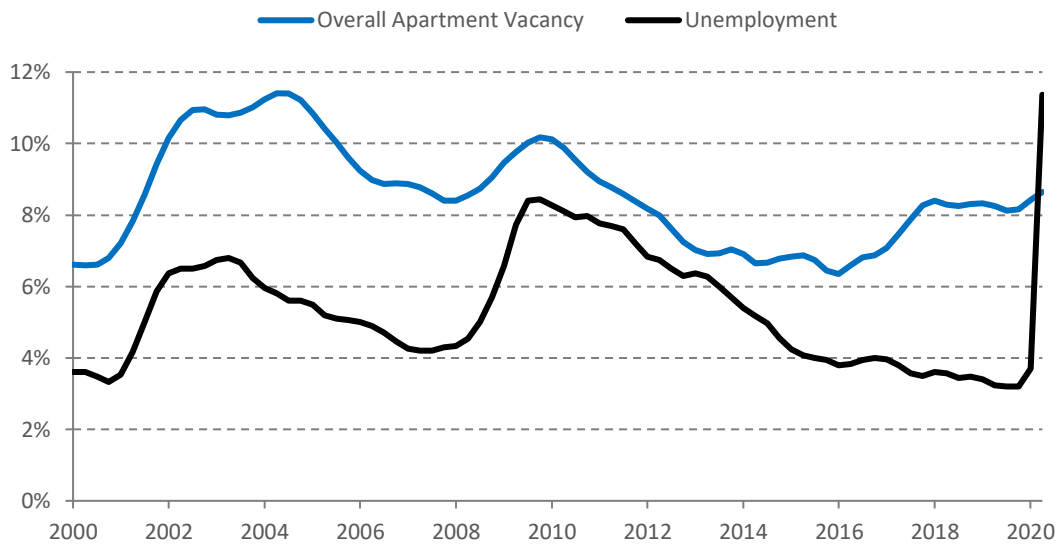
Source: Real Estate Center at Texas A&M University

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



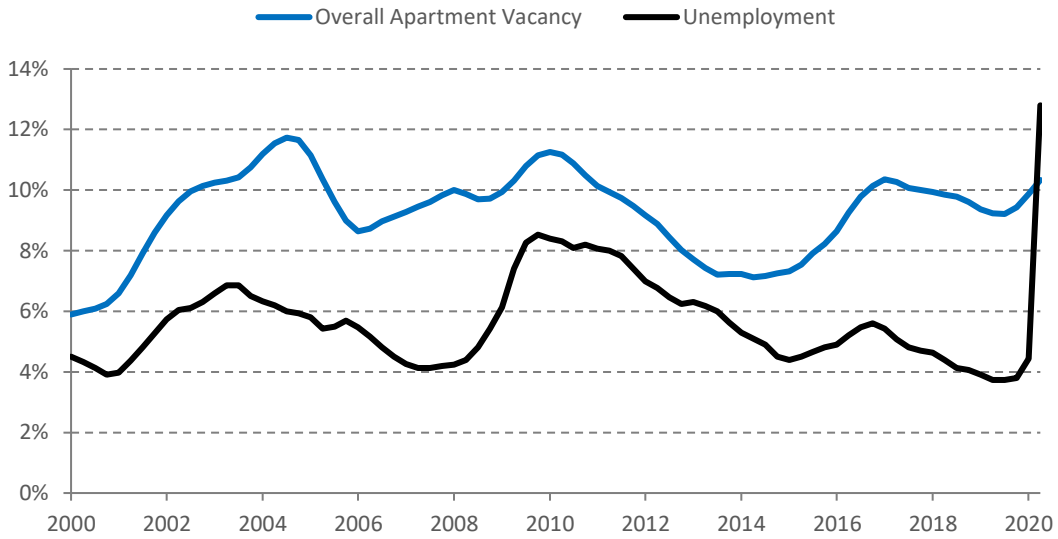
*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



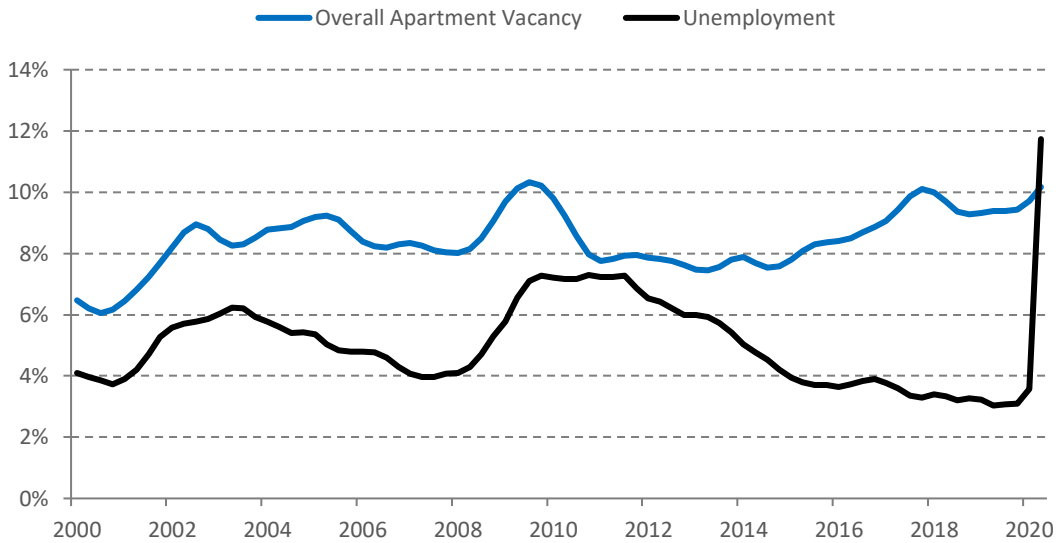
*Note: Vacancy rates seasonally adjusted and trend cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



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

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



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

Austin Overall

OCCUPANCY RATE
▼ 90.2%

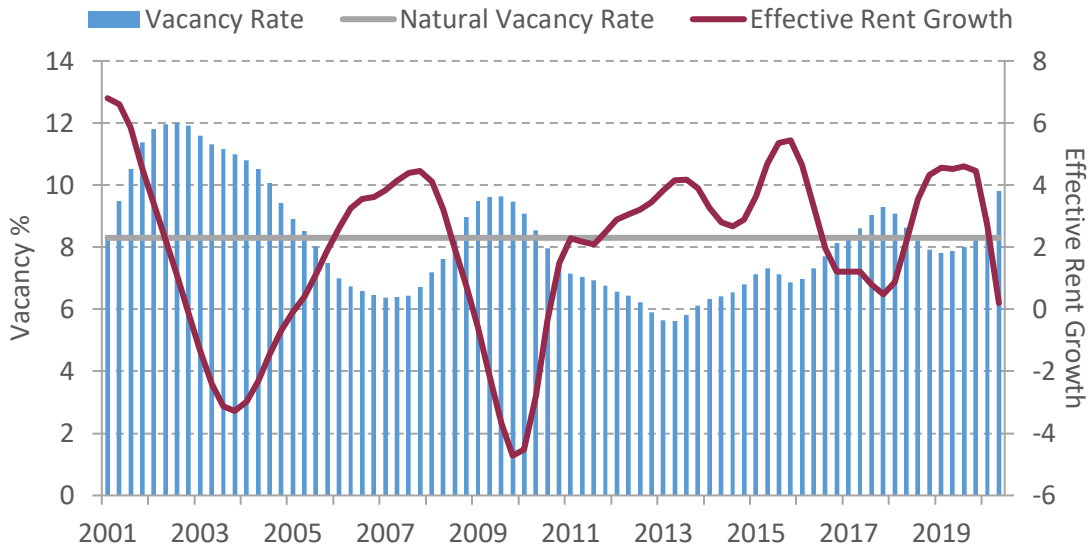
EFFECTIVE RENT GROWTH (PER UNIT)
▼ -0.7%

NET ABSORPTION (UNITS)
▲ 1,255

CONSTRUCTION STARTS
▼

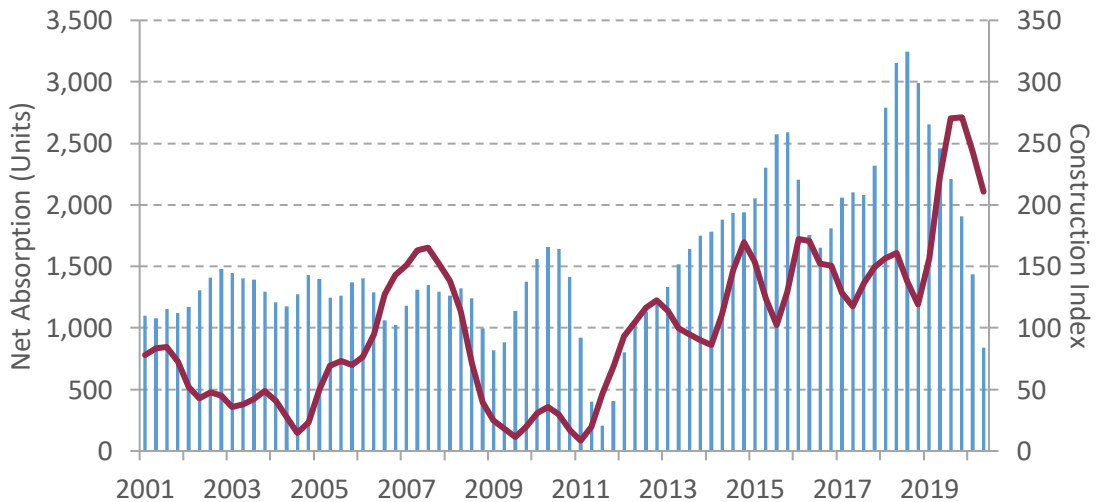
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



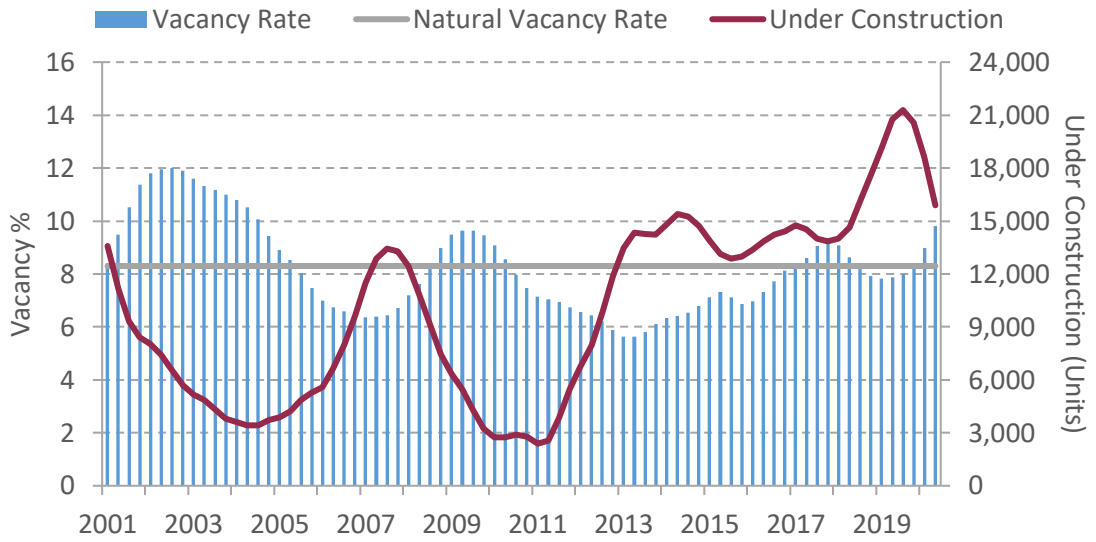
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



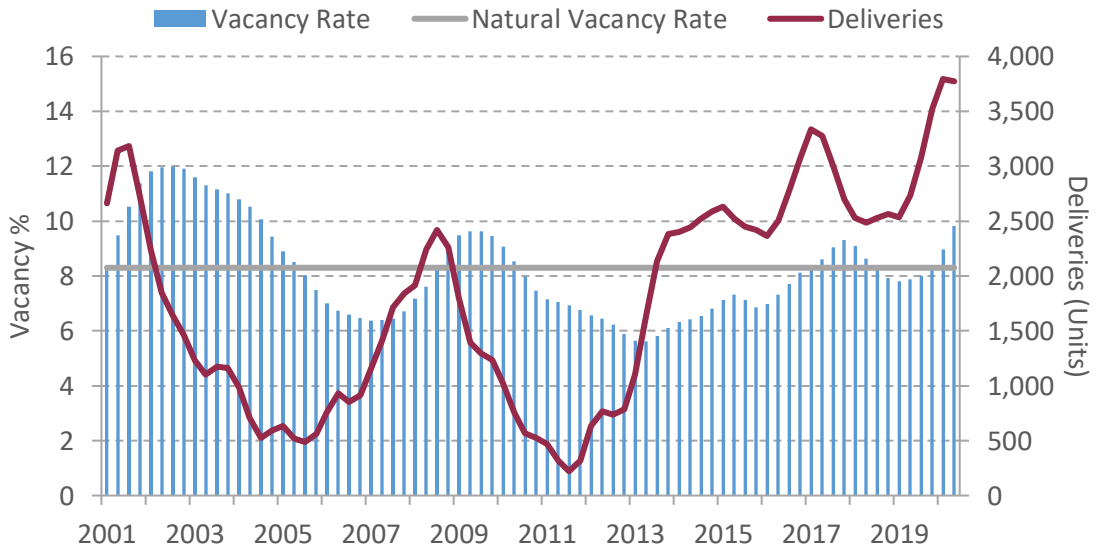
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

Figure 12. Austin Overall Vacancy and Deliveries in Units (SA and TC)*



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

Dallas-Fort Worth Overall

OCCUPANCY RATE
 91.4%

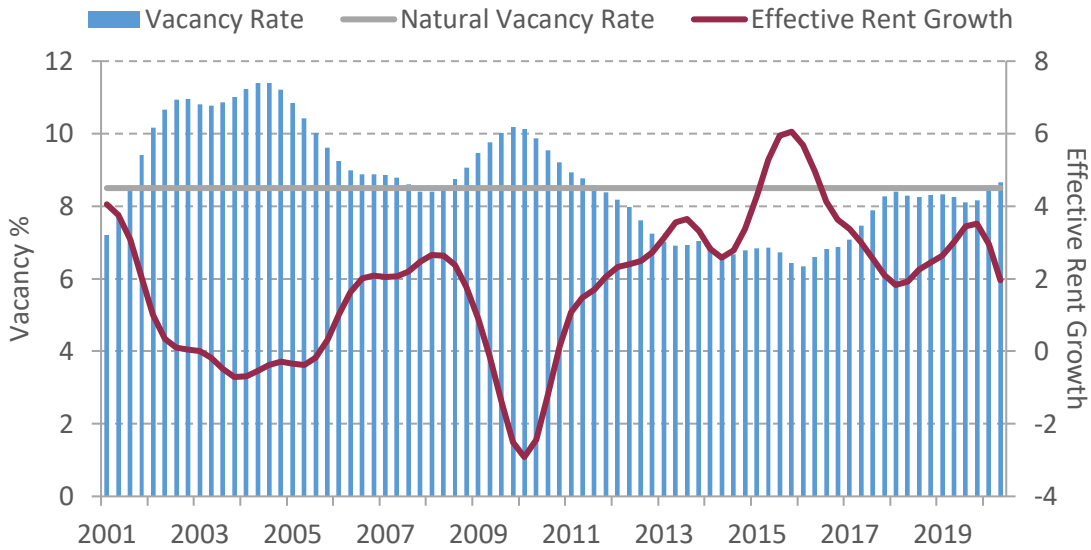
EFFECTIVE RENT GROWTH (PER UNIT)
 1.6%

NET ABSORPTION (UNITS)
 1,777

CONSTRUCTION STARTS

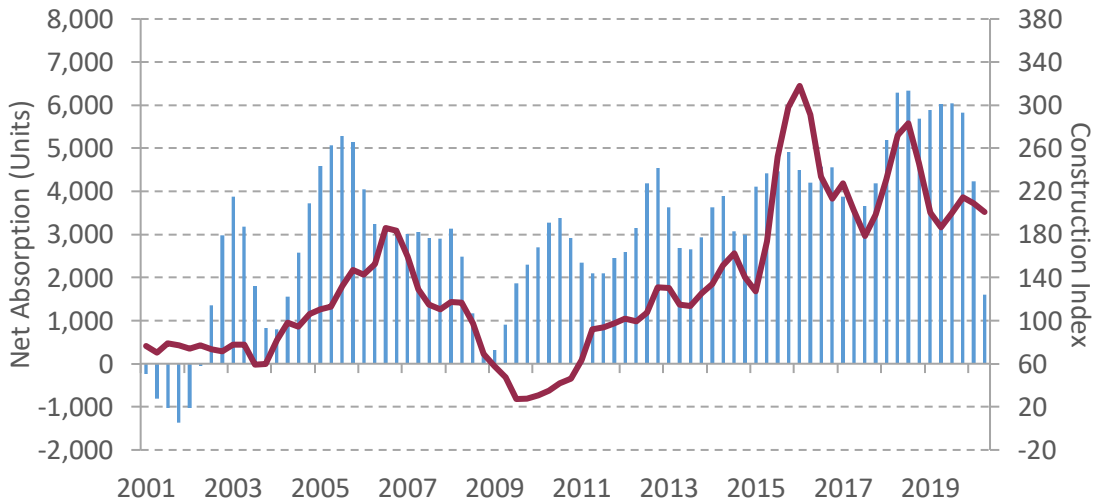

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
 Sources: CoStar and the Real Estate Center at Texas A&M University

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



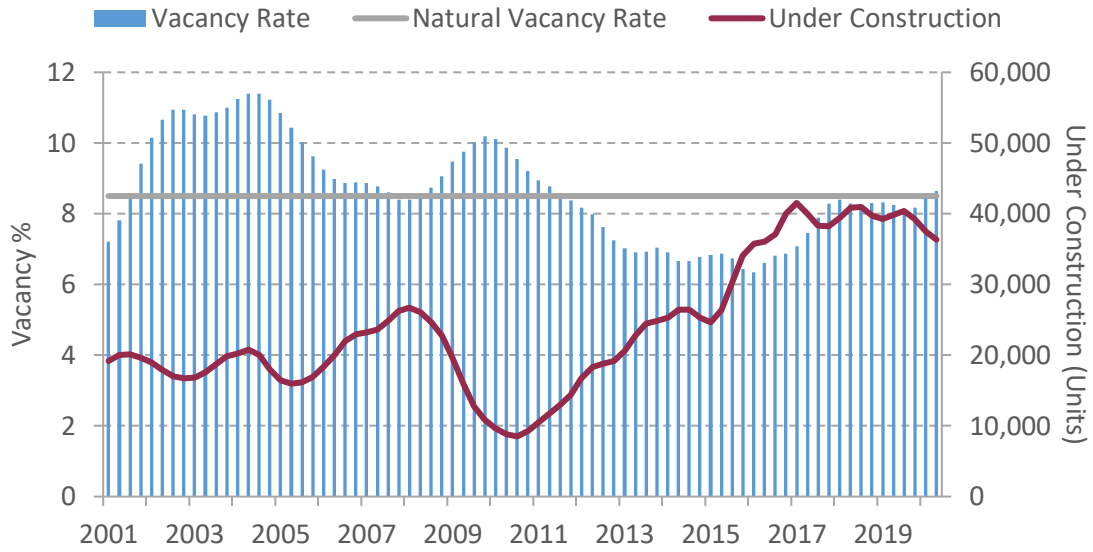
*Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar and Real Estate Center at Texas A&M University

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



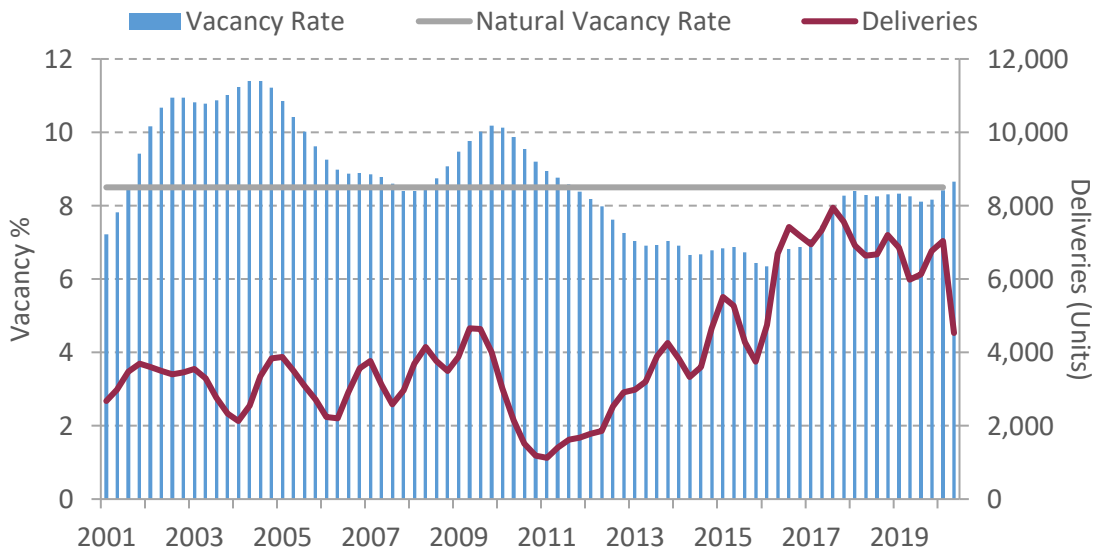
*Note: Seasonally adjusted and trend-cycle component.
 Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

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



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

Houston Overall

OCCUPANCY RATE
▼ 89.7%

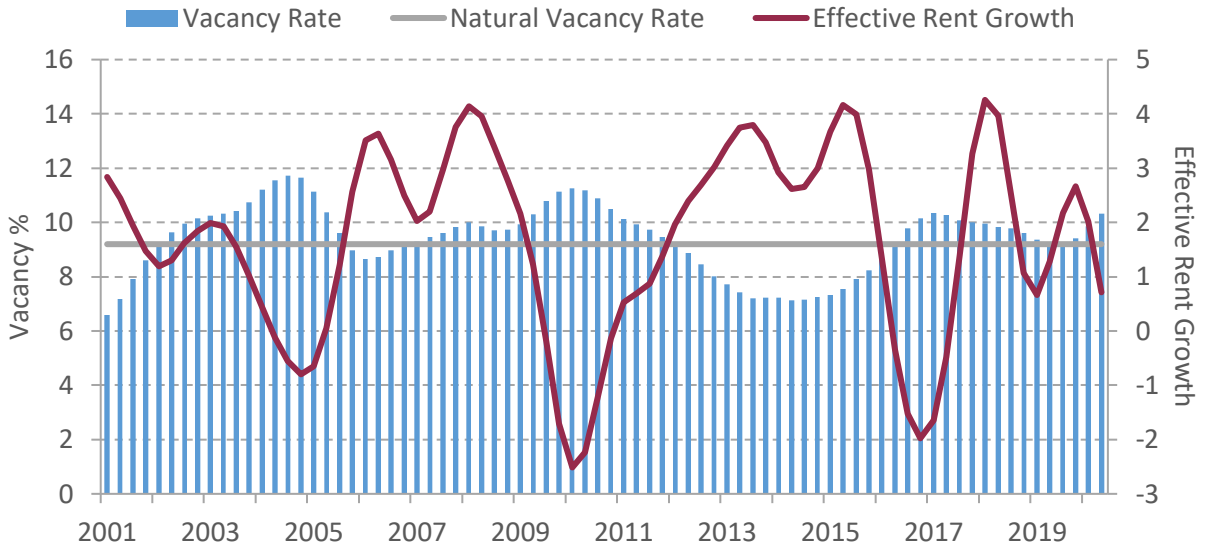
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 0.6%

NET ABSORPTION (UNITS)
▼ -19

CONSTRUCTION STARTS
▼

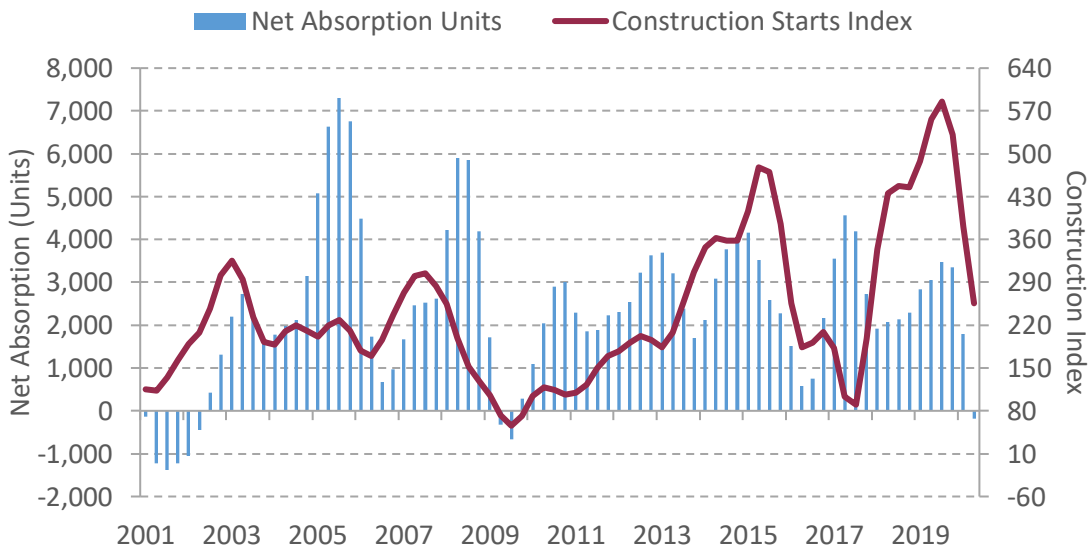
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



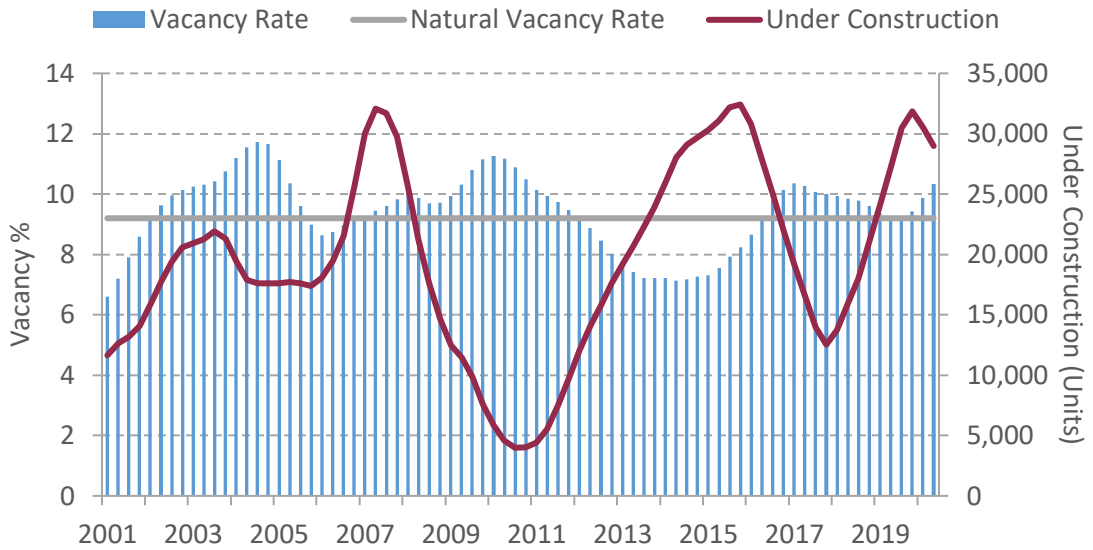
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



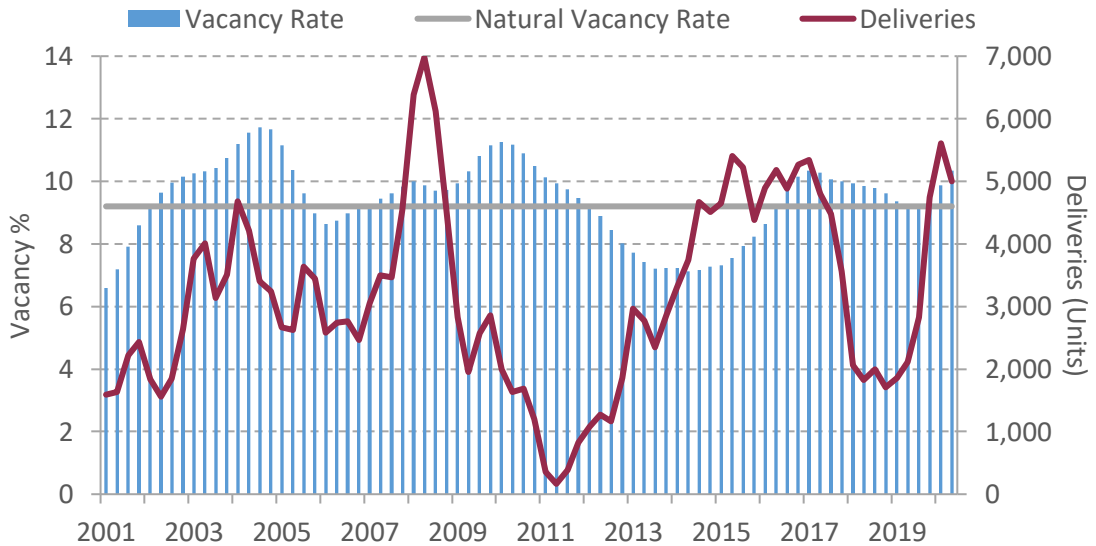
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 19. 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 20. 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
▼ 89.8%

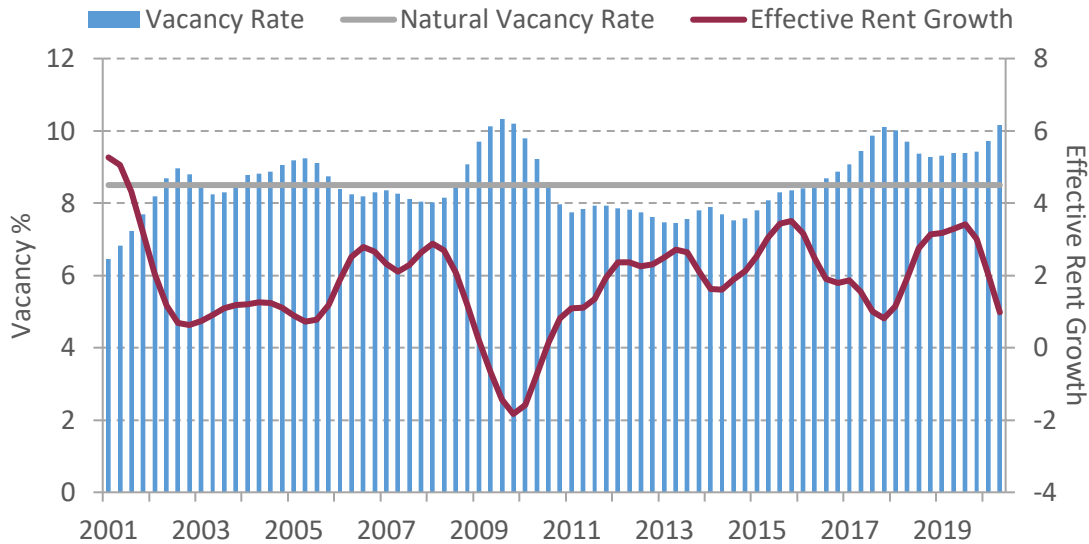
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 1.3%

NET ABSORPTION (UNITS)
▼ 249

CONSTRUCTION STARTS
▼

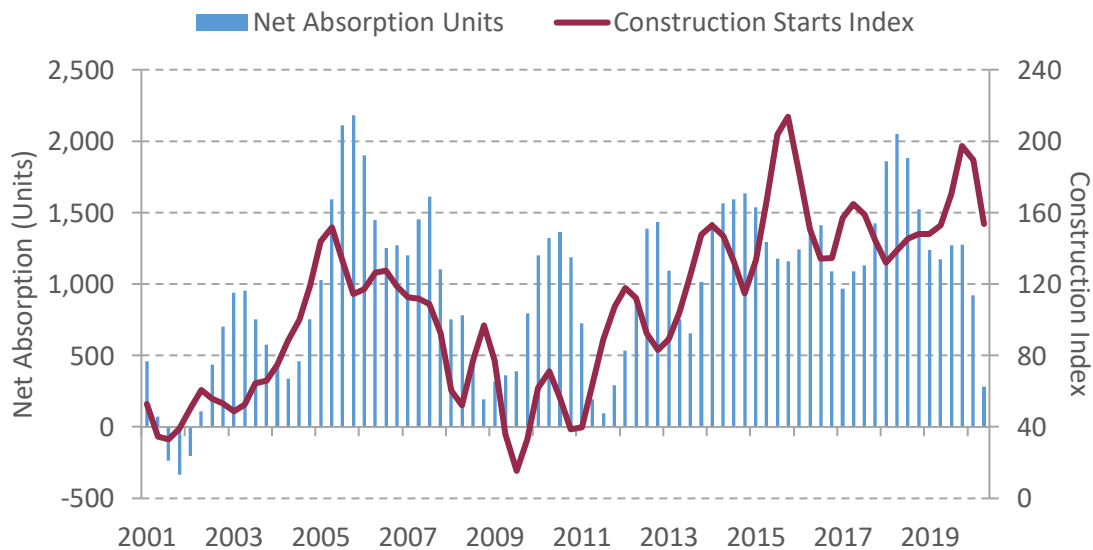
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



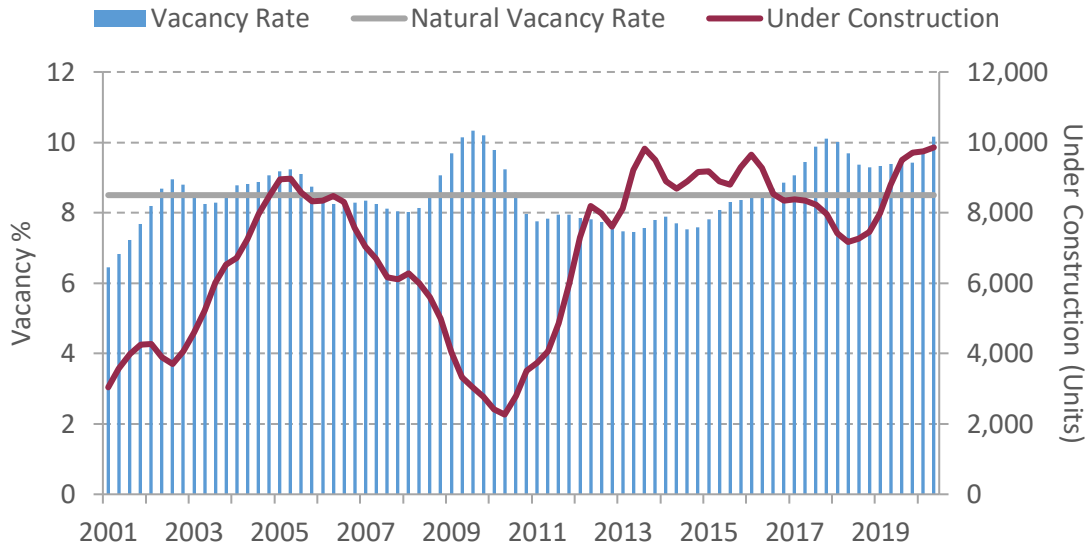
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



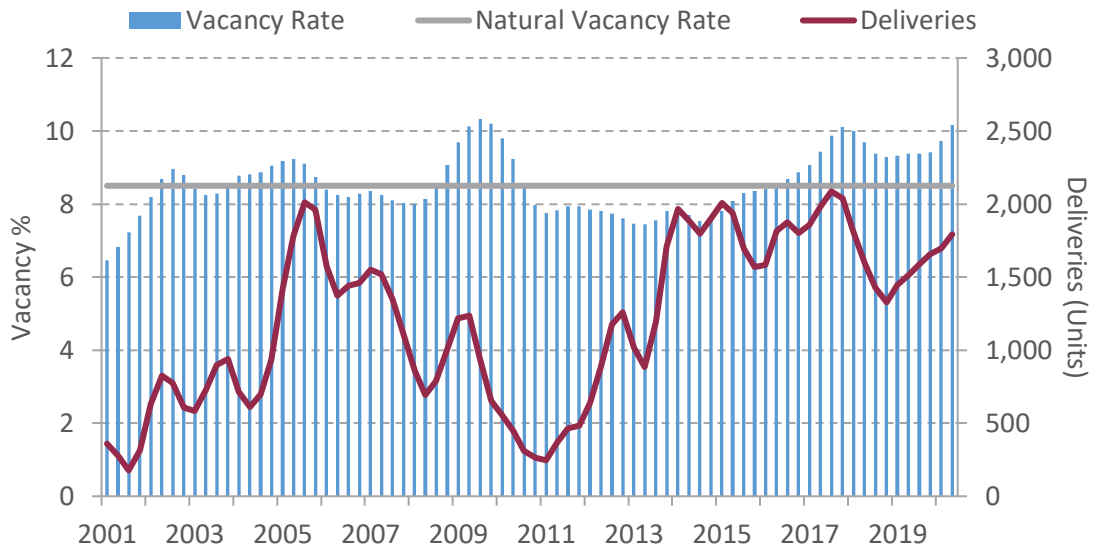
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 23. 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 24. 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
▼ 86.7%

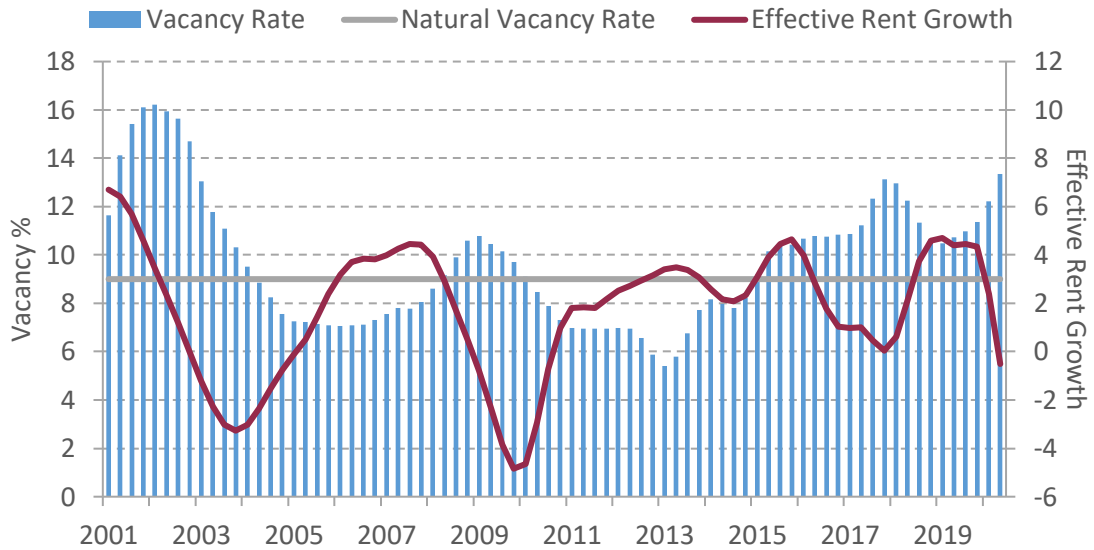
EFFECTIVE RENT GROWTH (PER UNIT)
▼ -1.7%

NET ABSORPTION (UNITS)
▼ 774

CONSTRUCTION STARTS
▼

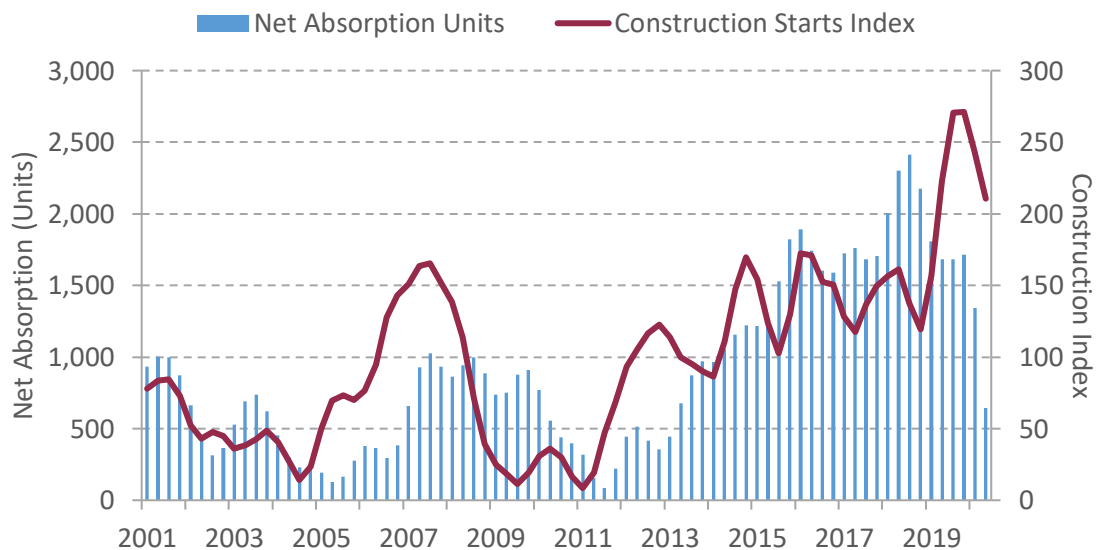
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



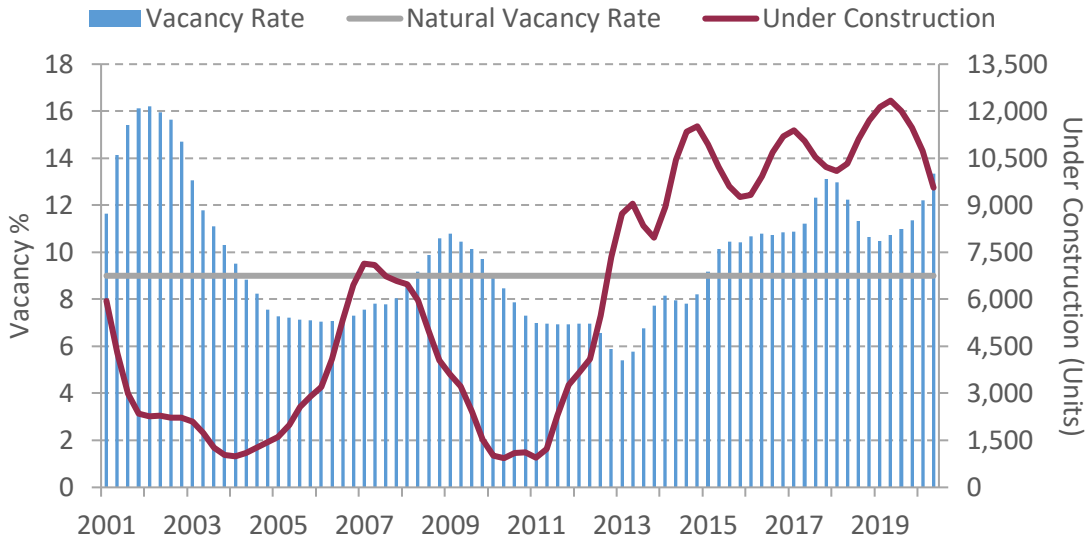
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



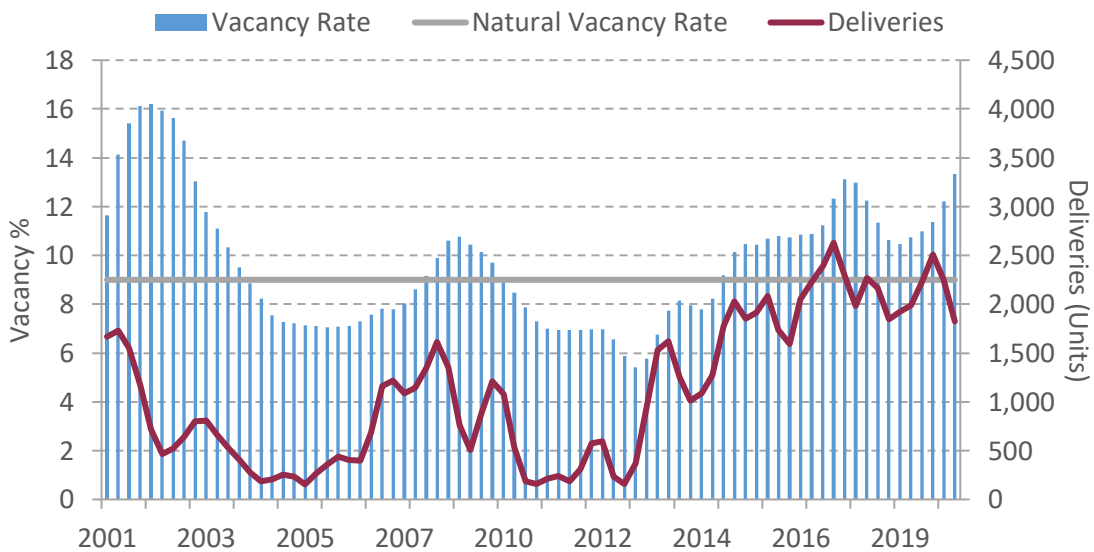
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 27. 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 28. 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
▼ 87.4%

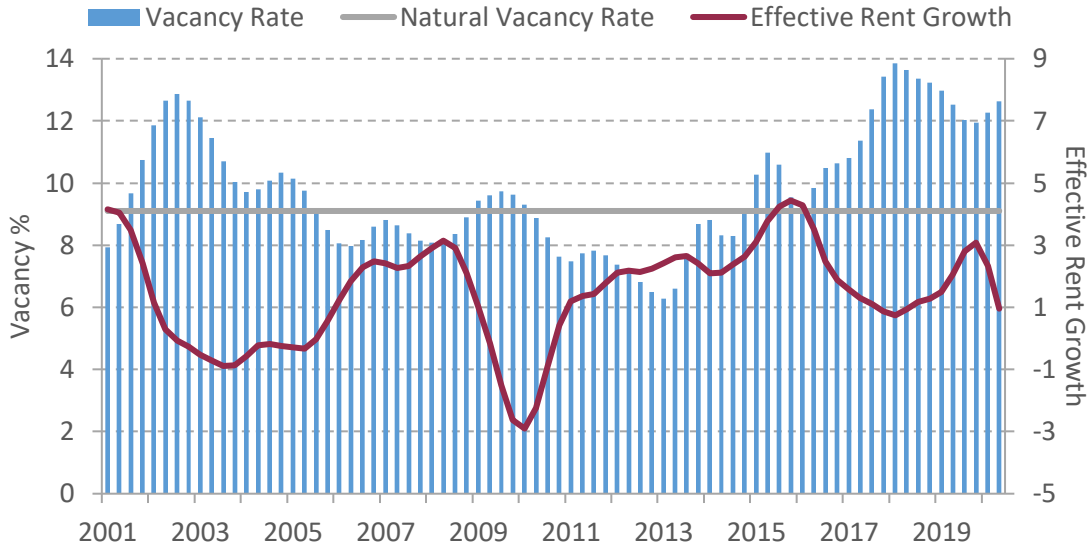
EFFECTIVE RENT GROWTH (PER UNIT)
▼ 0.4%

NET ABSORPTION (UNITS)
▼ 1,490

CONSTRUCTION STARTS
=

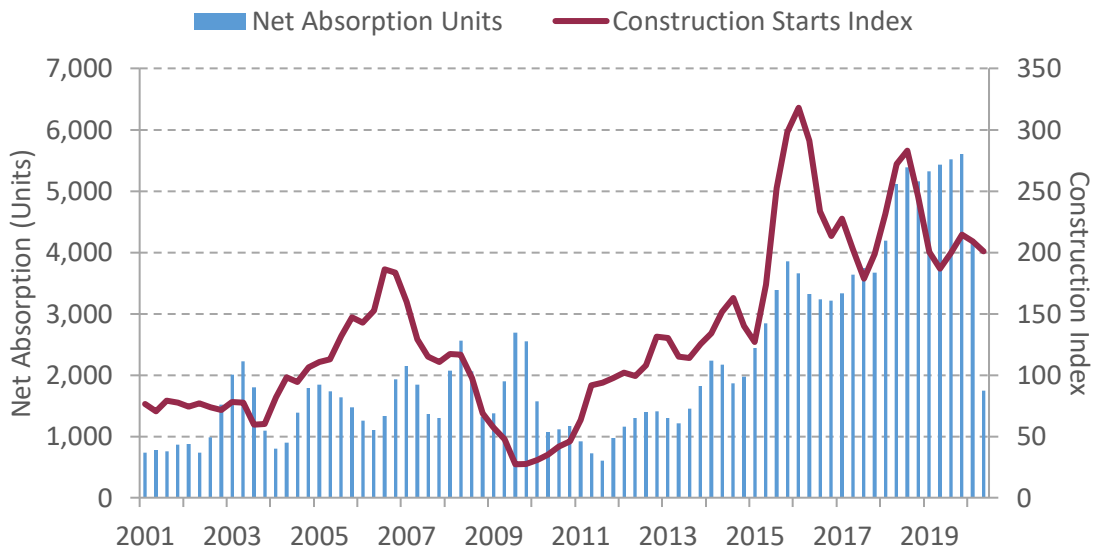
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



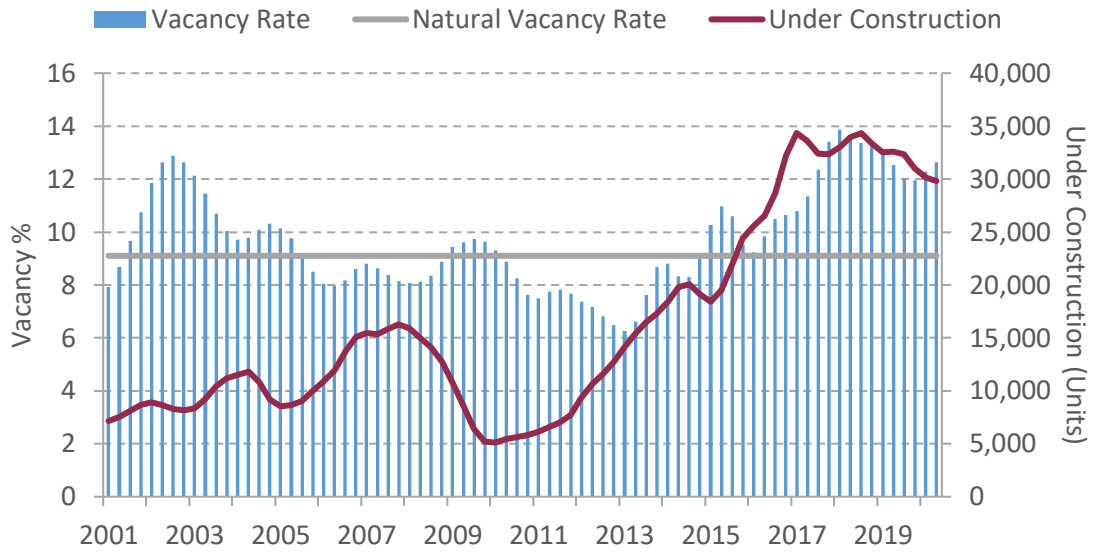
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



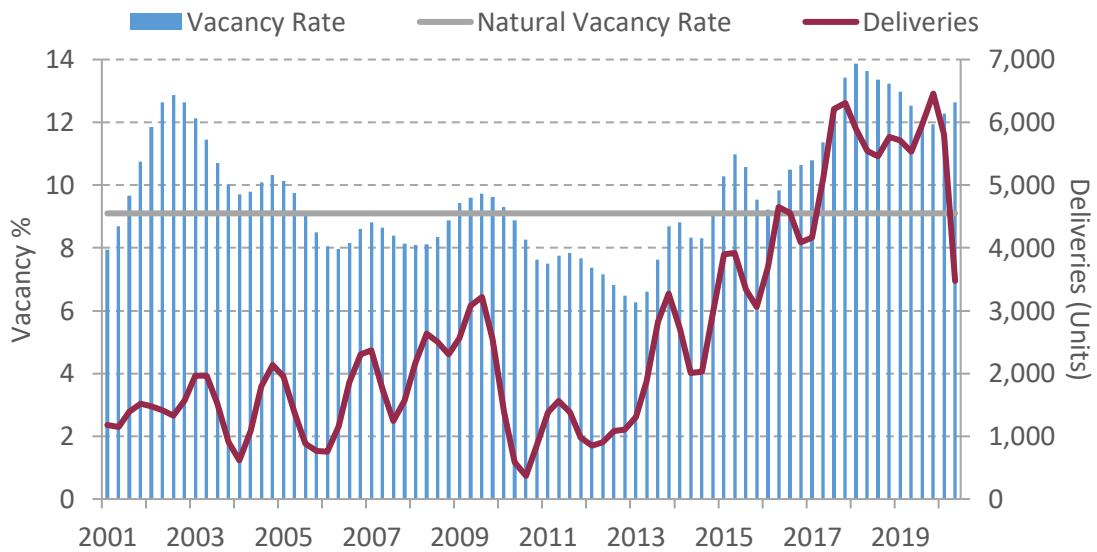
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

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



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

Houston Class A

OCCUPANCY RATE
▼ 87.4%

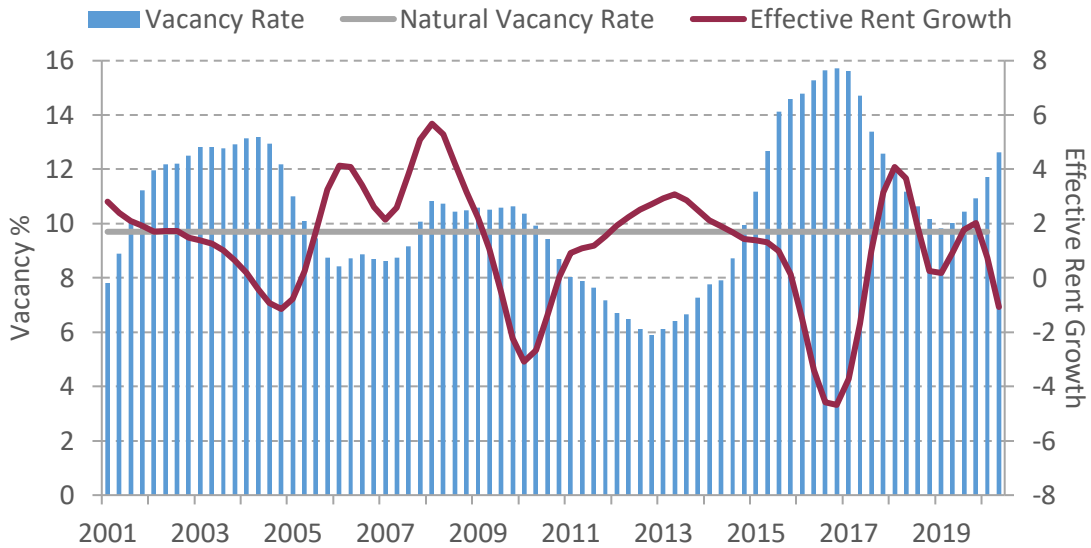
EFFECTIVE RENT GROWTH (PER UNIT)
▼ -1.8%

NET ABSORPTION (UNITS)
▼ 1,095

CONSTRUCTION STARTS
▼

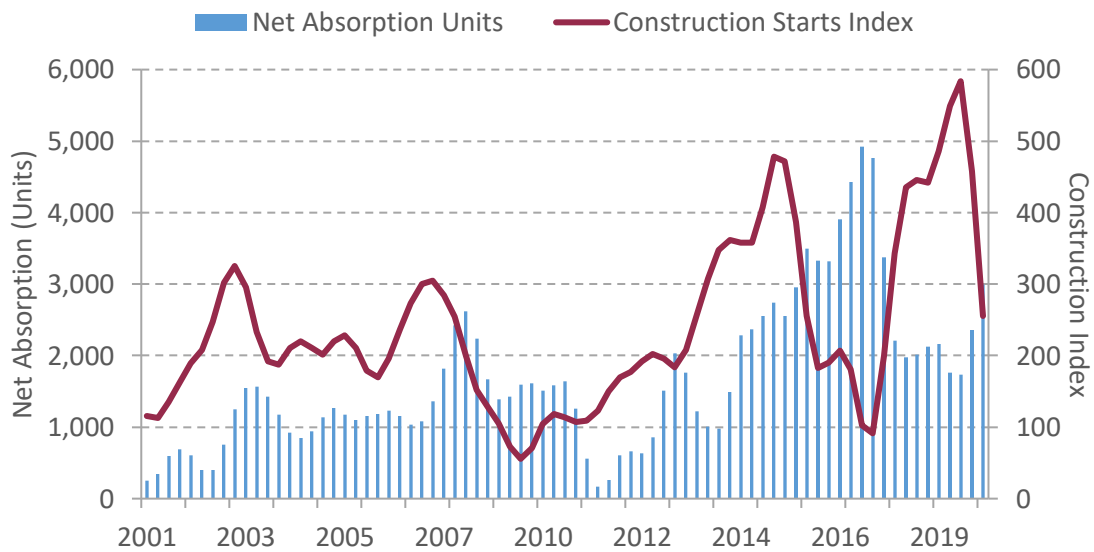
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



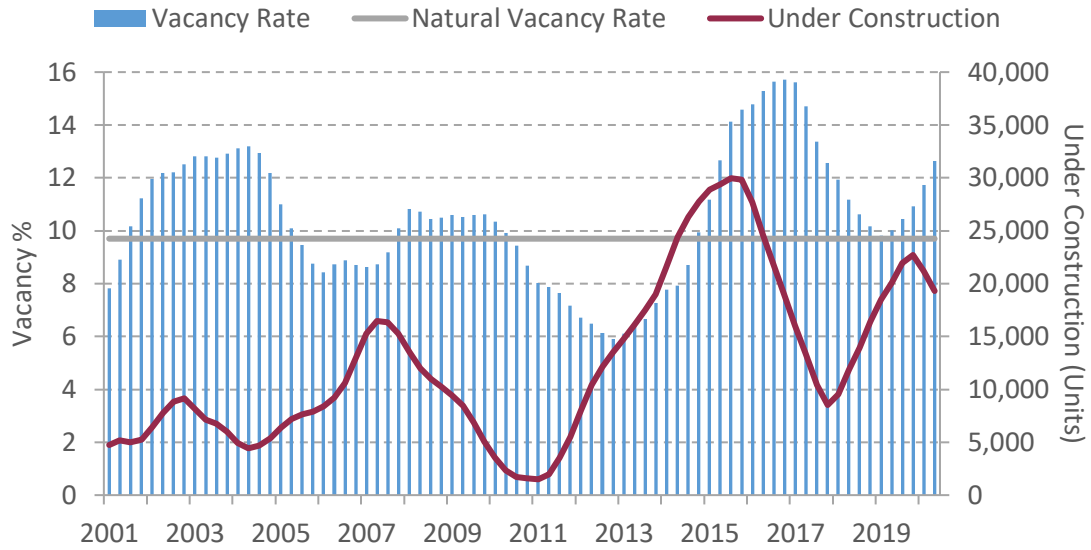
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



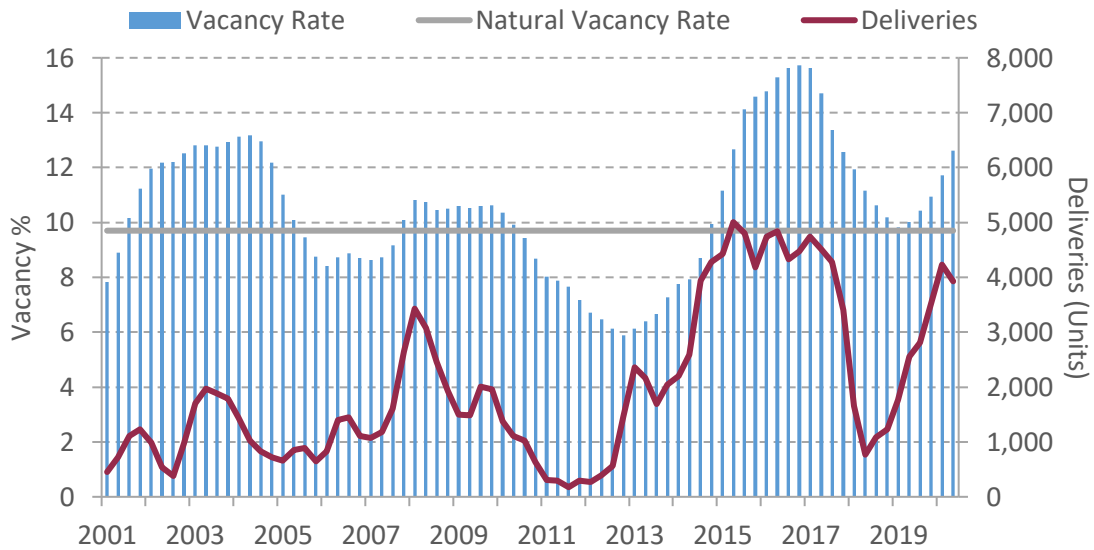
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

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



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

San Antonio Class A

OCCUPANCY RATE
▼ 88.1%

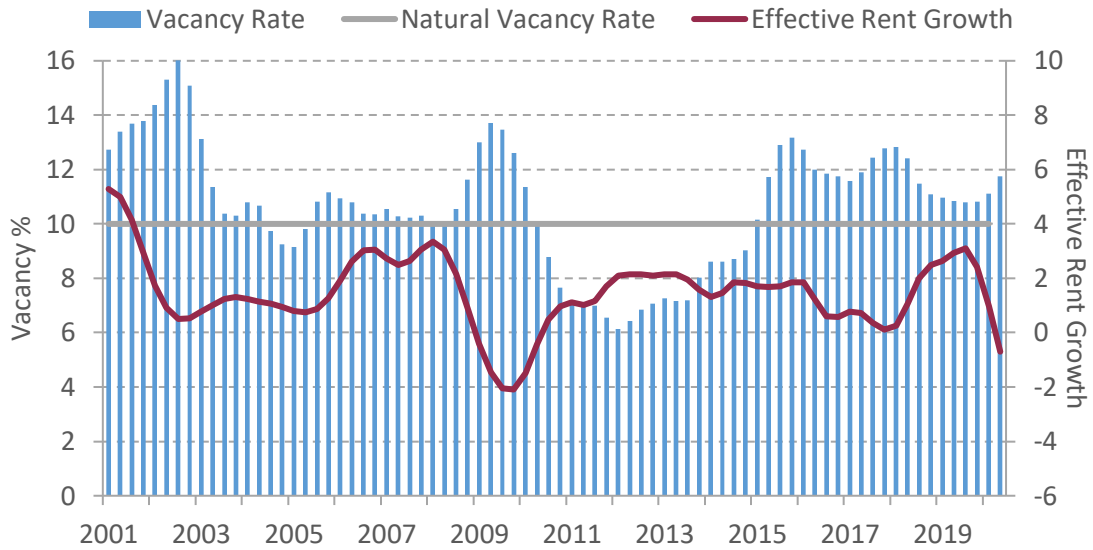
EFFECTIVE RENT GROWTH (PER UNIT)
▼ -0.5%

NET ABSORPTION (UNITS)
▼ 304

CONSTRUCTION STARTS
▼

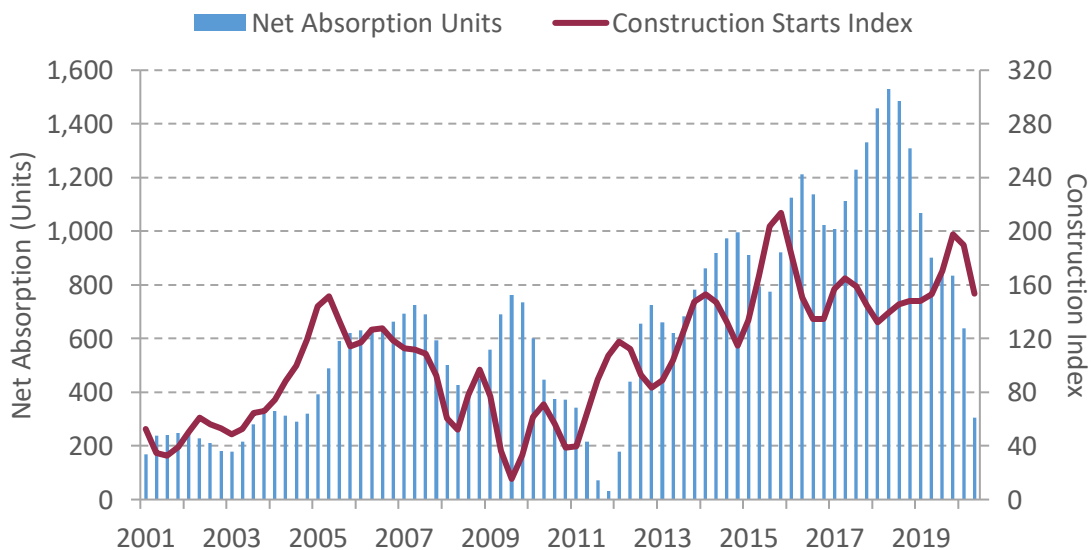
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and the Real Estate Center at Texas A&M University

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



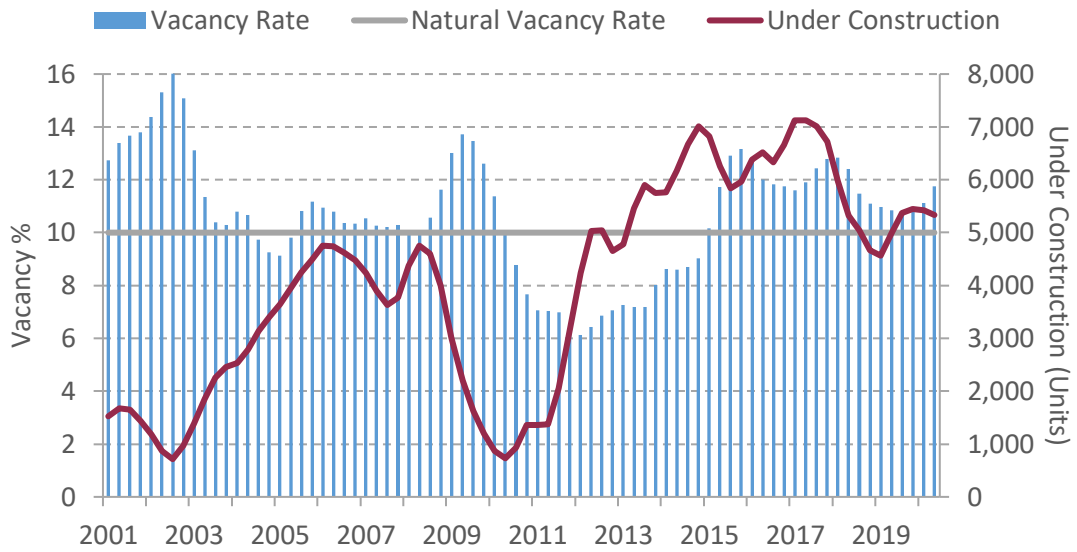
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



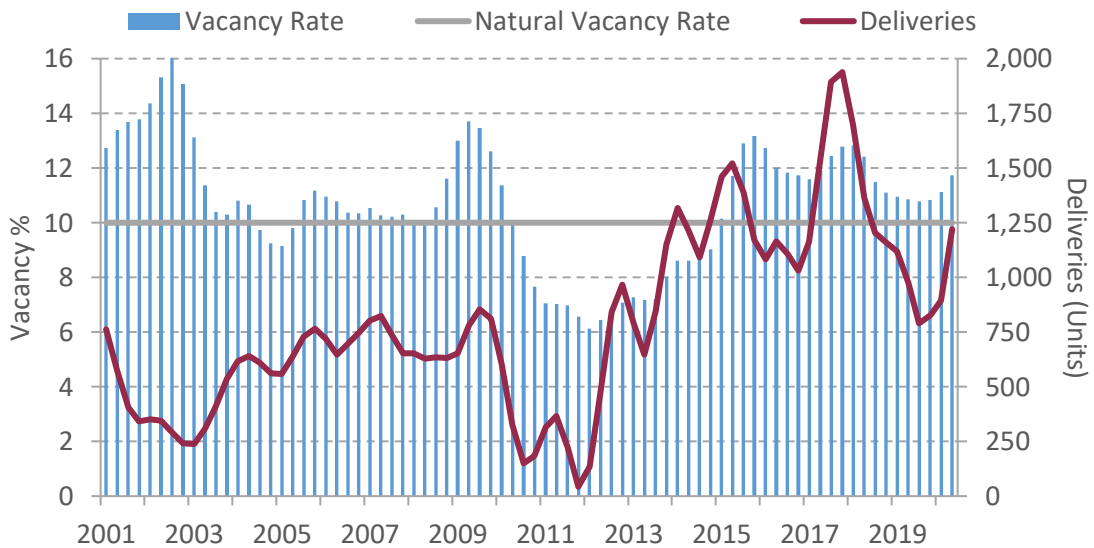
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 39. 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 40. 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 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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