

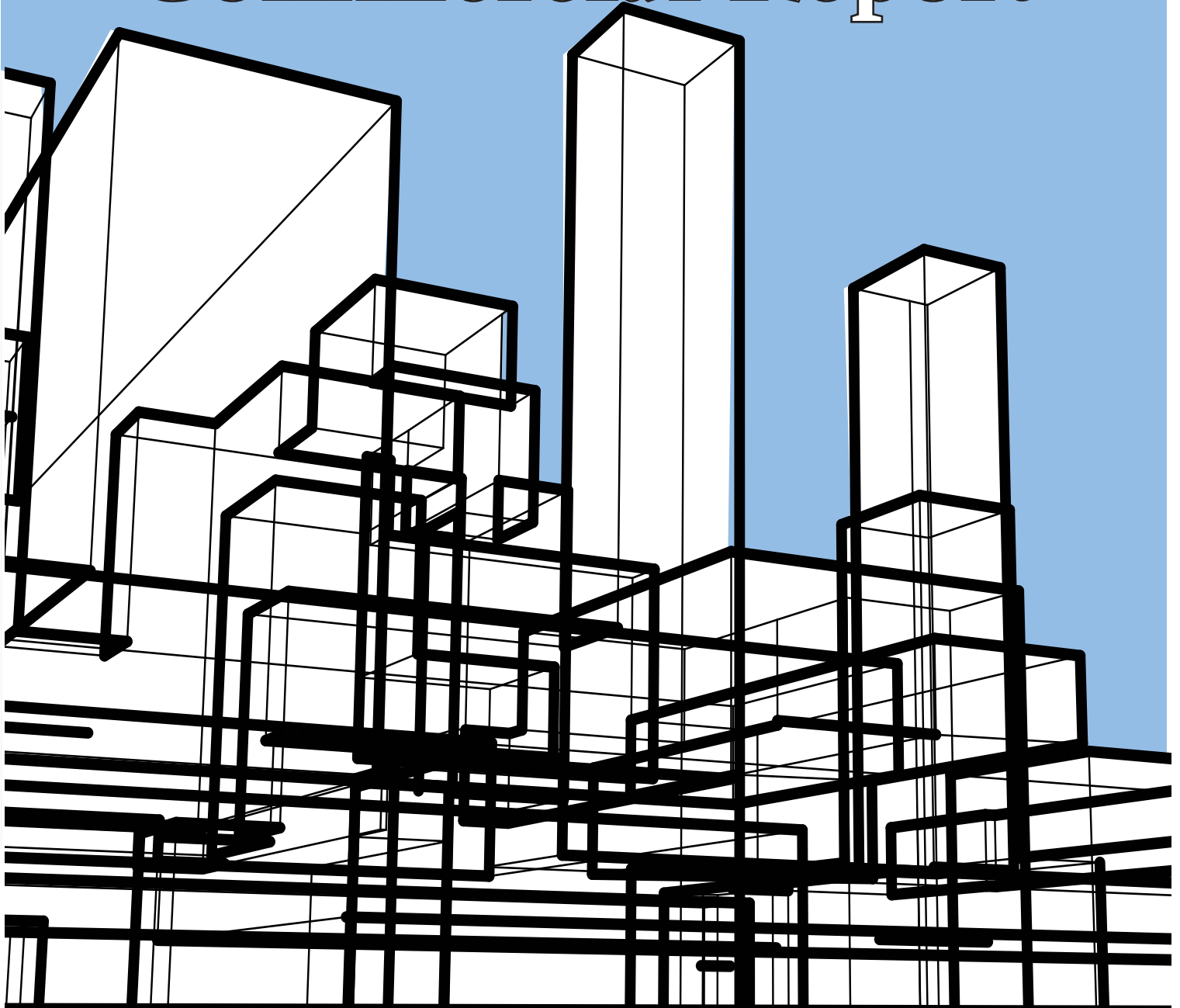


TEXAS A&M UNIVERSITY

Texas Real Estate Research Center



Texas Quarterly Commercial Report



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Technical Report
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THIRD QUARTER 2021

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Texas Quarterly Commercial Report: 3rd Quarter 2021

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OFFICE	78.5% ▬	2.5% ▼
OFFICE CLASS A	73.8% ▬	2.2% ▼
RETAIL	93.4% ▲	2.7% ▲
WAREHOUSE	93.4% ▲	0.3% ▼

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OFFICE	83.9% ▲	5.6% ▲
OFFICE CLASS A	81.9% ▼	5.7% ▲
RETAIL	95.7% ▲	2.9% ▲
WAREHOUSE	95.6% ▲	9.9% ▲

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OFFICE	87.2% ▲	1.4% ▼
OFFICE CLASS A	84.1% ▼	-2.8% ▼
RETAIL	94.2% ▲	3.1% ▲
WAREHOUSE	94.6% ▲	15.6% ▲

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OFFICE	77.4% ▲	-0.6% ▬
OFFICE CLASS A	73.3% ▼	-2.1% ▼
RETAIL	93.5% ▲	4.4% ▲
WAREHOUSE	89.1% ▲	2.3% ▼



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

The header features a blue rectangular background. On the left side, there is a white line-art illustration of a modern office building with several skyscrapers. To the right of this illustration, the words "Table of Contents" are written in a large, white, serif font with a thin black outline.

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About this Report

Texas Real Estate Research Center economists continuously monitor multiple facets of the global, national, and Texas economies. The *Texas Quarterly Commercial Report* is a summary of important economic indicators that help discern commercial real estate (CRE) trends in four major Texas Metropolitan Statistical Areas (MSA)—Austin, Dallas-Fort Worth, Houston, and San Antonio.

All quarterly measurements are calculated using seasonally adjusted and trend-cycled data. Seasonal adjustment smooths the quarterly fluctuations in the data, while trend-cycle adjustment 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 and trends in the data.

This report analyzes asking rents, which exclude tenant improvements and concessions, as opposed to effective rents. Rents reflect nominal year-over-year estimates, unless stated otherwise. The analysis uses industry-specific employment growth to reflect the employment most relevant to each industry. For example, the employment data for the office sector includes finance, insurance, and real estate as well as professional and business services (FIRE & PBS) employment to measure the bulk of employees working in the office sector.

This analysis uses CoStar and Dodge Analytics data. The time series varies by sector and geography, depending on the data available. Sectors with shorter time series limit the interpretation of the data. The data reflect nonowner-occupied space. No raw data are published in this report. Both CoStar and Dodge Analytics make changes to their historical data.

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

Dr. Luis Torres, Dr. Harold Hunt, Brendan Harrison, Connor Harwell, and Bryan Gilliland



Overview of the Texas Economy

Economic activity within Texas improved during the third quarter, and strong growth is expected for the remainder of the year. Increased hiring in September resulted in solid third-quarter payroll expansion, although joblessness in the Lone Star State was still higher than the national average. Moreover, headline wage numbers accelerated in real terms despite rising inflation. Oil industry activity accelerated as oil prices increased and the global economic recovery continued. Meanwhile, retail sales surpassed a record-breaking \$50 billion, but real commodity exports decelerated. Containment of the pandemic is vital as additional waves of infection, mainly from the Omicron variant, can weigh on consumer behavior and slow the return to pre-pandemic conditions.

The Delta variant appears to have reached its extreme point as the numbers of COVID-19 cases and hospitalizations continue to fall after peaking at the end of August. The announcement of a COVID-19 pill that reduces the risk of hospitalization and death has considerably reduced the uncertainty on halting the pandemic, improving future economic expectations. Still, the National Institute of Allergy and Infectious Diseases has expressed its concerns about a possible surge during the winter months as temperatures drop, and the appearance of the Omicron variant has increased preoccupations about future outbreaks. For additional commentary and statistics, see the Texas Real Estate Research Center's *Outlook for the Texas Economy*.

The Texas Nonresidential Construction Cycle (Coincident) Index, which measures current construction levels, slowed during September due to decreasing put-in-place construction values. The statewide Nonresidential Construction Leading Index overall trend points toward a future increase in nonresidential construction activity amid rising construction value starts and a decrease in the ten-year real Treasury bill yield. Austin's office and retail leading indexes reflected statewide movements, pointing toward increases in commercial construction activity in the near future as the value of construction starts increased, while the trend decreased for warehouse activity. DFW leading indexes point toward increased future activity in all three sectors: office, retail, and warehouse. Houston leading indexes, with the exception of office, signal higher construction activity going forward due to increasing construction start values. San Antonio leading indexes, with the exception of office, indicate less activity going forward. See Figures 1-5 for the Nonresidential Coincident Index and Leading Indicator for Texas and the four major metros.

Texas nonfarm employment added 95,800 jobs in September, rising 6.7 percent at a seasonally adjusted annual rate (SAAR). Based on the state's solid employment performance, the Dallas Fed forecasts annual employment to increase 5.1 percent in 2021, reaching 13 million workers by December. Hiring in Houston surged during the third quarter, recovering 51,400 jobs compared with the 23,500 positions added during the second quarter. Despite registering the highest number of job gains of the four major MSAs, Houston payrolls remained 3.7 percent below pre-pandemic levels. Austin added 34,000 employees, more than doubling employment gains from the second quarter as the metro benefited from its substantial high-tech sector, which can socially distance and has prospered during the pandemic. Employment increased precipitously in Fort Worth, gaining 30,700 positions after increasing payrolls by just 400 workers in the previous three months. Only hiring in Dallas and San Antonio slowed quarter over quarter, but the metros still registered quarterly increases of 36,000 and 9,300 workers, respectively. Payroll expansions across the major metros were largely concentrated in the professional/business services and education/health services industries, while goods-producing employment mainly elevated due to rising construction jobs.

Texas' goods-producing sector gained 26,500 jobs during the third quarter after losing 16,700 positions the previous quarter. Amid increasing oil prices, energy-related employment rose by 7,800 jobs but remained around 16 percent below pre-pandemic levels. Recovering global economic conditions supported the state's manufacturing industry, which added 12,000 employees, while durable-goods payrolls recorded a 6,100-job gain. Construction payrolls expanded this quarter, adding 6,700 jobs after losing jobs in four consecutive months from April to July.

Texas' service-providing sector recovered nearly all jobs lost due to the pandemic, adding 203,400 workers during the third quarter. Leisure/hospitality recouped 28,400 jobs, but arts/entertainment/recreation payrolls remained almost 15 percent below pre-pandemic levels. On the other hand, the transportation/warehousing/utilities industry added 31,400 positions, surpassing pre-pandemic employment by 2.6 percent.

Texas' unemployment rate decreased to 5.6 percent, still higher than the national rate of 4.8 percent. The size of the state's labor force expanded while the labor force participation rate reached 62.4 percent. Texas' major metros reported lower unemployment rates than the statewide average, except in Houston where joblessness fell to 5.8 percent. Unemployment inched down to 5 percent in Fort Worth and fell in San Antonio and Dallas to 4.9 and 4.8 percent, respectively. Joblessness remained lowest in Austin, where unemployment slid to 3.8 percent.

The decrease in unemployment after 2Q2020 is important for commercial 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 would be expected, the increase in the unemployment rate in 2Q2020 pushed up vacancy rates in the major metros and the declining unemployment rates since have alleviated some of the pressures on rising vacancy rates. Still there seems to be a disconnect between office vacancy rates and unemployment rates that started after 2Q2020 when the pandemic shut down the economy. This disconnect is a result of the hybrid working environment that has demonstrated that employees can be productive working from home. The disconnect has been reinforced by the postponed return of employees to the office as new variants of COVID-19 have caused outbreaks, increasing uncertainty surrounding future office demand (Figures 6-9).

With monetary policy possibly normalizing, starting with the Federal Reserve Bank's tapering of bond purchases, economic growth forecasts for the coming years point to a slow return to the long-run structural trend as the initial and strongest stage of recovery likely reached its peak. It's becoming clearer that inflationary pressures will be permanent. The ten-year U.S. Treasury bond yield decreased to 1.5 percent during 3Q2021 but was down from pre-pandemic levels of 1.7 percent in 4Q2019. The spread between commercial capitalization rates and the ten-year Treasury yield increased during 3Q2021 after decreasing from 1Q2021 to 2Q2021. The increase in the spread was due to a decline in the ten-year yield. Rising inflation expectations and the Federal Reserve's tapering of assets purchases should push up interest rates in 2022. As a result, the spread should decline somewhat next year.

After decreasing during the first half of 2021 in Texas' major metros, office cap rates increased during 3Q2021, with the exception of Austin (Figure 10). The uncertainty surrounding the return of employees to the office contributed to the increase in cap rates and a decrease in the ten-year U.S. Treasury bond yield. Austin was the exemption due to positive expectations surrounding the local office market due to the presence of the technology industry and the movement of companies to the Texas Capital. San Antonio and Houston continued to register the highest cap rates, followed by DFW and Austin. The office cap rate spread with the ten-year Treasury bill increased during 3Q2021 after decreasing since the start of the pandemic in all Texas' major MSAs. Austin was the least risky market for office real estate during the nine months of 2021 based on the spread with the ten-year Treasury bill.

Retail cap rates (Figure 11) increased during 3Q2021 after decreasing since 2Q2020 in three of Texas' major MSAs; Houston was the exception. The spread between retail cap rates and the ten-year Treasury registered an increase in the third quarter in all four major Texas' MSAs due to the decrease in the ten-year yield. Although Houston's cap rate decreased during the third quarter, it could not overcome the fall in the ten-year Treasury yield. The overall decreasing trend in the spread reflects the change in sentiment regarding future expectations for the retail sector from devastating to a relatively more positive one. Austin and San Antonio are the least risky and lowest-return markets for retail real estate.

Industrial cap rates (Figure 12) increased during 3Q2021. San Antonio and Houston recorded the highest cap rates. Similar to the other two markets, the spread between the ten-year Treasury increased during 3Q2021 in all four MSAs. DFW is the least risky and lowest return market for industrial real estate based on the spread with the ten-year Treasury bill.

Commercial Real Estate Outlook

Office

- The office market has been exposed to some pervasive underlying changes in the work environment that will not be fully evident until employees return safely to the office. The appearance of the Delta and Omicron variants has delayed this return further.
- Occupancy cannot improve significantly until COVID-19 variants are subdued.
- Uncertainty surrounding the future hybrid work landscape will probably cause vacancies to remain high, resulting in subdued rent growth in the coming years.
- The relationship between business employment growth and office demand has changed. The pandemic showed firms can hire employees without increasing their demand for office space.
- Office space will still be needed in sectors such as technology, life sciences, professional business, and financial activities.

Retail

- The pandemic has accelerated the shift to e-commerce from brick-and-mortar retail. Still, some purchasing experiences cannot be duplicated online.
- Retailers are increasingly using a hybrid store model that integrates the on-site experience with the online one.
- Both the hybrid model and the preference for physically purchasing some goods and services suggest brick-and-mortar retail will continue for the foreseeable future.
- The following factors will aid the retail sector during 2021 and should continue in 2022:
 - the reopening of the economy due to the vaccines, which has led to strong economic growth and solid consumer demand; and
 - household preference for social interaction after being locked up during the pandemic.

Industrial

- This sector has benefited greatly from the shift to e-commerce and need for distribution and warehousing centers.
- Industrial space will continue to be aided by the shift to e-commerce, increased inventory requirements and supply chain diversification in the coming years.
- A possible future concern could be overbuilding driven by increasing investor interest in the sector. This occurred in the Houston warehouse market during the end of 2019 and beginning of 2020, causing vacancy rates to reach double digit levels and moderating rent growth, in some cases severely.

The Texas Real Estate Research Center estimated 2021, 2022, and 2023 vacancy rates and asking rent percent changes for the different commercial markets and major MSAs (Tables 1A - 3).

Table 1A. Forecasted Overall Office Vacancy Rates, Asking Rents

MSA	Natural Office Vacancy Rate	Vacancy Rates (%)				Asking Rents (y-o-y %)			
		2020	2021	2022	2023	2020	2021	2022	2023
Austin	13.0	12.7	16.3	16.7	16.8	4.7	2.2	2.1	2.0
Dallas-Fort Worth	18.0	19.2	21.7	22.5	22.8	3.2	2.0	1.6	0.5
Houston	14.0	21.2	22.8	23.2	23.3	0.2	-1.0	1.6	1.5
San Antonio	12.0	12.1	13.3	13.5	13.7	4.7	1.7	-0.4	0.5

Note: Annual numbers are the four-quarter average of the seasonally adjusted data. The rent growth is nominal and estimated from the previous year's average.

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

Table 1B. Forecasted Class A Office Vacancy Rates, Asking Rents

MSA	Natural Office Vacancy Rate	Vacancy Rates (%)				Asking Rents (y-o-y %)			
		2020	2021	2022	2023	2020	2021	2022	2023
Austin	15.0	12.8	17.1	18.2	18.4	3.3	2.5	2.1	3.0
Dallas-Fort Worth	21.0	22.9	25.7	26.7	26.9	2.8	1.5	0.4	0.4
Houston	16.0	24.5	26.6	27.3	28.3	-1.4	-1.5	0.7	0.3
San Antonio	14.5	14.7	15.6	15.7	15.8	6.1	0.3	-0.6	0.4

Note: Annual numbers are the four-quarter average of the seasonally adjusted data. The rent growth is nominal and estimated from the previous year's average.

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

Table 2. Forecasted Overall Retail Vacancy Rates, Asking Rents

MSA	Natural Retail Vacancy Rate	Vacancy Rates (%)				Growth Asking Rents (y-o-y %)			
		2020	2021	2022	2023	2020	2021	2022	2023
Austin	6.0	4.6	4.8	4.6	4.3	-0.1	0.6	0.8	1.0
Dallas-Fort Worth	8.0	6.5	7.0	6.9	6.8	-0.5	0.2	0.8	0.9
Houston	7.0	6.8	6.8	6.5	6.2	3.7	3.4	2.4	2.9
San Antonio	6.0	5.8	6.1	6.2	6.4	1.8	0.3	1.1	1.0

Note: Annual numbers are the four-quarter average of the seasonally adjusted data. The rent growth is nominal and estimated from the previous year's average.

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

Table 3. Forecasted Overall Warehouse Vacancy Rates, Asking Rents

MSA	Natural Warehouse Vacancy Rate	Vacancy Rates (%)				Growth Asking Rents (y-o-y %)			
		2020	2021	2022	2023	2020	2021	2022	2023
Austin	11.0	8.5	6.3	5.9	5.7	5.4	4.3	3.9	3.8
Dallas-Fort Worth	11.0	8.4	7.4	7.2	7.0	14.3	4.6	4.2	3.9
Houston	8.0	11.5	12.6	12.3	11.6	0.9	1.5	1.9	2.2
San Antonio	8.0	6.8	5.8	5.6	5.7	4.3	9.2	3.2	2.4

Note: Annual numbers are the four-quarter average of the seasonally adjusted data. The rent growth is nominal and estimated from the previous year's average.

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

Office Class A Tenants by Industry

To better understand how economic expansions and recessions will affect demand for commercial space in a particular location, it is important to know who the tenants are and what industry they belong to. This allows one to estimate the industry mix and the market's diversity from a downturn in a particular industry.

The importance of the technological industry to Austin is apparent in the high percentage of tenants that belong to the computer and processing sector encompassed by the business services sector (Graph 1). This industry has performed relatively well during the pandemic. Working from home will have consequences on future office space demand. (Look at the outlook box for further comments on this).

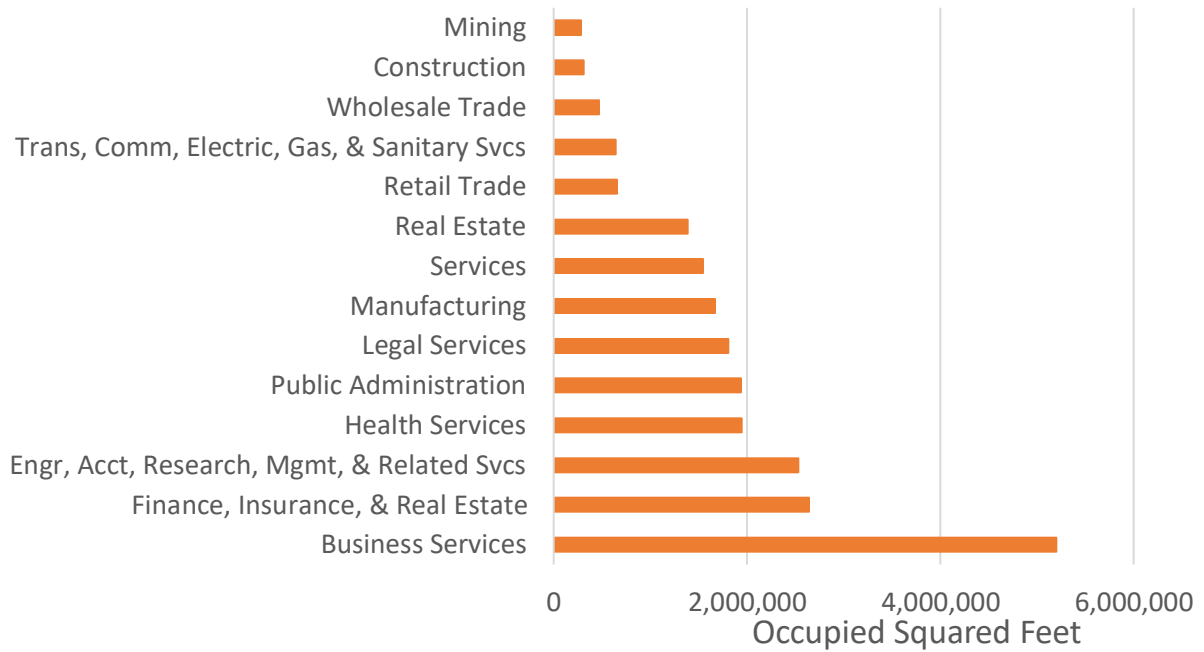
Financial industry tenants play an important demand role in all markets, especially in DFW (Graphs 1-4). This industry has been able to socially distance and has done a good job of managing the transition of working from home. With the exception of Houston, the financial industry in Texas' major MSAs has returned to pre-COVID employment without returning to the office. There is a disconnect in the relationship between employment growth and office demand. This has implications for future office space demand.

In addition, engineering, accounting, research, management, and related services is another sector with a strong demand for office space (Graphs 1-4). This industry has also recorded strong job growth without employees returning to the office. It is unclear how the hybrid work model in this sector will affect future office demand.

Houston's concentration of tenants in the oil industry stands out. Around one-fifth of the occupied space is from tenants in this industry (Graphs 3). This probably underestimates the number of tenants that are part of the oil industry since it doesn't include services provided to the oil sector, such as engineering services. The oil industry faces strong headwinds due to movement from carbon-based energy to a cleaner, renewable energy. This structural change facing the oil industry will affect office demand.

A significant share of the tenants in San Antonio belong to the health services sector (Graph 4). This industry's demand for office space is expected to continue since health services require social interaction.

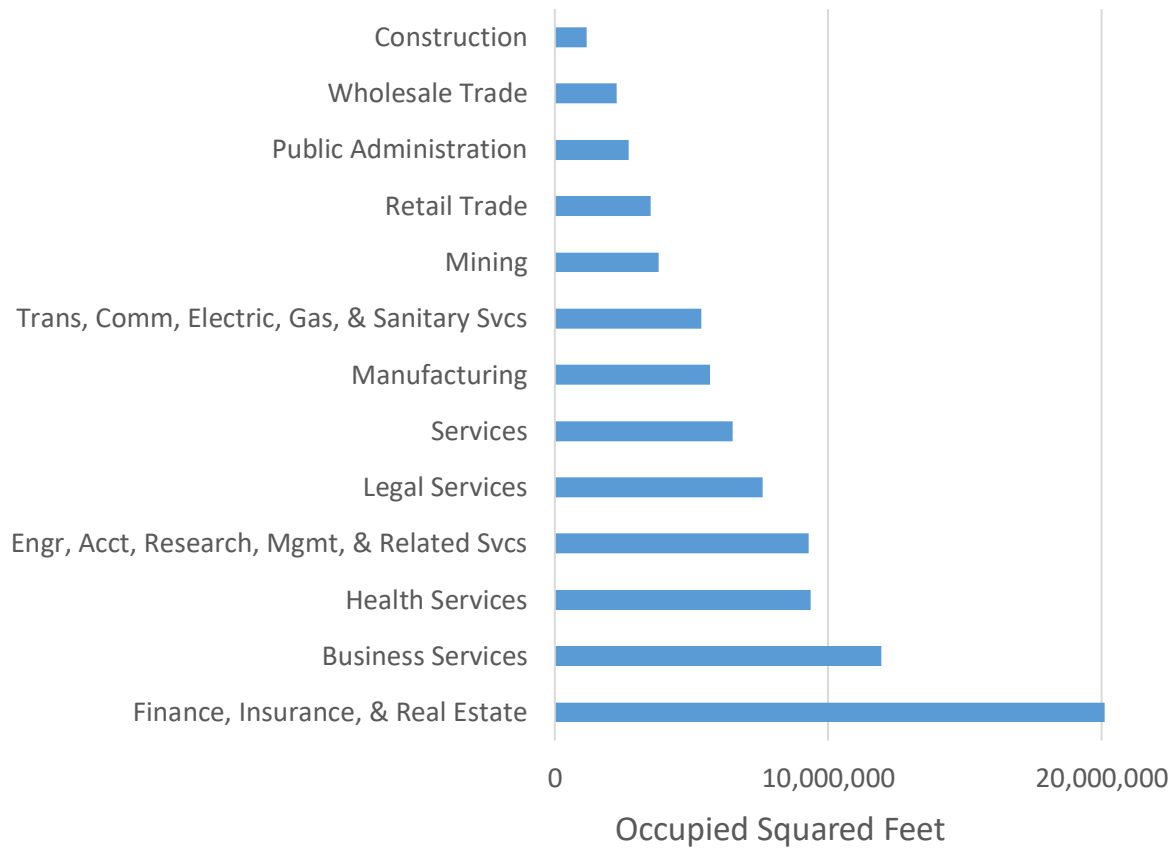
Graph 1. Austin Office Class A Tenants by Industry



Note: Estimated using July 27, 2021, CoStar data with the Standard Industry Classification (SIC).

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

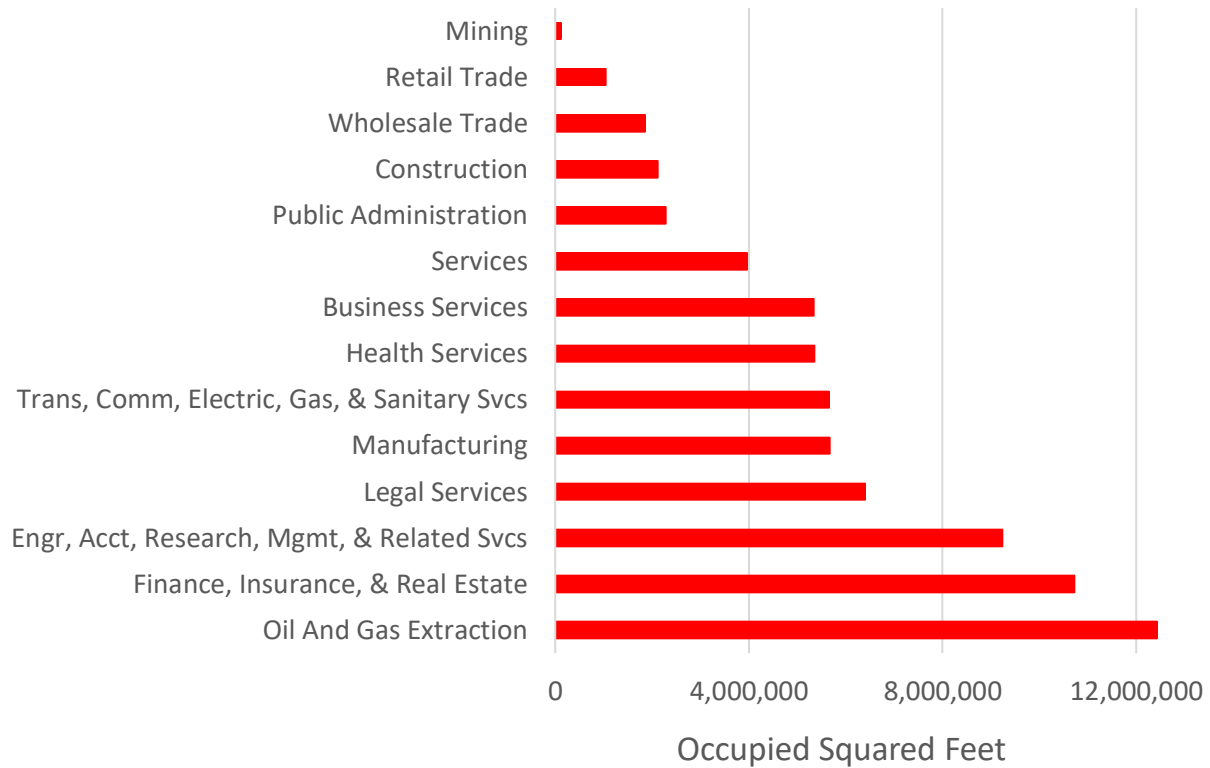
Graph 2. Dallas Office Class A Tenants by Industry



Note: Estimated using July 27, 2021, CoStar data with the Standard Industry Classification (SIC).

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

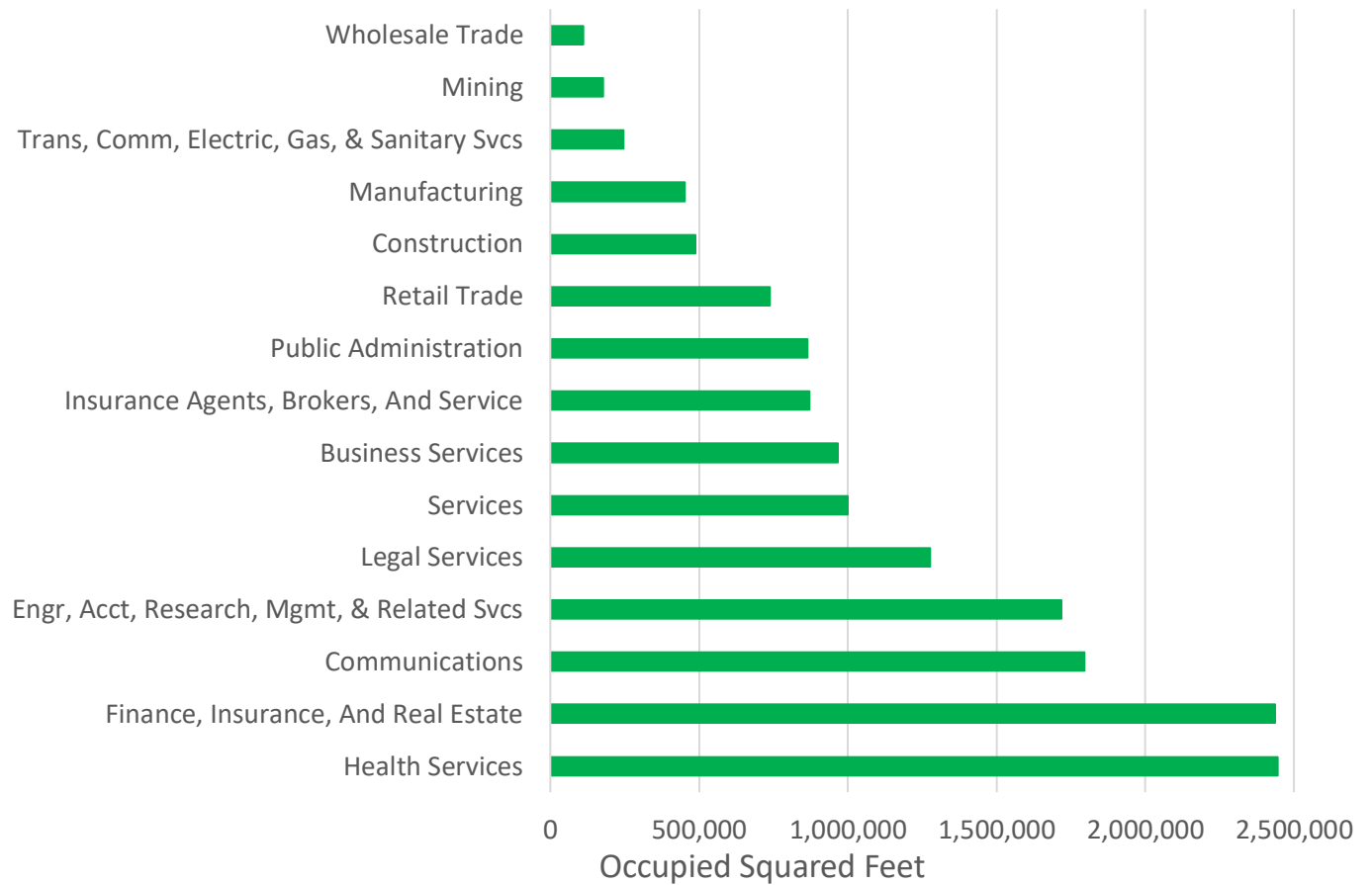
Graph 3. Houston Office Class A Tenants by Industry



Note: Estimated using July 27, 2021, CoStar data with the Standard Industry Classification (SIC).

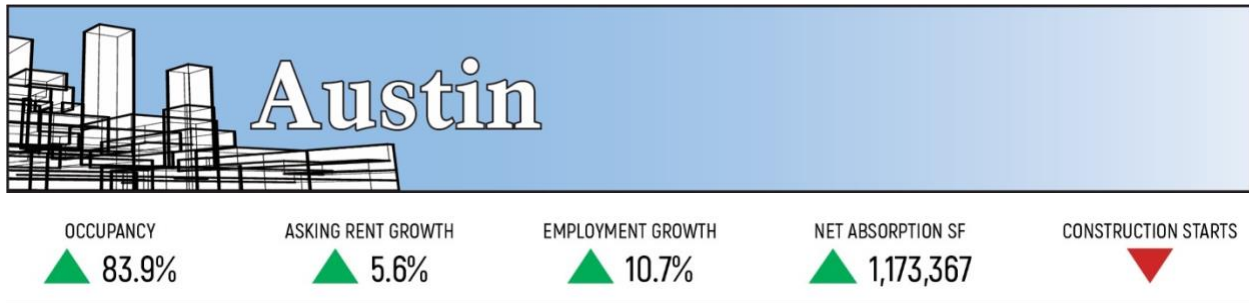
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

Graph 4. San Antonio Office Class A Tenants by Industry



Note: Estimated using July 27, 2021, CoStar data with the Standard Industry Classification (SIC).

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



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Overall Office (Figures 13 - 17)

Following 2017's year-end record low, vacancy rates gradually increased and have spiked over the last year. However, this quarter they started to decline. Actual; vacancy rates still remain more than 3.1 percent above the natural vacancy rate of 13 percent. Asking rent growth has risen again for the second consecutive quarter. As vacancy slowly declines and rent growth increases, Austin's office market has continued to recover from former pandemic-related rates and is showing promising numbers for the future. Net absorption remained positive, declining slightly, possibly due to remaining work-from-home options. FIRE & PBS employment growth continued to grow for the fifth consecutive quarter, almost reaching 11 percent. Austin employment growth increased just under ten points this quarter, following the state's increasing trend, but lagging slightly behind Dallas and Houston.

Deliveries declined slightly from last quarter, potentially due to increased material costs throughout the country. Construction starts also decreased significantly, which could be due to over-saturation and material costs. However, square feet under construction remained about the same. COVID continues to lead to uneasiness about what the future of construction looks like, and rising costs are leading to fewer construction starts as vacancy rates begin to fall.



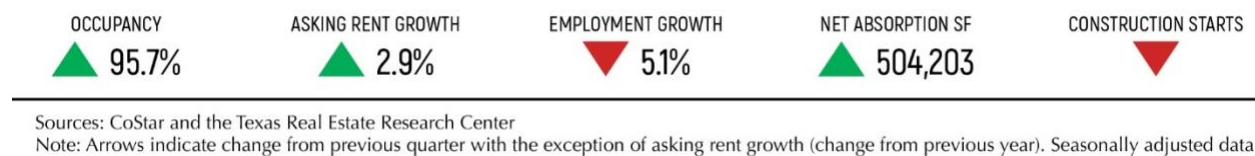
Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Class A Office (Figures 18 - 22)

Actual vacancy continues to climb, reaching 18 percent and continuing its ninth straight quarter of increases. For the fourth straight quarter, vacancy has risen well above the natural vacancy rate of 15 percent. Asking rent growth has also increased for the fourth straight quarter to just under 6 percent. Net absorption nearly tripled this quarter, most likely due to companies returning to the office. Demand is continually rising for Class A space, and this trend should continue as COVID restrictions ease.

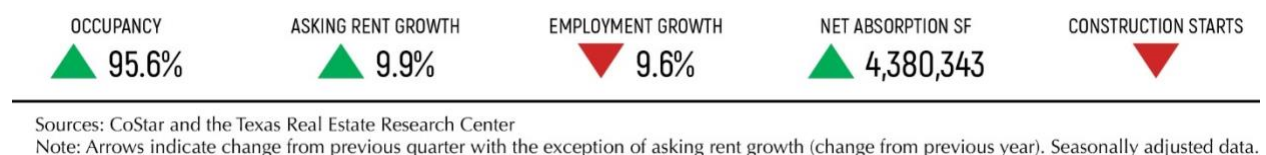
Deliveries decreased, breaking the upward trend of the past two quarters, while square feet under construction remained about the same. The reduced construction of office space can be attributed to over-saturation, high vacancy rates due to work-from-home options, and labor and material shortages.



Retail (Figures 23 - 27)

Retail vacancy has continued to follow the recent five-year trend, remaining between 4 and 5 percent. Third quarter vacancy dropped slightly, but despite some pandemic restrictions, remains below the natural vacancy rate of 6.0 percent. Asking rent growth increased to 2.9 percent, indicating retailers are continuing to return to in-person business slowly but surely. Employment growth decreased to 5.1 percent, breaking the recent five quarter trend of increases. Although employment growth slowed, retail demand should continue to increase in Austin as the city returns to pre-pandemic routines.

Construction starts decreased significantly while square feet under construction increased, breaking the previous five-quarter streak of decreases. Retail has bounced back slightly in the past few quarters as life continues to return to normal. However, there are still concerns. With online retail dominating the industry, business owners continue to look for ways to integrate in-person shopping into their business while promoting their online component.



Warehouse (Figures 28 - 32)

Vacancy has continued its eight-quarter downward trend decreasing 4.4 percent. This is significantly lower than the natural vacancy rate of 11 percent. Asking rent growth increased dramatically to 9.9 percent. Demand has increased again in the Austin market as businesses continue to experience increased online shopping. Occupancy rates have risen, while rent has increased and employment growth has decreased. These figures reveal a steadying market in the near future.

Construction starts have decreased once again as the material and labor shortage remains present. However, net absorption increased significantly due to the increased need for warehouse space. E-commerce has shown no sign of slowing; with COVID still present, it should

remain strong. Firms such as Tesla and Amazon have been moving to the Austin area, which should keep the demand for goods steady, bolstering the need for industrial space.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Overall Office (Figures 33 - 37)

Overall office vacancy rates increased slightly, settling at 21.5 percent and continuing the upward trend for the tenth straight quarter. The current rate is over 3.5 percent higher than the natural vacancy rate of 18.0 percent. Unsurprisingly, rent growth declined to 2.5 percent. Employment growth rose to just above 7 percent, likely due to pandemic restrictions continuing to ease.

Once again, the value of construction starts has decreased, likely due to labor and material shortages. Along with the shortages, developers are being careful not to oversaturate in these uncertain times. With this uncertainty still lingering as recovery from the pandemic continues, office markets remain fragile. Companies have implemented effective work-from-home structures, but employees are expected to continue returning to the office. Changes to office space configuration may be implemented to entice employees to return.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Class A Office (Figures 38 - 42)

Dallas Class A office vacancy rates have remained stable for the third quarter in a row, hovering above the natural vacancy rate of 20 percent. The past two quarters have posted almost the exact same vacancy of just over 26 percent. This stabilization may be a sign of pandemic restrictions easing. Asking rent growth declined slightly to 2.2 percent, within the typical range of 2 to 4 percent since 2017. Employment growth declined slightly, remaining fairly stable at 6.4 percent. Net absorption increased significantly but remains negative for the seventh quarter in a row.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Retail (Figures 43 - 47)

Dallas-Fort Worth retail vacancy declined slightly to 6.6, remaining well below the natural vacancy rate of 9 percent. Asking rent increased significantly, almost doubling to 2.7 percent, a four-quarter trend of increases. Net absorption more than tripled, indicating retailers are showing increased optimism as pandemic restrictions ease considerably. Employment growth decreased to 3.8 percent, breaking the strengthening trend of the past five quarters. Although some retail has been severely impacted, it has proven to be resilient.

Deliveries saw an increase for the fourth straight quarter while square feet under construction increased for the second quarter in a row. Construction starts decreased slightly.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Warehouse (Figures 48 - 52)

Demand for Dallas-Fort Worth warehouse space has continued to rise and outperform every other sector. Vacancies fell again for the fourth straight quarter to 6.6 percent, indicating strong demand for industrial space in the area and sitting far below the natural vacancy of 11 percent. However, asking rent growth declined drastically for the fourth straight quarter to 0.3 percent. Net absorption decreased as well, breaking the rising trend of the last three quarters. Warehouse employment growth increased slightly, while remaining relatively steady for the last year.

The value of construction starts decreased, following the strong cyclical trend of the past couple of years. Deliveries also dropped considerably, potentially due to high material costs. Although the supply of space is slowing, industrial should continue to perform well as e-commerce remains at an all-time high.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Overall Office (Figures 53 - 57)

Vacancy rates fell this quarter for the first time since 1Q2019, but only to 22.6 percent. This remains significantly higher than its natural vacancy rate of 14 percent, which has not been matched since 2015. Along with the higher vacancy rates, asking rent growth rates have decreased to just under 0 percent, following the trend in the overall office market. However, FIRE & PBS employment continue to grow, increasing to 4.1 percent in the third quarter. This increase is likely due to pandemic restrictions continuing to ease as the economy re-opens. Net absorption rebounded this quarter, showing its first positive value since 4Q2019.

With vacancy trending upward since 2015, square feet under construction decreased slightly for the third consecutive quarter. Although vacancy is still increasing, construction activity has remained higher than expected, despite a large increase in building material costs. Deliveries in 3Q2021 increased dramatically, the largest such increase since 2Q2019. As the COVID-19 crisis ensues, material prices remain high. Labor demand has also risen. The value of construction starts has continued to decrease, following the trend of the past several quarters. Multiple negative factors continue to stress Houston's overall office market.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Class A Office (Figures 58 - 62)

Class A Office vacancy declined slightly to 26.7 percent this quarter, remaining well above the natural vacancy rate of 16 percent. Asking rent growth decreased again for the seventh consecutive quarter, likely due to owners' attempts to combat high vacancy rates. Net absorption rose considerably, breaking the previous six-quarter negative streak. FIRE and PBS employment grew slightly.

Deliveries increased significantly for the third straight quarter. However, square feet under construction dropped slightly, following the trend of the previous two quarters. Decreasing

construction rates may be due to nationwide labor and material shortages. Office space still remains quite uncertain as companies continue to use their work-from-home abilities. Houston has a wide variety of space that may be attractive to returning workers. As many industries continue to struggle, there have been few significant improvements. As pandemic restrictions continue to ease, the hope is for positive growth in this area of real estate



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Retail (Figures 63 - 67)

Actual vacancy continued declining in 3Q2021 to 6.5 percent, remaining below the natural vacancy rate of 8 percent. Asking rent growth slowed to 4.4 percent, while employment growth fell to 1.4 percent after a massive jump in 2Q2021. All of these positive factors, alongside increased net absorption, signify Houston retail space continues to improve.

While square feet under construction increased this quarter, the value of construction starts and deliveries declined. This indicates developers are more optimistic about the future of retail although still unsure about the long-term viability of the class. As pandemic restrictions ease, tenants' ability to use retail space has increased. However, it remains unclear if retail will return to pre-pandemic models. As delivery services and online shopping become increasingly popular, tenants are finding different ways to use retail space. Retail is becoming more innovative as businesses learn to adapt beyond the traditional brick-and-mortar stores through their use of retail space as inventory management areas, rather than just in-person sales.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Warehouse (Figures 68 - 72)

Actual vacancy decreased slightly during 3Q2021 to 10.9 percent, moving down from its historical high. This third consecutive decrease in vacancy illuminates a positive trend for warehouse space, bringing occupancy to nearly 90 percent. Houston's vacancy rate has been considerably higher than other Texas MSAs, remaining above its natural vacancy rate of 8 percent. Asking rent growth decreased to 2.3 percent, likely contributing to the favorable vacancy trend. Employment growth increased to 10 percent, paralleling the trend of high demand for distributed and delivered goods over traditional shopping methods. Net absorption increased dramatically this quarter, and every quarter, since its last decline in 1Q2021.

Deliveries increased slightly for the second consecutive quarter. Square feet under construction decreased for the first time since 4Q2020, remaining significantly lower than pre-COVID levels. This is likely due to the continual decrease of supply because of significant construction in previous years. The shift to e-commerce is still on the rise as consumers continue to order many items online rather than purchase them in stores. This, combined with numerous companies relocating to Texas, will likely lead to continued increased demand for warehouse space. As economies return to normal and construction start values and square feet under construction slow down, vacancy rates across the board will likely begin to even out.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Overall Office (Figures 73 - 77)

Overall office vacancies in San Antonio remained basically unchanged from the second quarter, dropping to 12.8 percent and breaking the recent upward trend. Asking rent growth decreased to 1.4 percent, remaining below the peak of 5 percent for the fourth consecutive quarter. San Antonio's FIRE & PBS employment growth decreased for the first time since the beginning of 2020, dropping by 5 percent.

Square feet under construction decreased dramatically, continuing the trend of relatively low construction since 1Q2020. The trend of increased deliveries that followed the economic shut down of 2020 resumed this quarter, demonstrating a rebound from 2Q2021. The number of construction starts fell for the first time in 2021, dropping by over 50 percent. FIRE & PBS employment growth and net absorption fell slightly. These factors are likely lingering effects from the pandemic.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Class A Office (Figures 78 - 82)

Class A office actual vacancy rose to 15.9 percent in 2Q2021, higher than the natural vacancy rate of 14.5 percent. Asking rent growth declined to -2.8 percent, the third consecutive quarter of significant decreases. Net absorption and square feet under construction both decreased significantly from the previous quarter.

Following last quarter's dramatic decrease, deliveries bounced back to record an increase. As pandemic restrictions have eased, supply has begun increasing. New supply could bring about negative effects, as economic uncertainty due to COVID-19 continues.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

Retail (Figures 83 - 87)

Actual vacancy declined to just below 6 percent, ending a three-year increase. This continues the nine-year trend of remaining lower than the natural vacancy rate of 7 percent. Asking rent growth rebounded from previously negative values, rising to 3.1 percent. Net absorption increased significantly this quarter, while retail employment growth slowed to 2.4 percent following its explosive increase in 2Q2021.

Deliveries increased dramatically, but square footage under construction decreased for the first time since 4Q2020. The value of construction starts decreased once again, most likely due to high material costs and ongoing supply chain issues. Stable employment demonstrates that the retail sector has been reliable through the year and will hopefully begin to grow as pandemic restrictions continue to lift. The drastic increase in net absorption bodes well for retail returning to some semblance of what it was before the pandemic.



Sources: CoStar and the Texas Real Estate Research Center

Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.

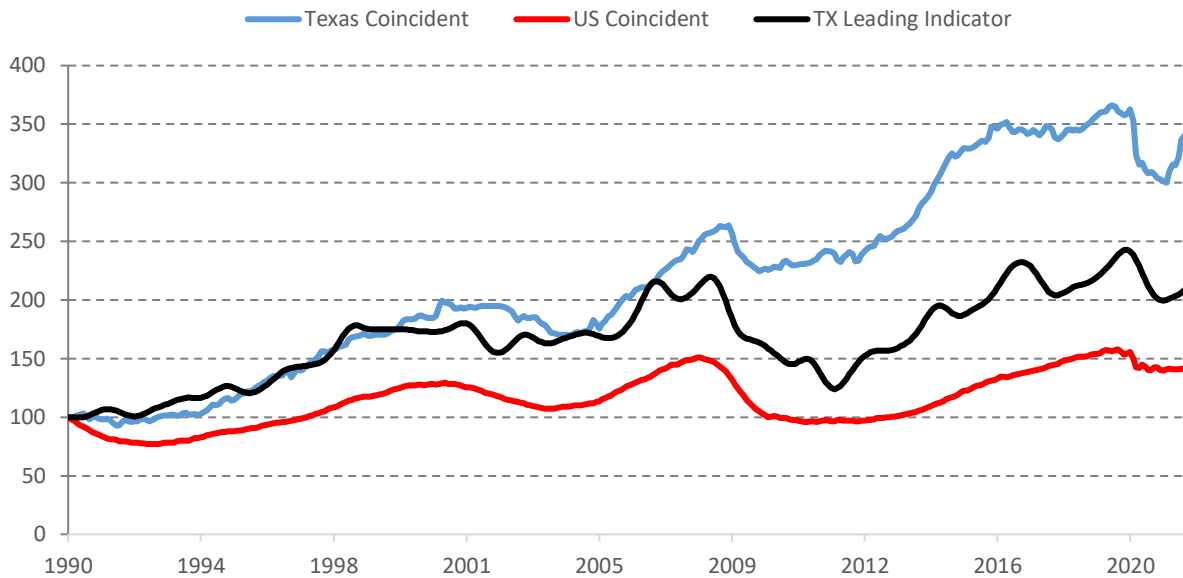
Warehouse (Figures 88 - 92)

Similar to other MSAs, San Antonio warehouse sector has continued to perform well with another quarter of increased and steady growth. Actual vacancy declined for the sixth consecutive quarter to 5.4 percent, continuing the trend of remaining below the natural vacancy rate of 8 percent. Asking rent growth increased significantly to 15.6 percent this quarter, and net absorption increased slightly as well. Employment growth slowed to 9.4 percent. It has remained relatively constant over the past two quarters due to the changing dynamic of using warehouses and distribution rather than traditional retail areas for shopping and purchasing.

Deliveries continued to fall, recording a steep drop off in 3Q2021. This represents the third consecutive quarter of decline. San Antonio's construction start values dropped by over 50 percent, which could be due to lack of labor and material costs similar to other MSAs. Square feet under construction rose for the first time since 2Q2020, while net absorption increased slightly as well. If deliveries and square footage under construction continue to rise, vacancy rates should begin to increase slightly.

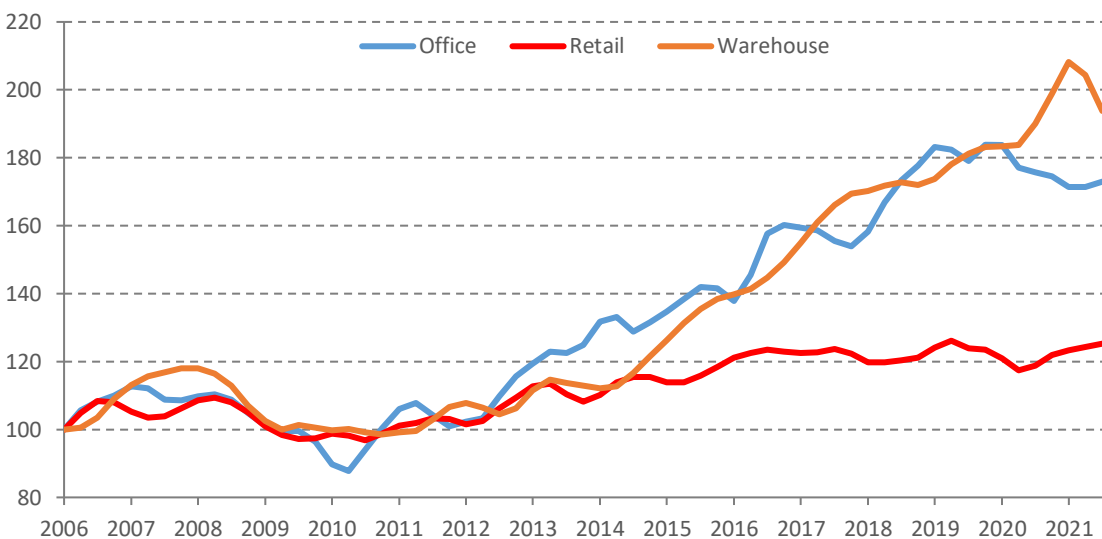


Figure 1. Texas Nonresidential Construction Coincident and Leading Indicators
(Index Oct. 1990 = 100)



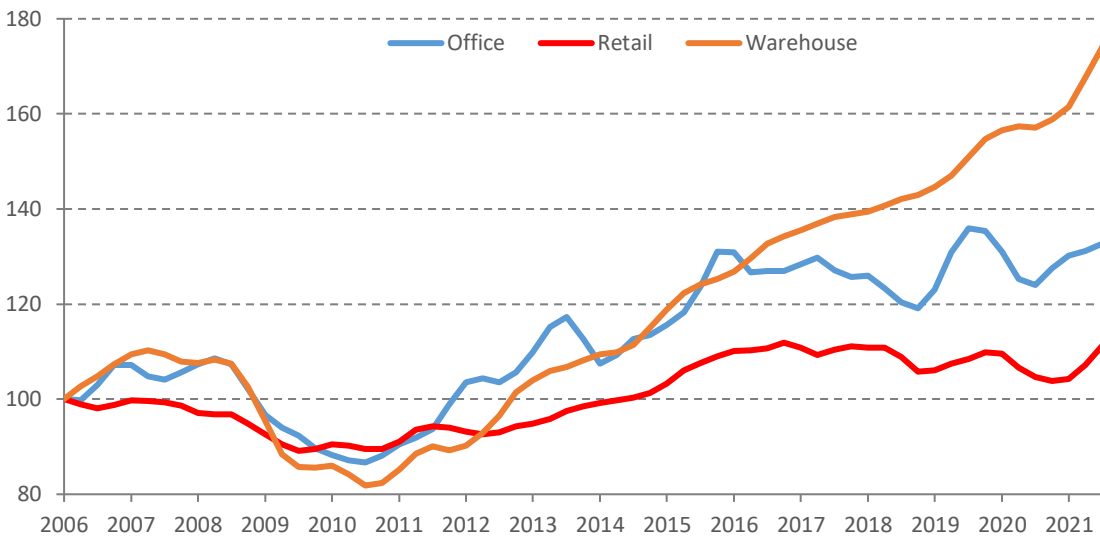
Source: Texas Real Estate Research Center at Texas A&M University

Figure 2. Austin Nonresidential Construction Leading Indicators
(Index 2006 Q1 = 100)



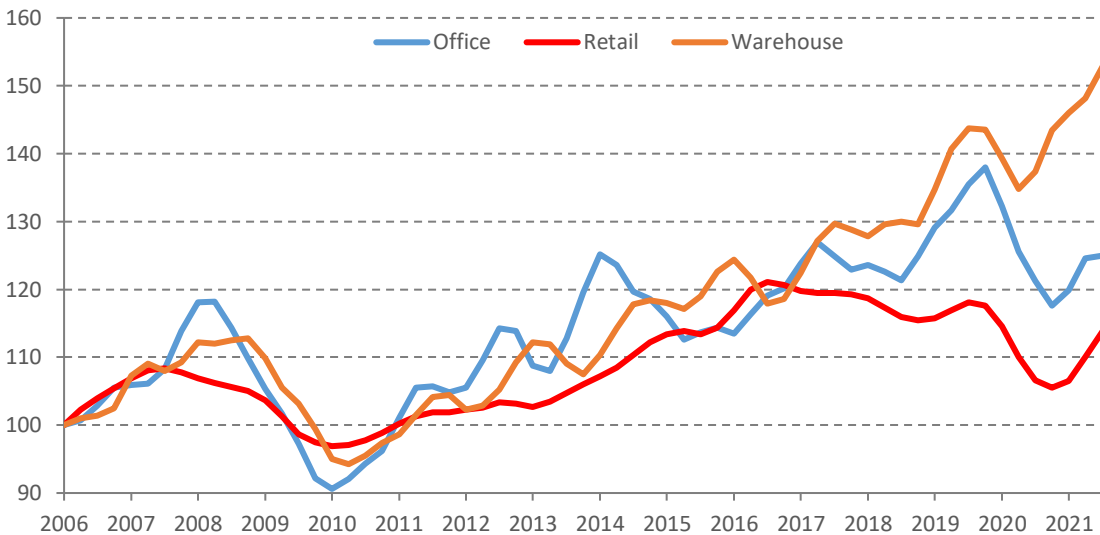
Source: Texas Real Estate Research Center at Texas A&M University

Figure 3. DFW Nonresidential Construction Leading Indicators
(Index 2006 Q1 = 100)



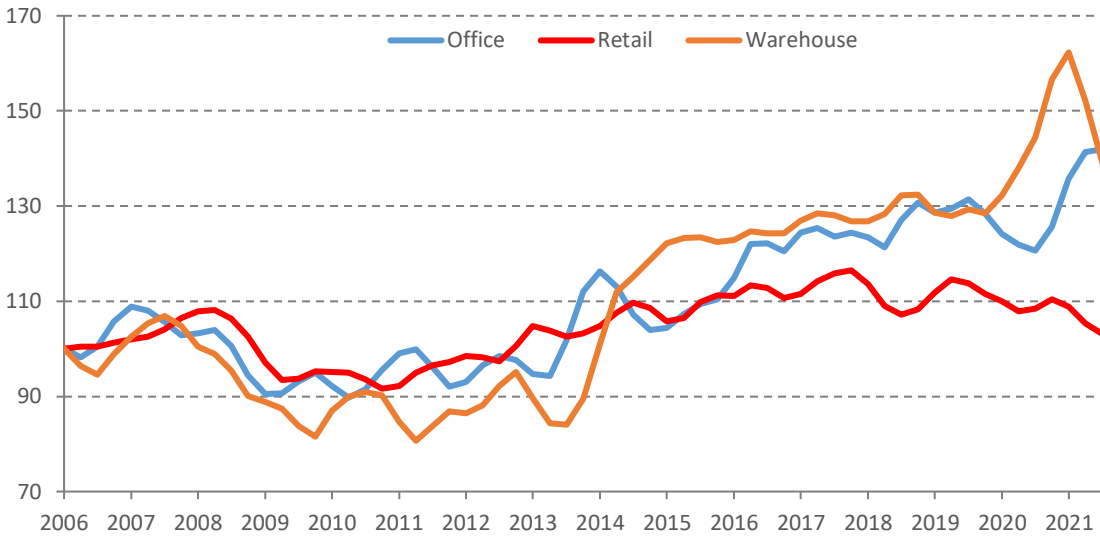
Source: Texas Real Estate Research Center at Texas A&M University

Figure 4. Houston Nonresidential Construction Leading Indicators
(Index 2006 Q1 = 100)



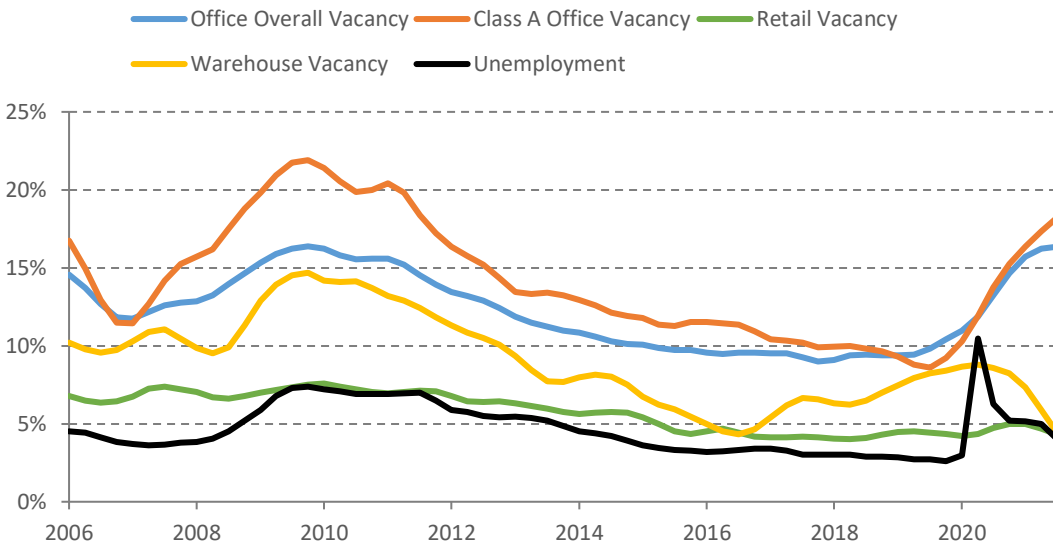
Source: Texas Real Estate Research Center at Texas A&M University

Figure 5. San Antonio Nonresidential Construction Leading Indicators
(Index 2006 Q1 = 100)



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

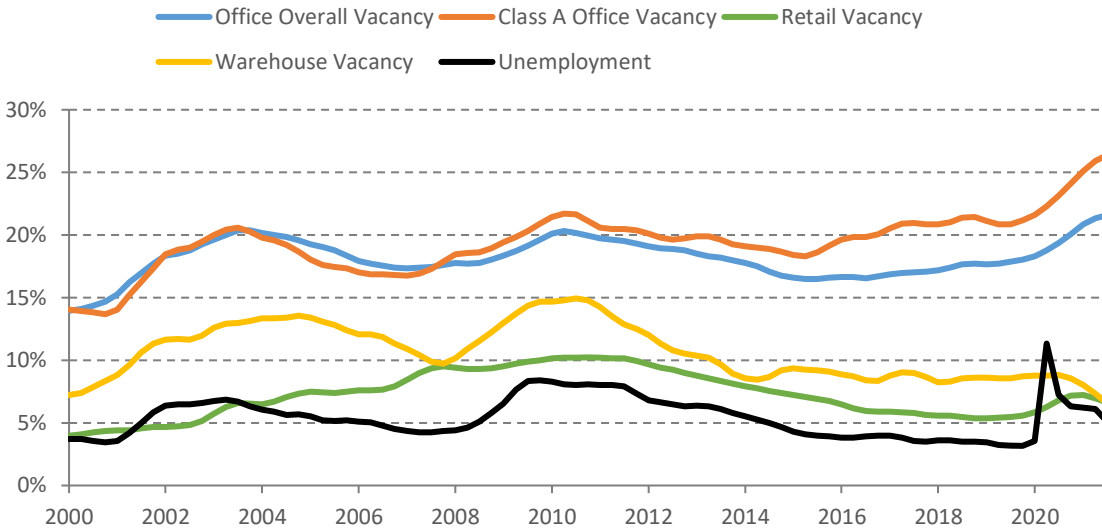
Figure 6. Austin Commercial Vacancy Rates and Unemployment (SA and TC)*



*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.

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

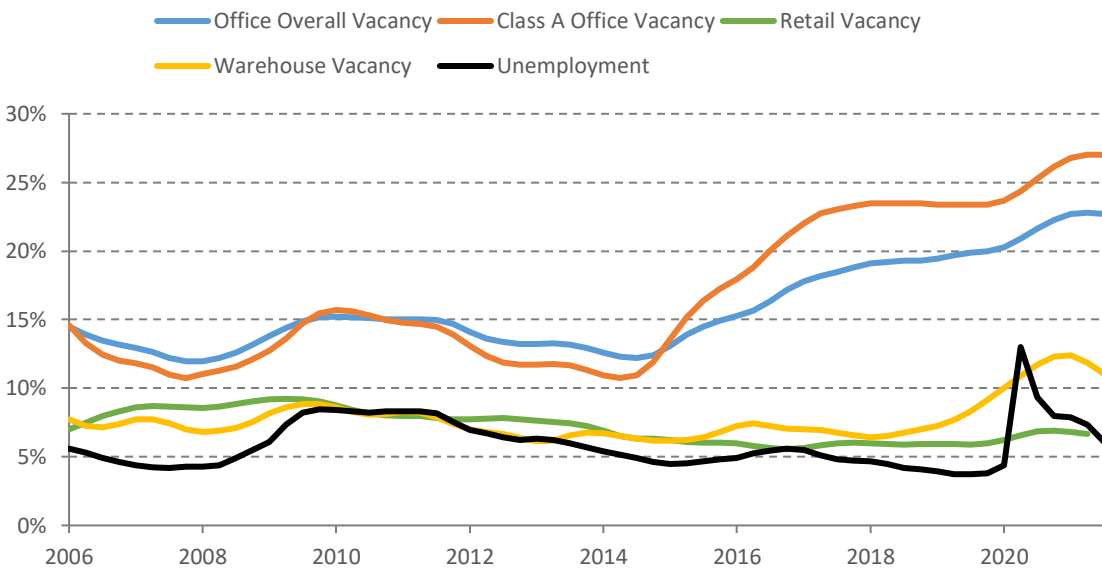
Figure 7. DFW Commercial Vacancy Rates and Unemployment (SA)*



*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.

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

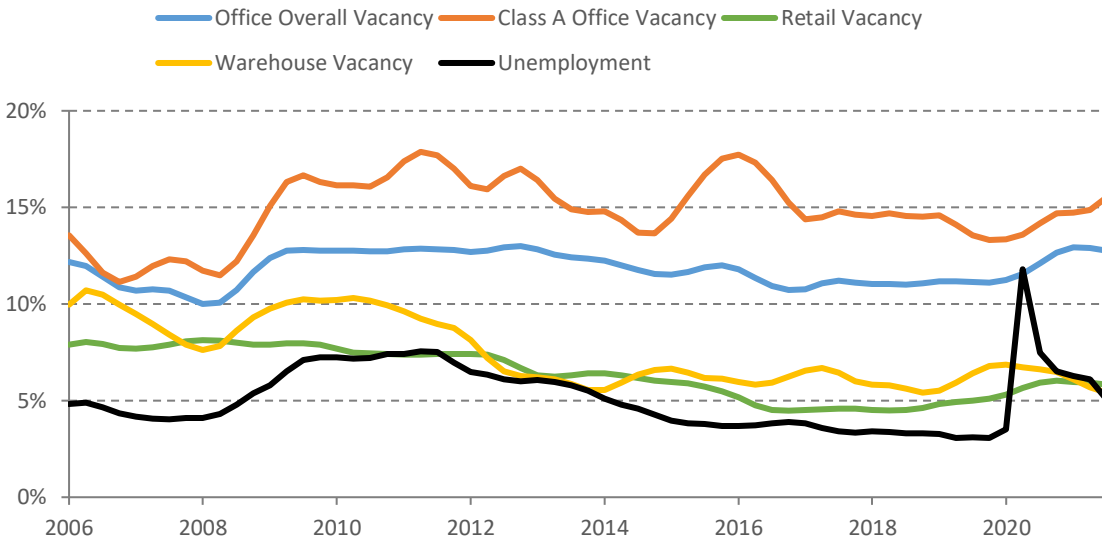
Figure 8. Houston Commercial Vacancy Rates and Unemployment (SA)*



*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.

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

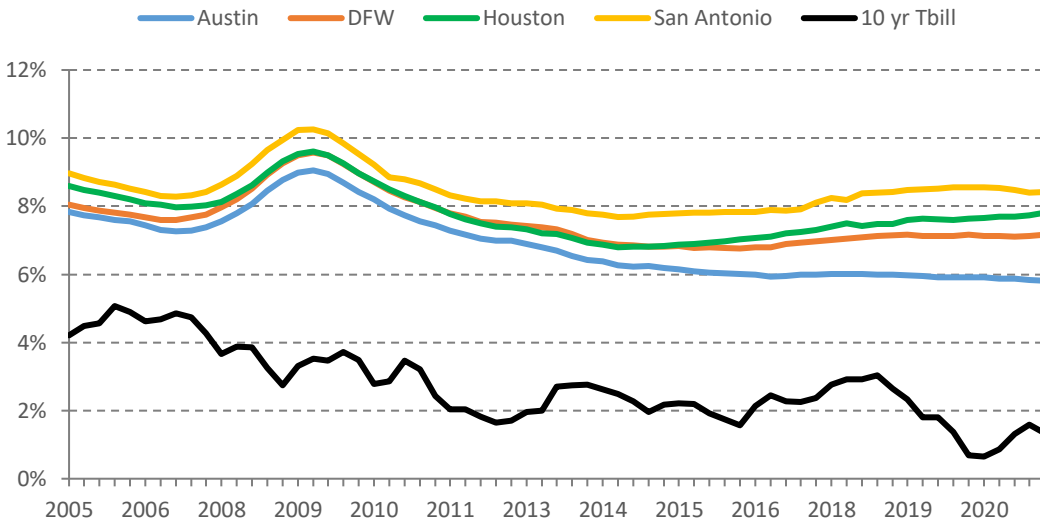
Figure 9. San Antonio Commercial Vacancy Rates and Unemployment



*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.

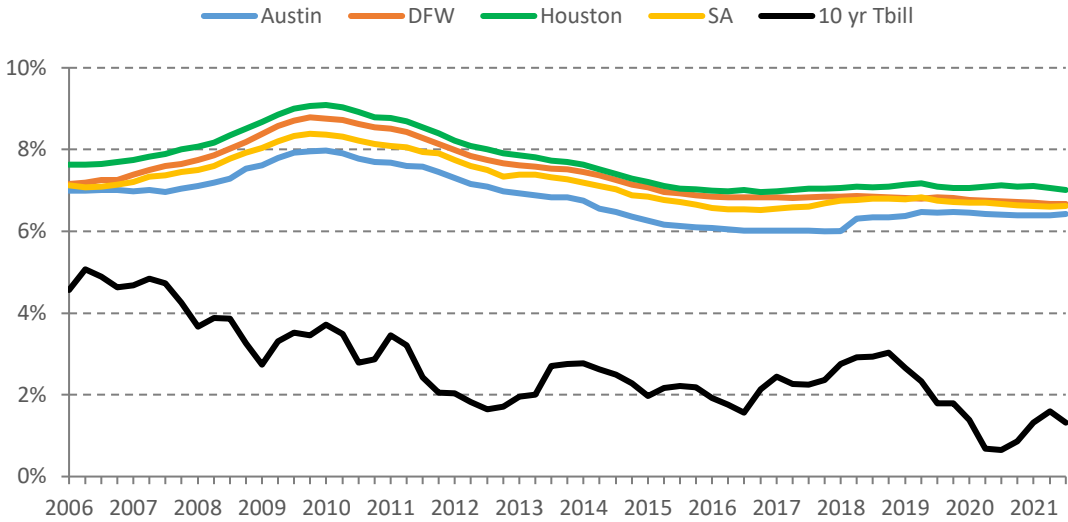
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

Figure 10. Texas Major MSAs Office Cap Rates



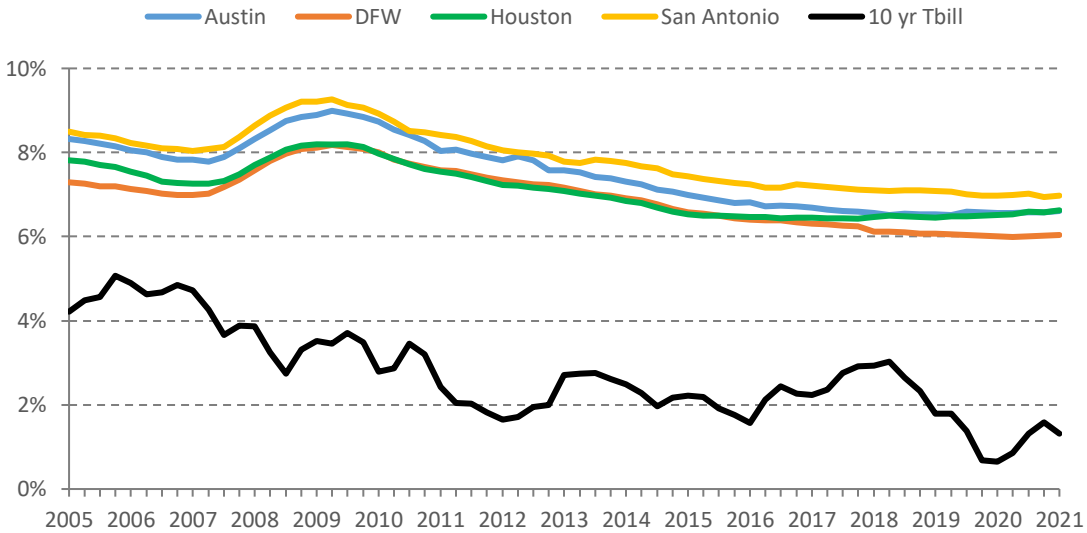
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

Figure 11. Texas Major MSAs Retail Cap Rates



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

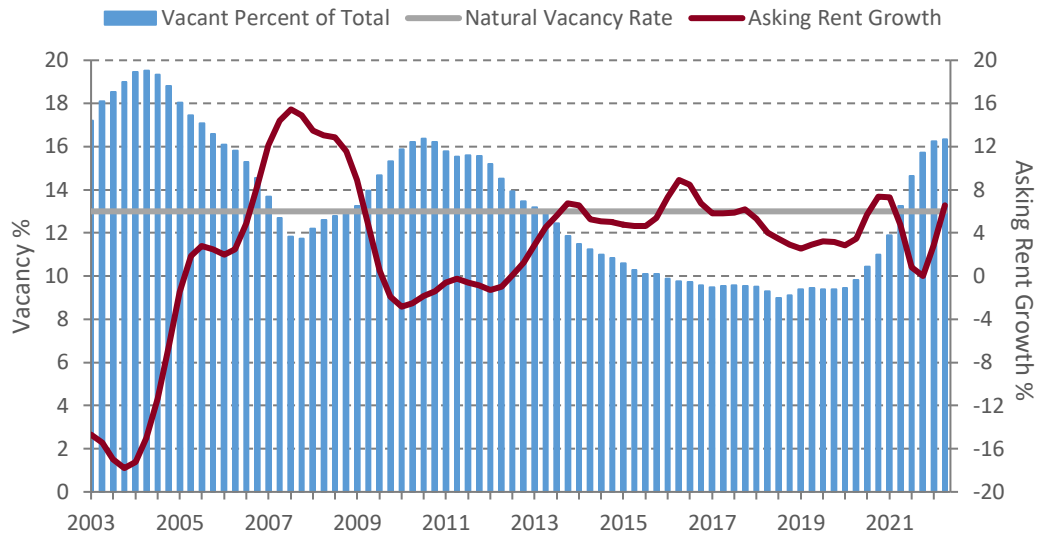
Figure 12. Texas Major MSAs Warehouse Cap Rates



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

Austin

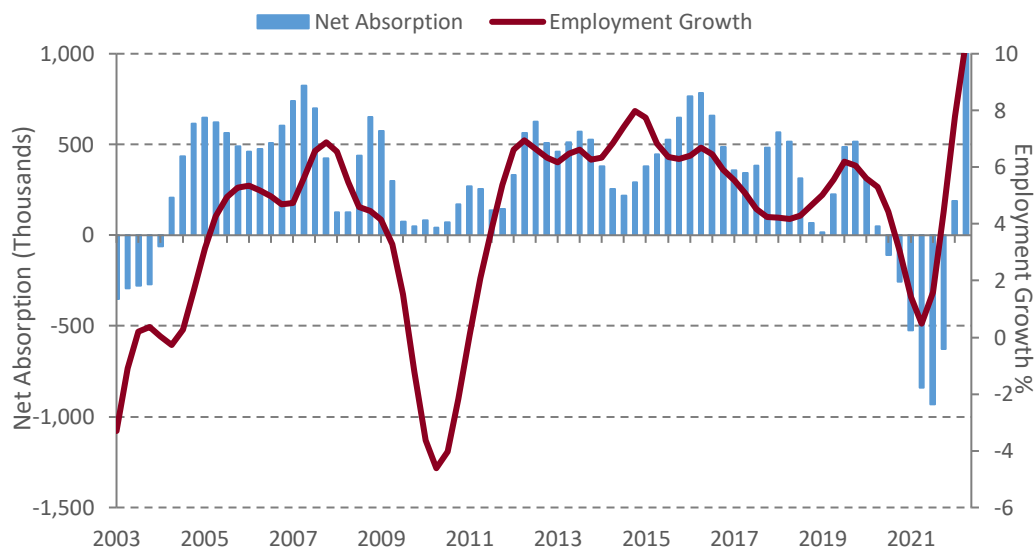
Figure 13. Austin Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

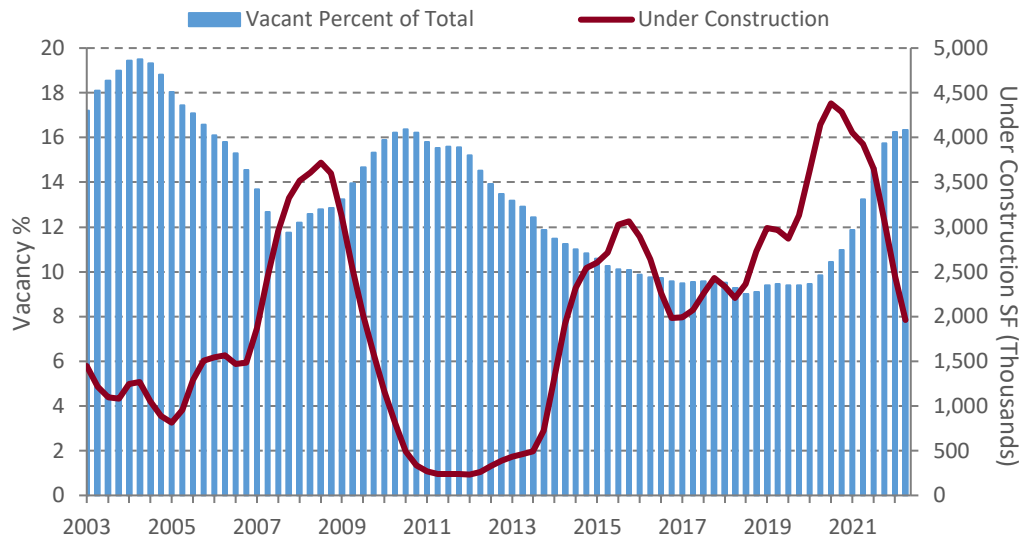
Figure 14. Austin Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

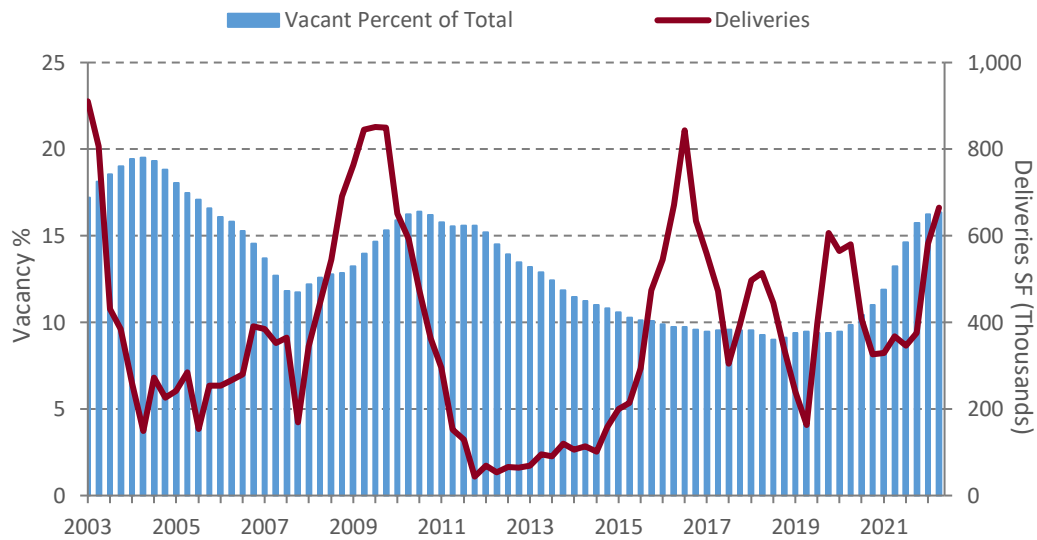
Figure 15. Austin Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

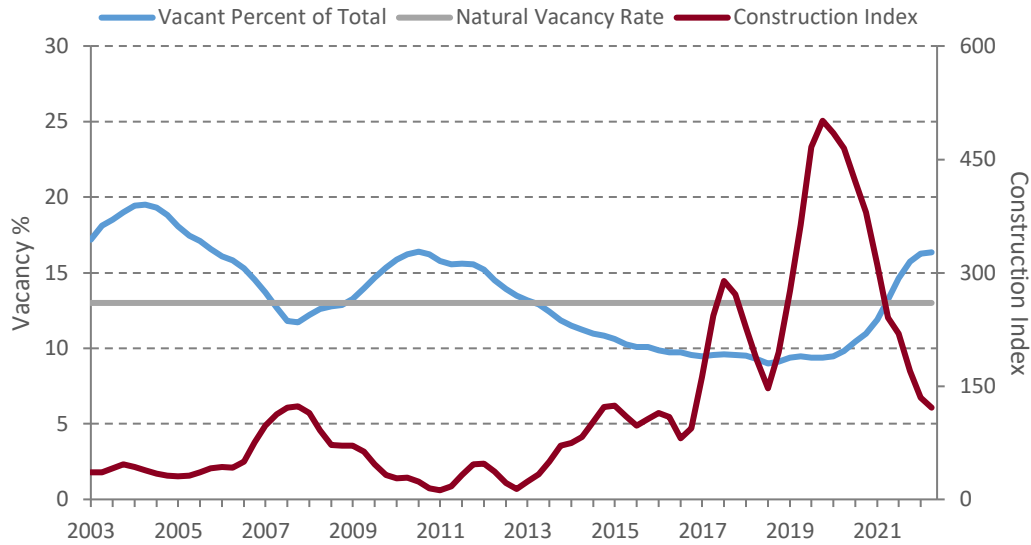
Figure 16. Austin Office Overall Vacancy (SA and TC)* and Deliveries



*Note: Four-quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.

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

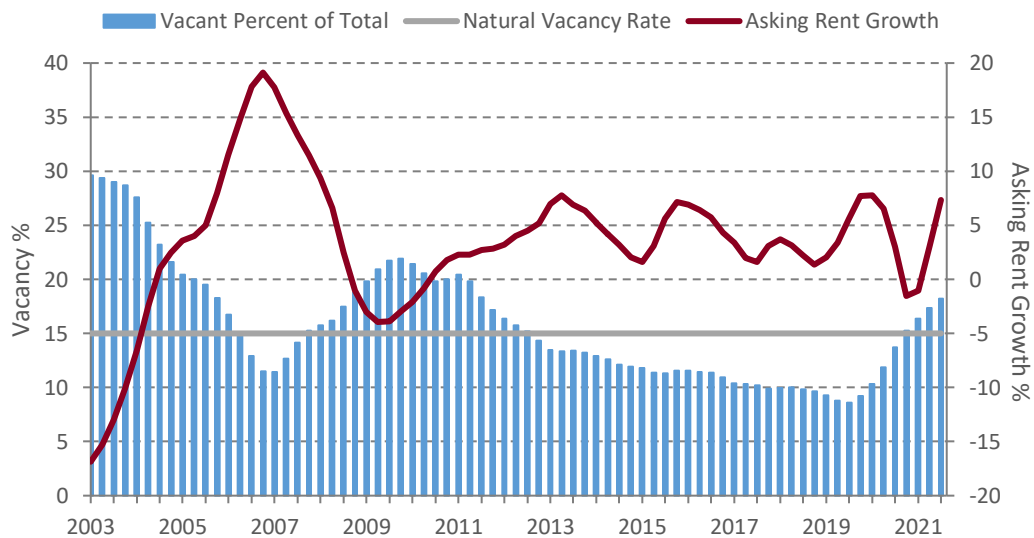
Figure 17. Austin Office Overall Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

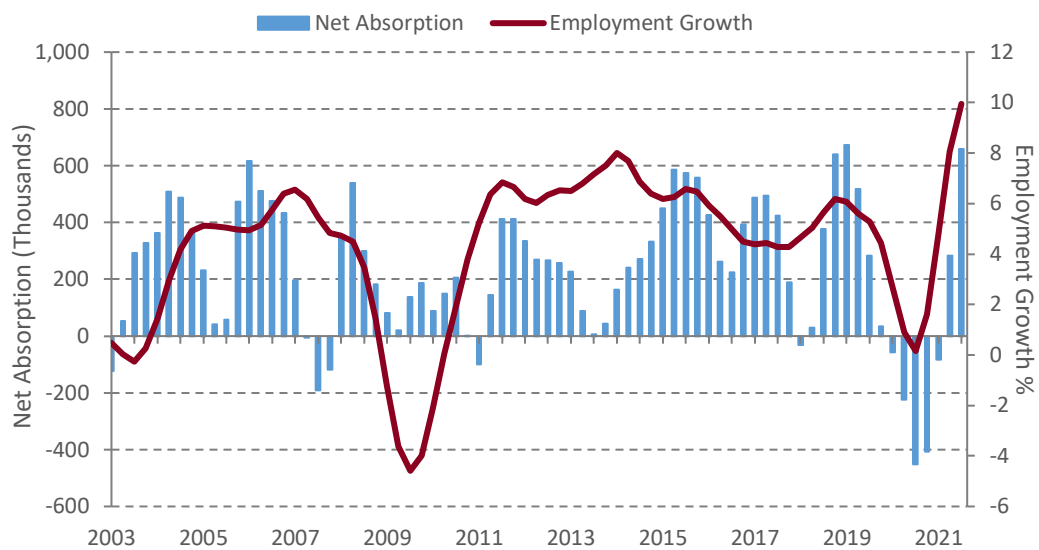
Figure 18. Austin Office Class A Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

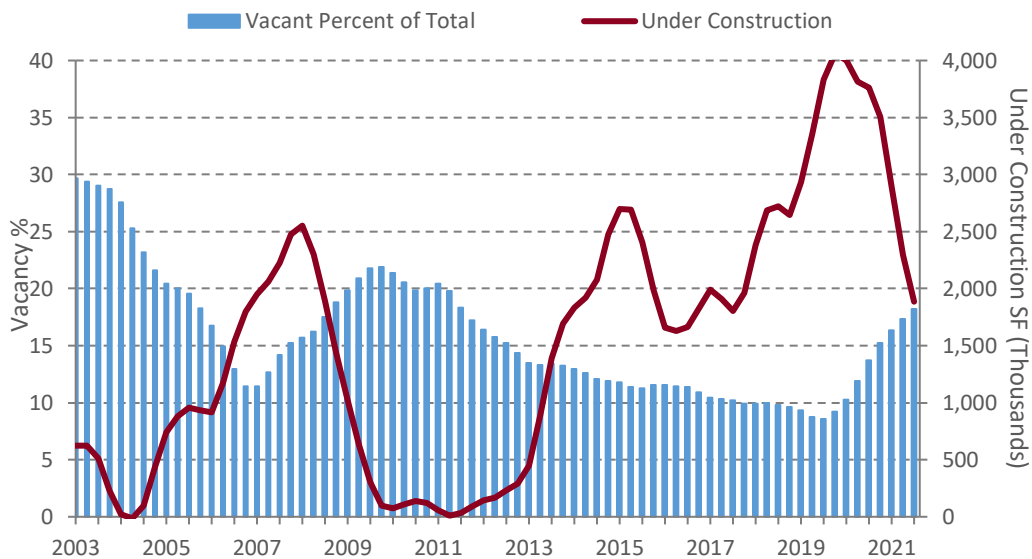
Figure 19. Austin Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

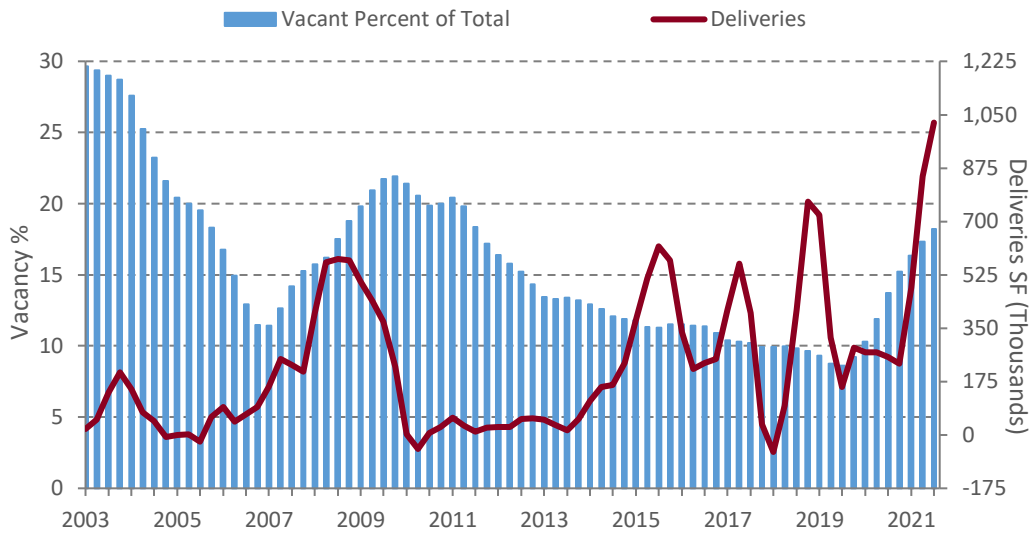
Figure 20. Austin Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

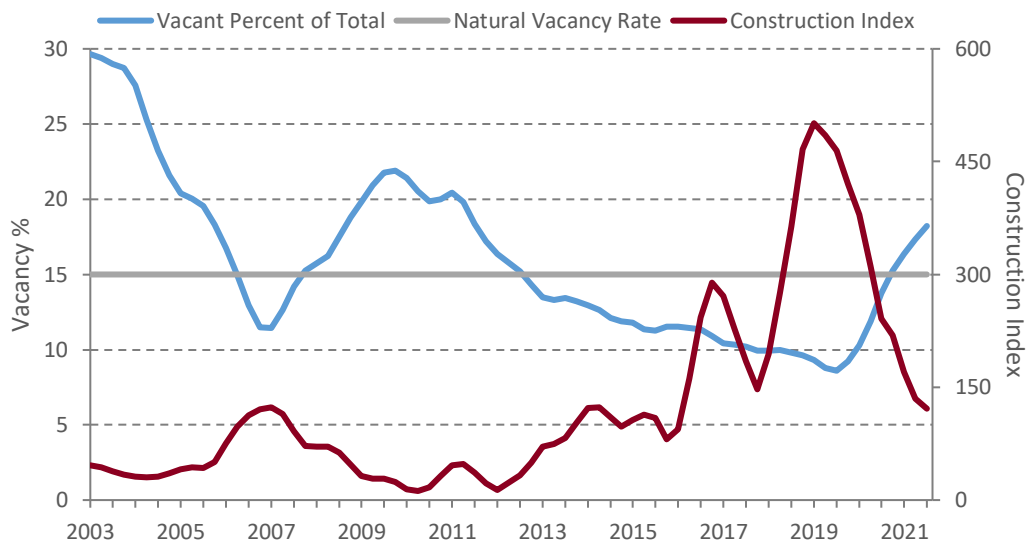
Figure 21. Austin Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

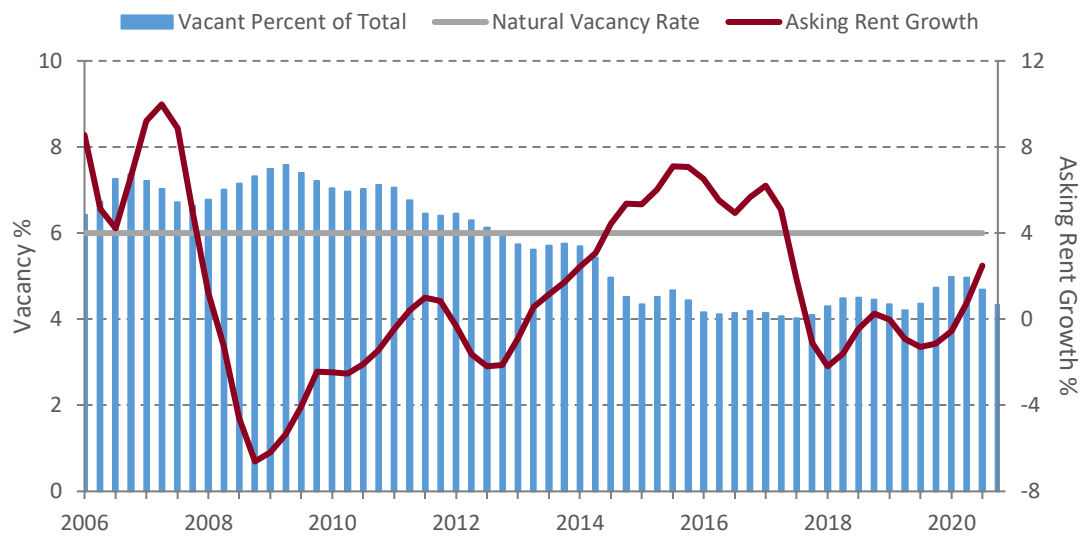
Figure 22. Austin Office Class A Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

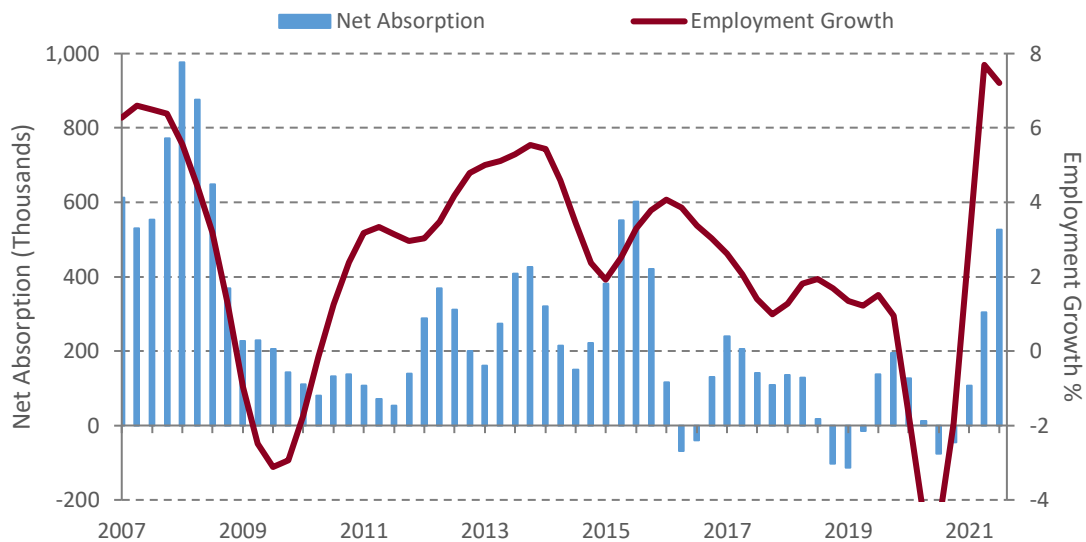
Figure 23. Austin Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

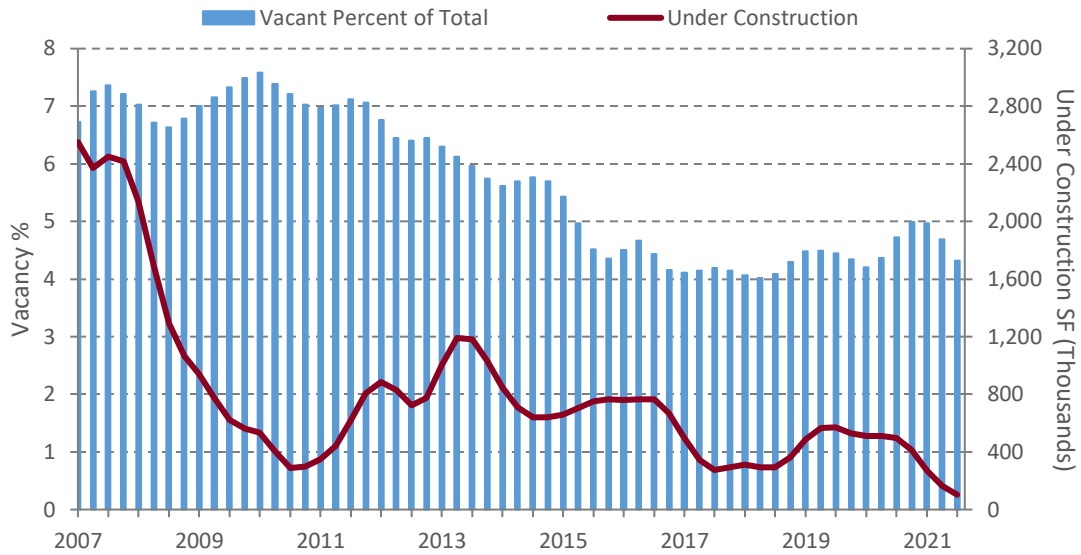
Figure 24. Austin Retail Net Absorption SF and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

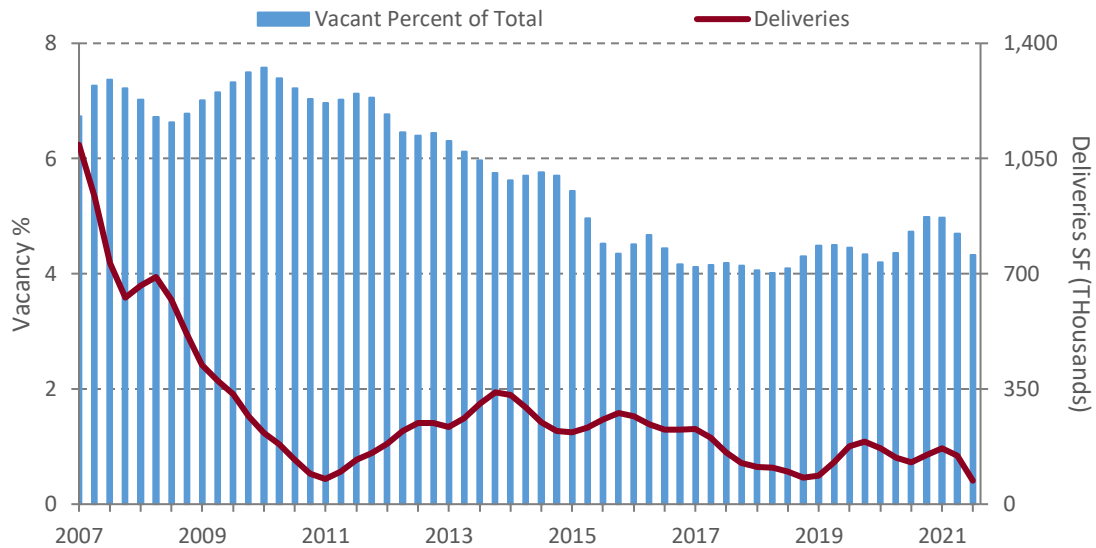
Figure 25. Austin Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

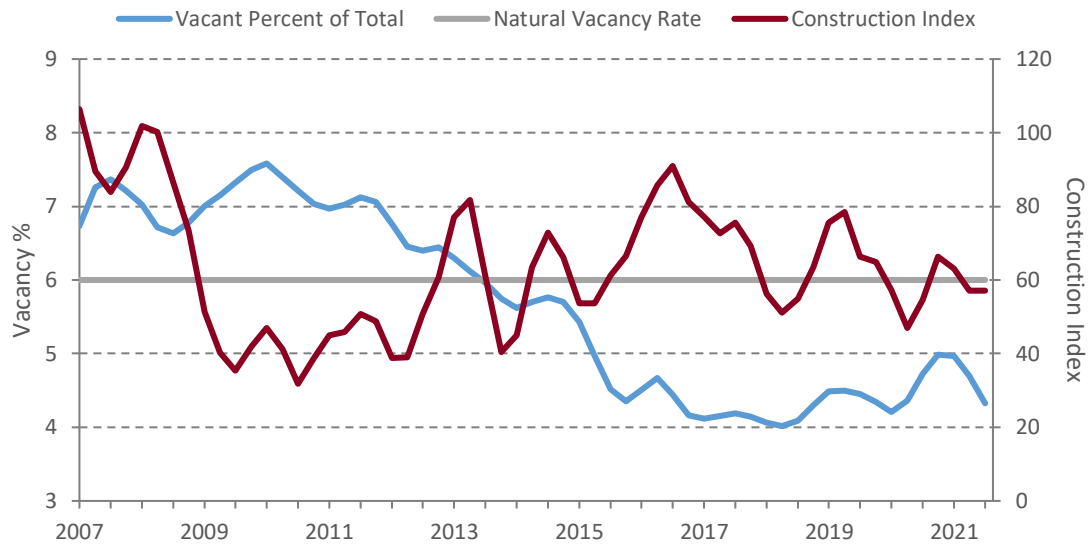
Figure 26. Austin Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

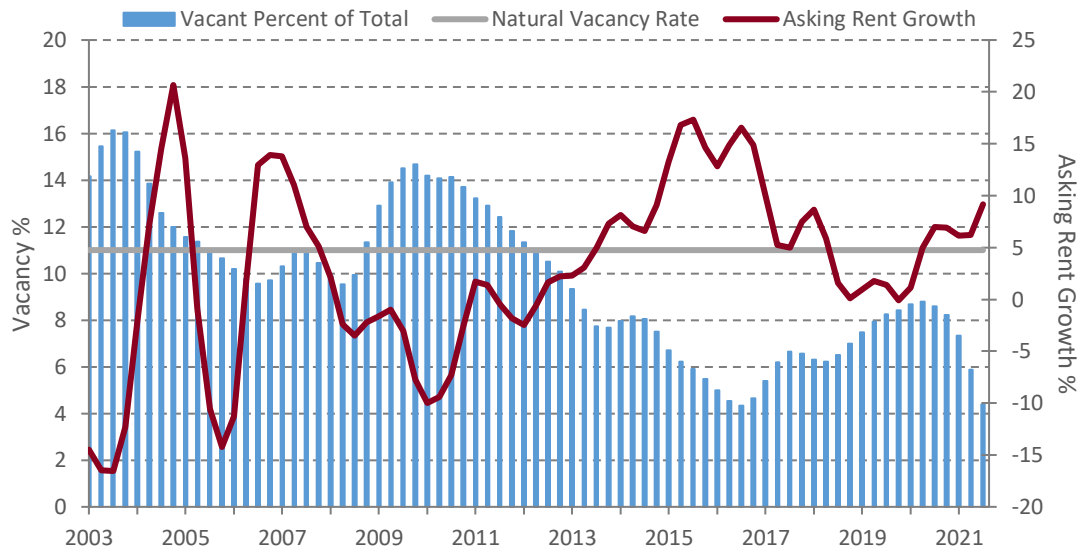
Figure 27. Austin Retail Vacancy and Construction Index (SA and TC)*
(Index 2006 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

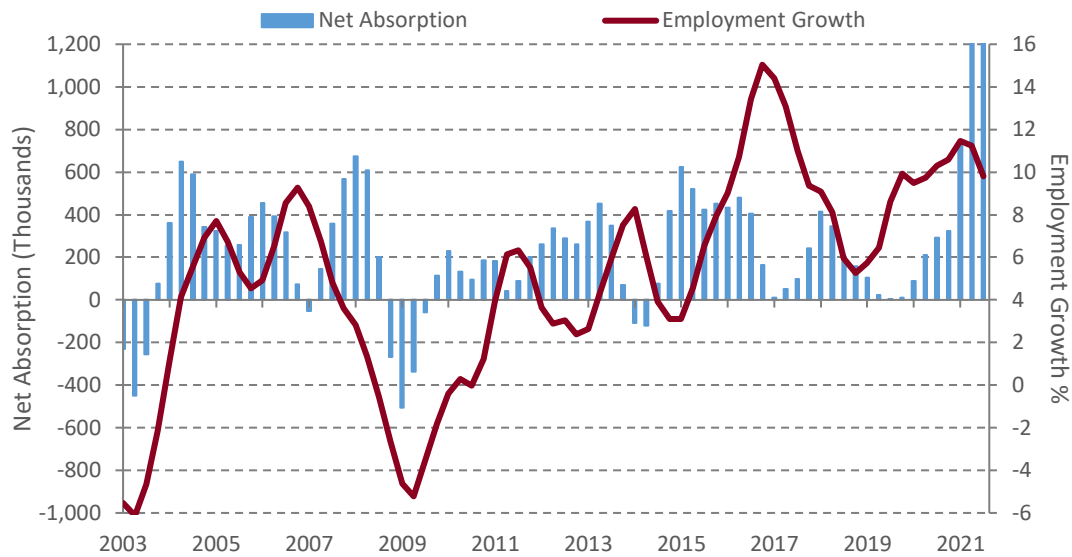
Figure 28. Austin Warehouse Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

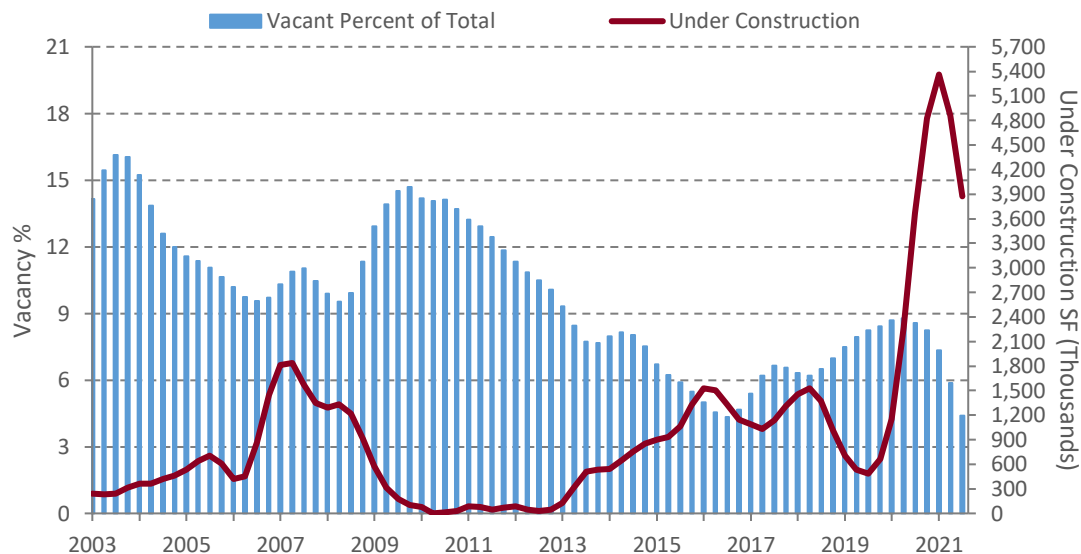
Figure 29. Austin Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

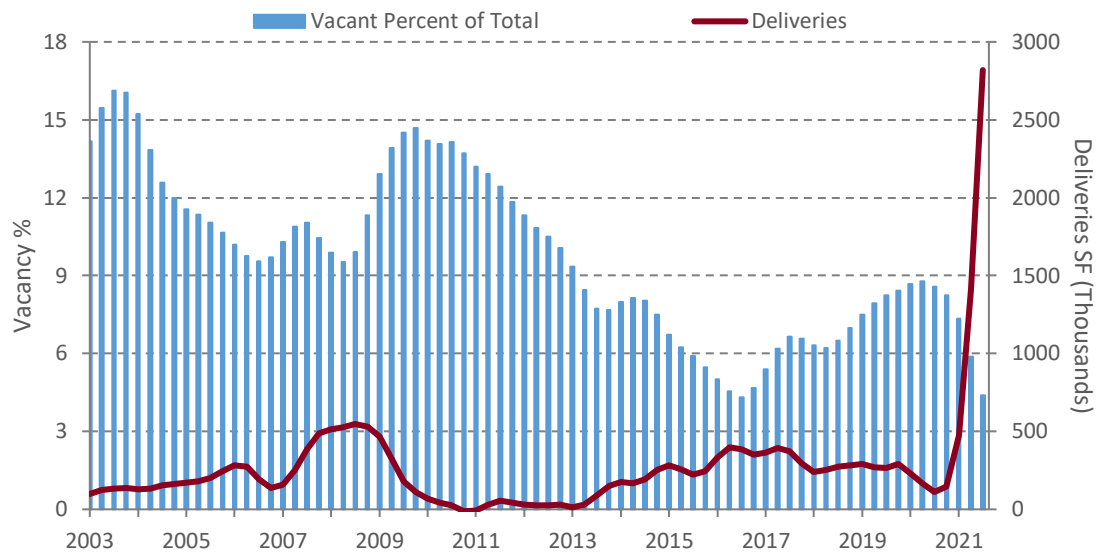
Figure 30. Austin Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

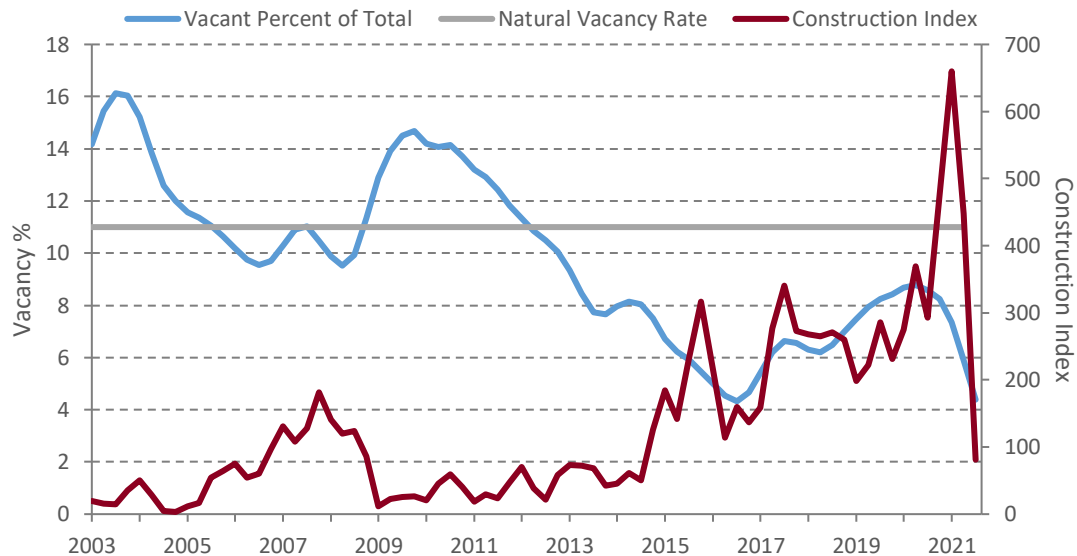
Figure 31. Austin Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

Figure 32. Austin Warehouse Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)

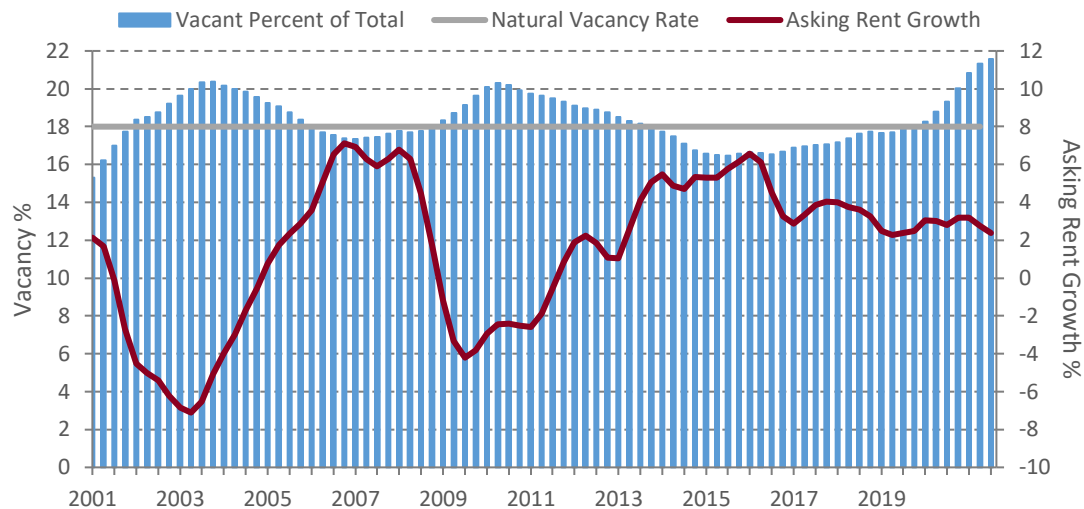


*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

DFW

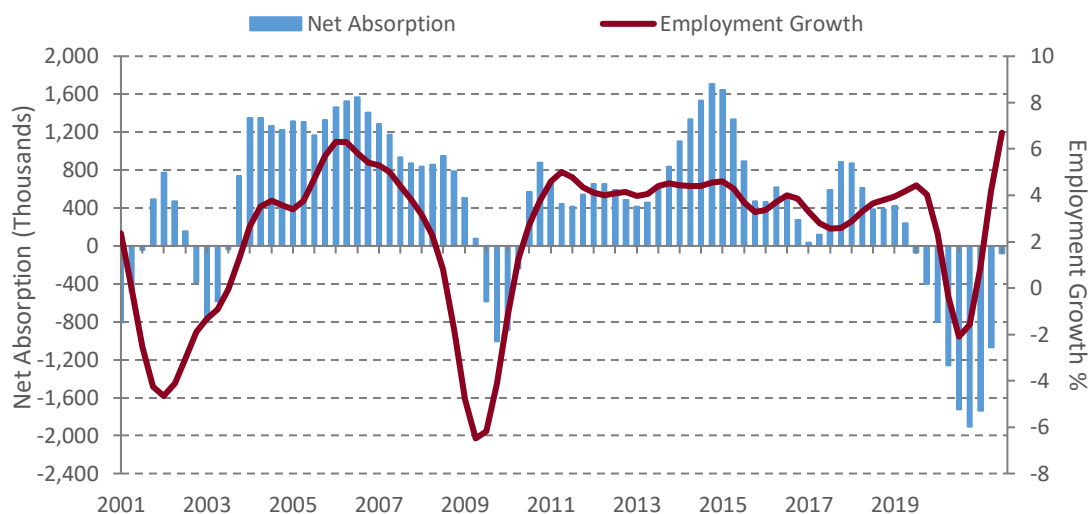
Figure 33. DFW Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

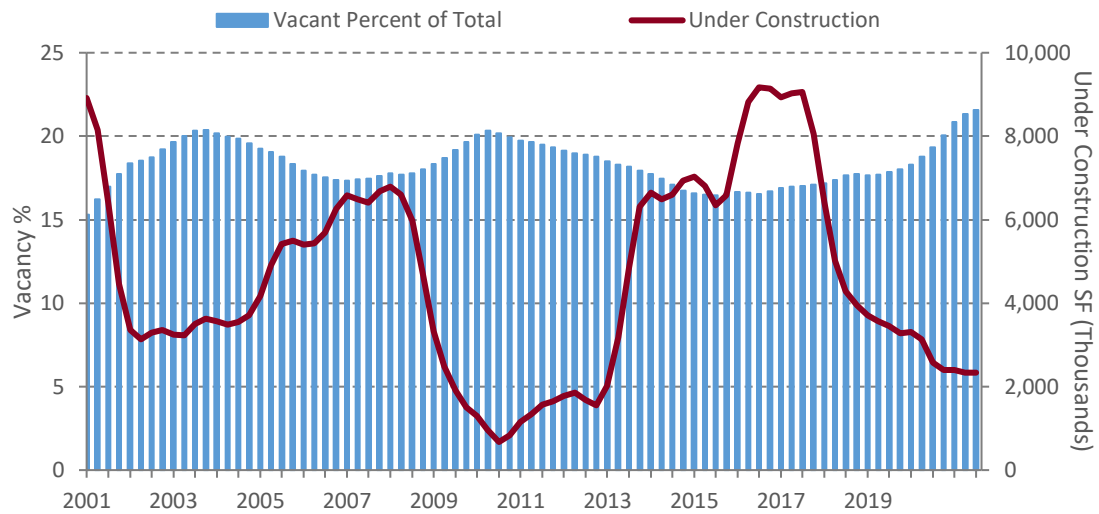
Figure 34. DFW Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

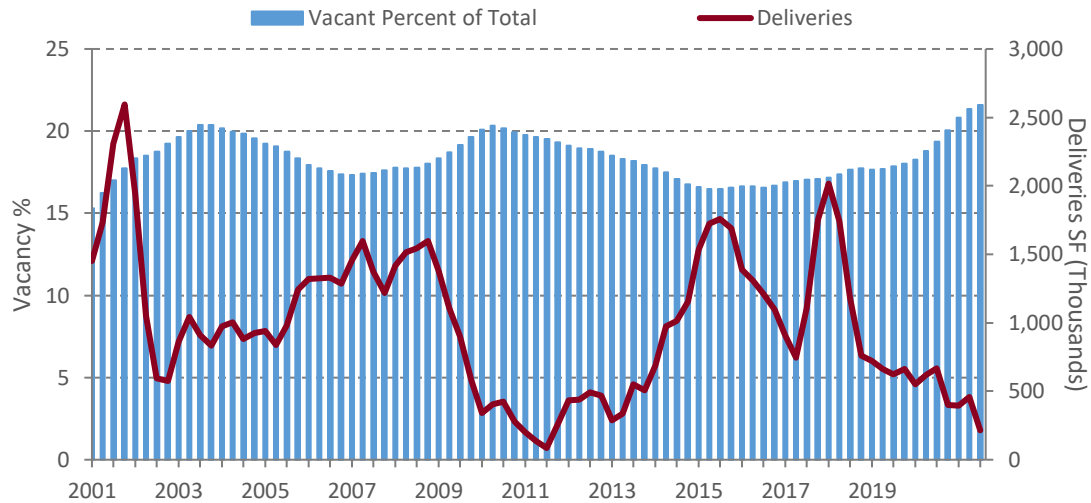
Figure 35. DFW Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

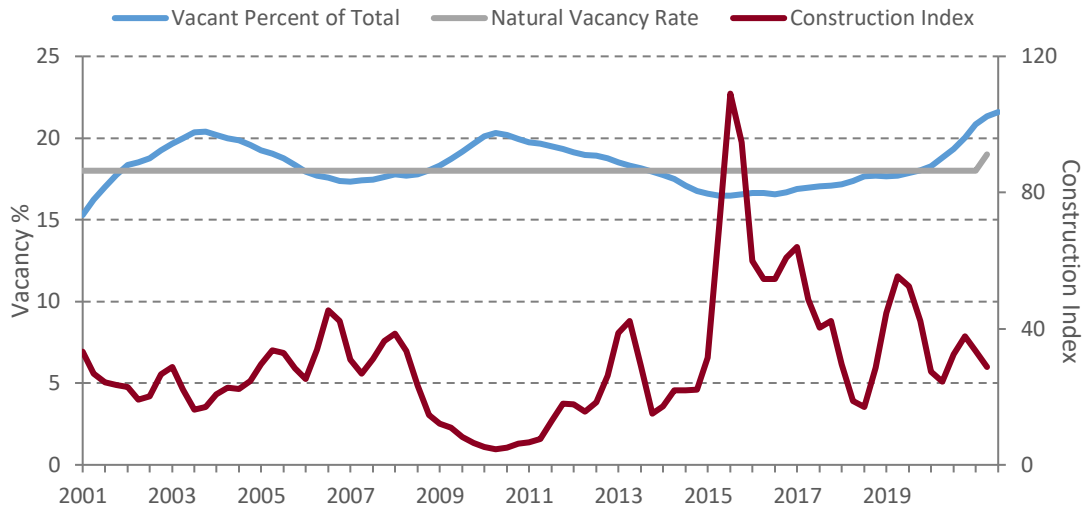
Figure 36. DFW Office Overall Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

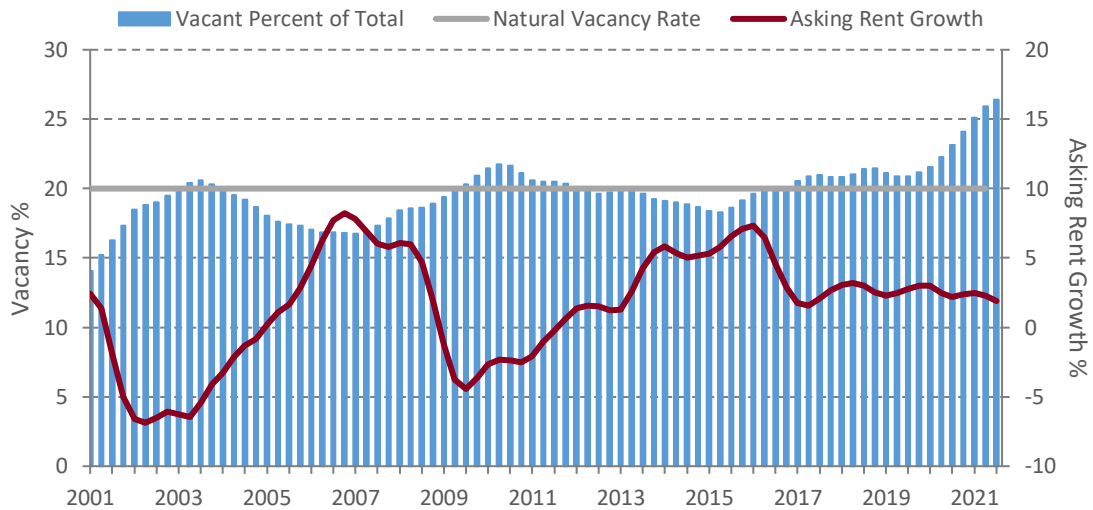
Figure 37. DFW Office Overall Vacancy and Construction Index (SA and TC)*
(Index 1982 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

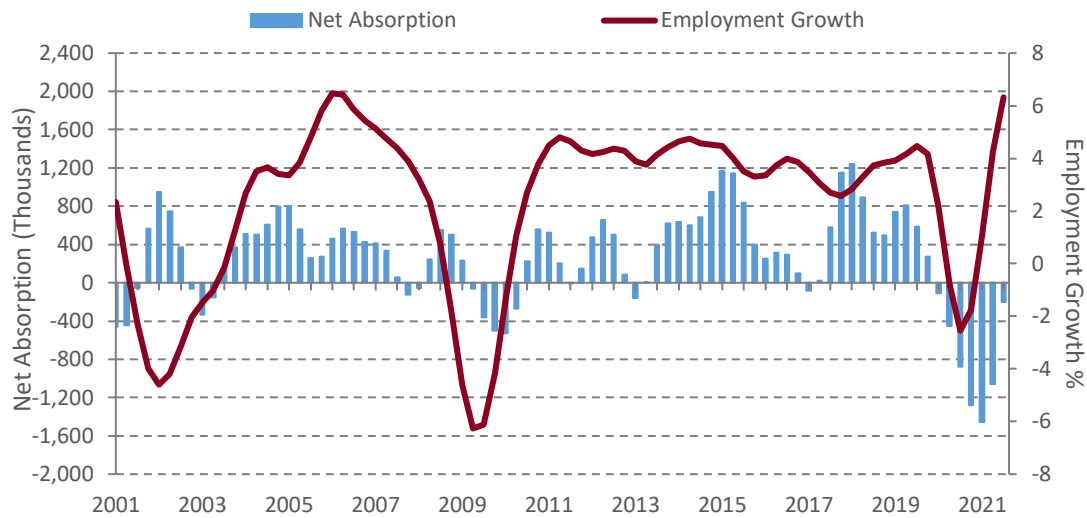
Figure 38. DFW Office Class A Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

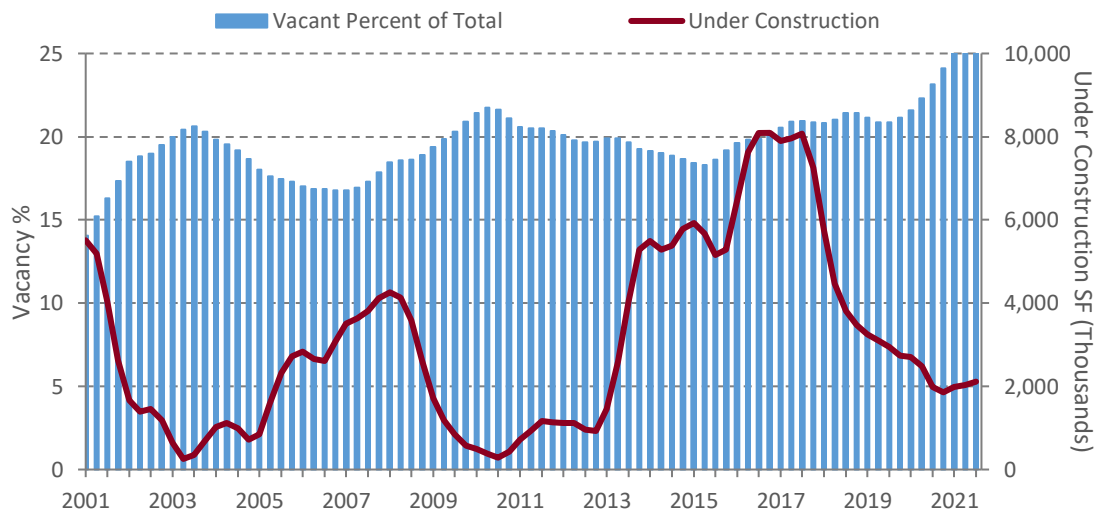
Figure 39. DFW Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

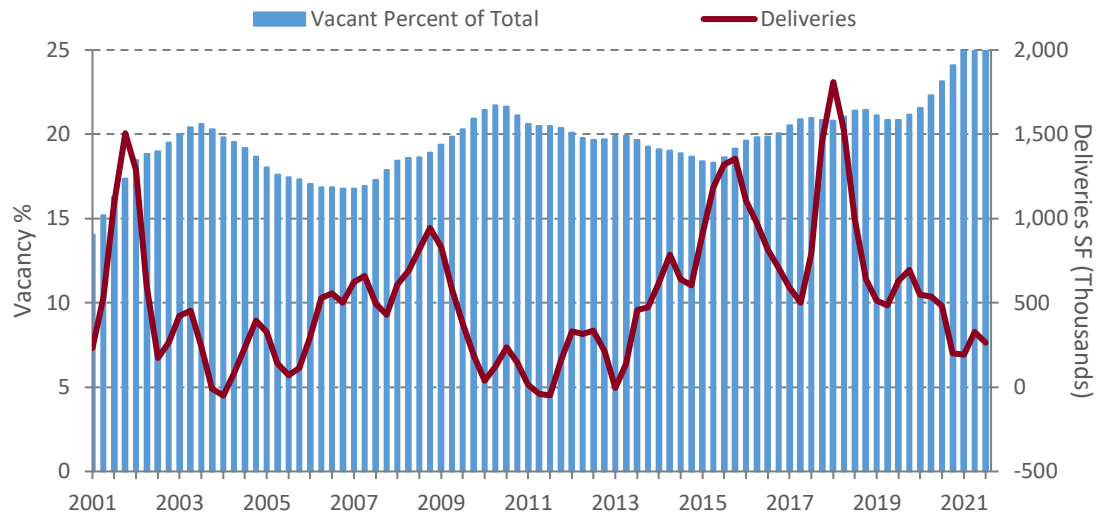
Figure 40. DFW Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

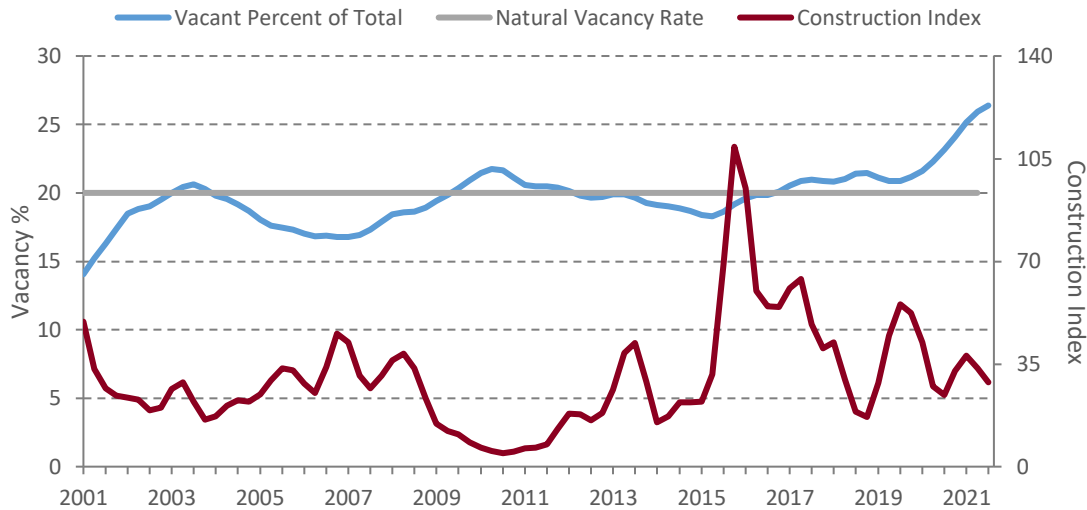
Figure 41. DFW Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

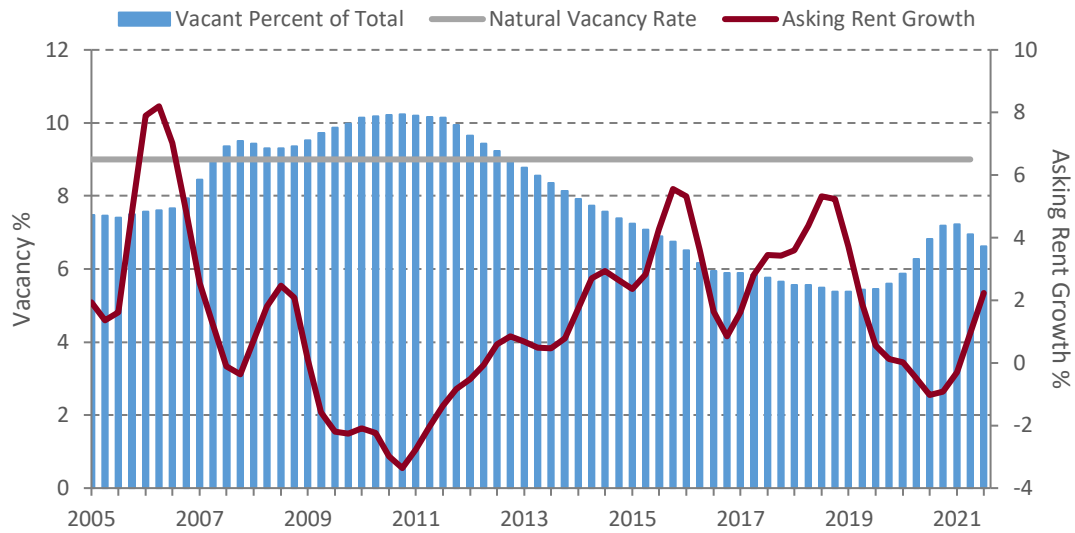
Figure 42. DFW Office Class A Vacancy and Construction Index (SA and TC)*
(Index 1982 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

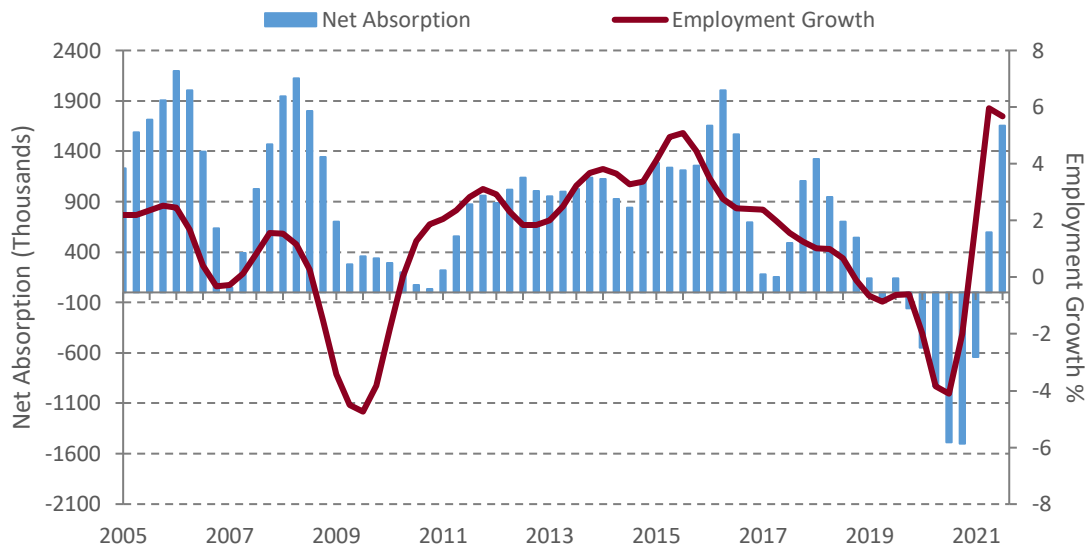
Figure 43. DFW Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

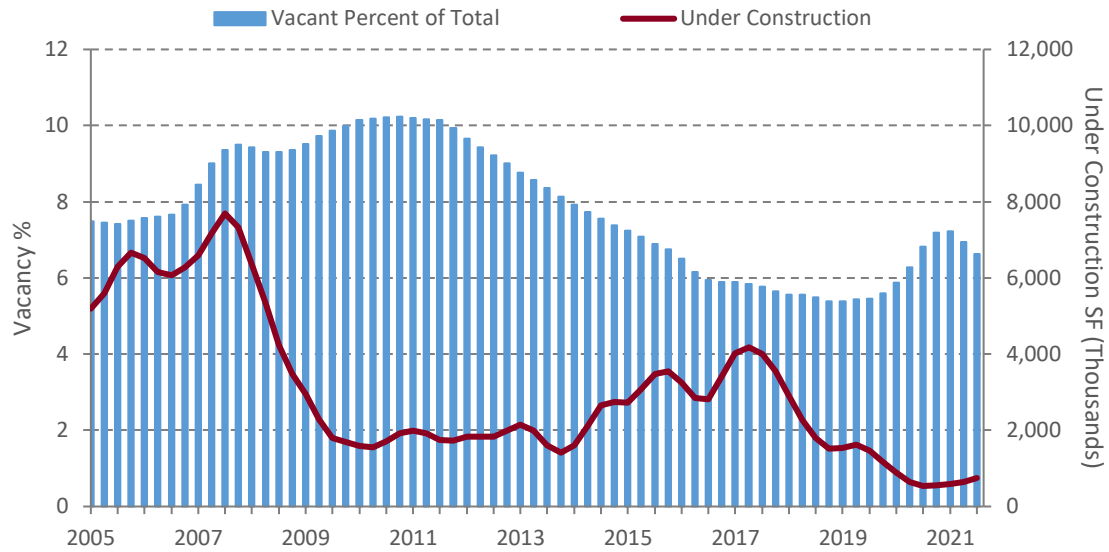
Figure 44. DFW Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

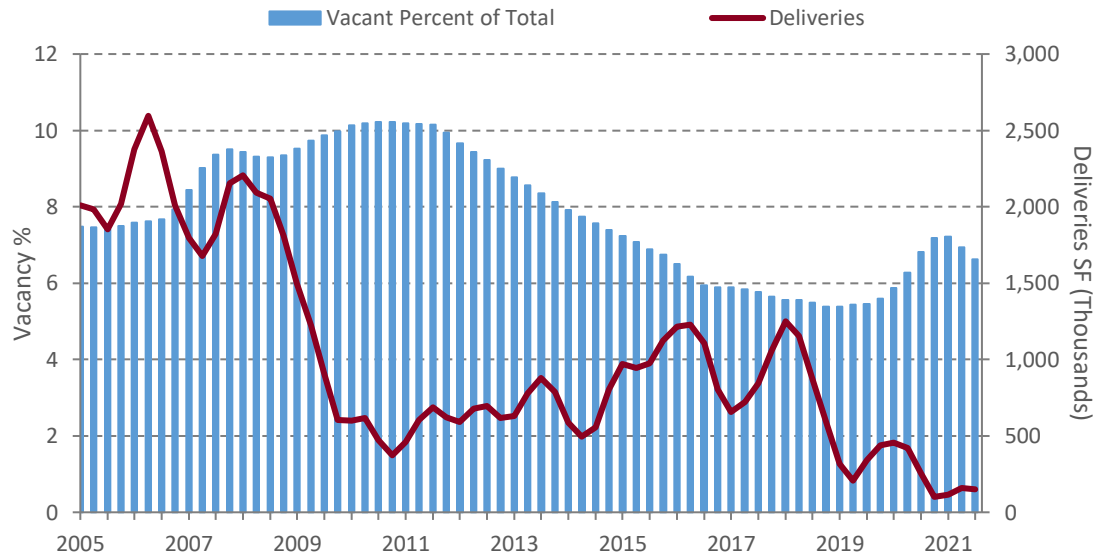
Figure 45. DFW Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

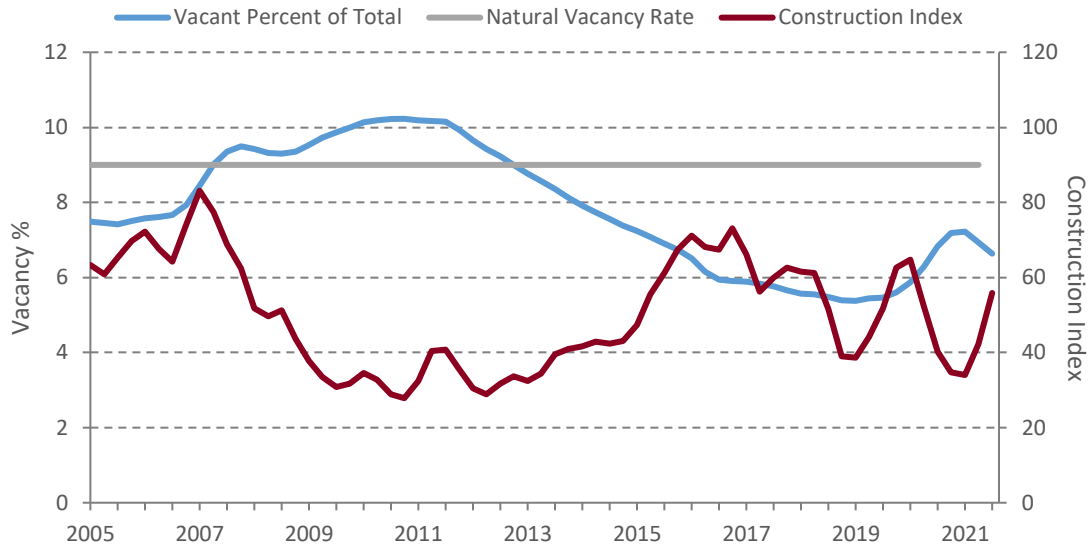
Figure 46. DFW Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

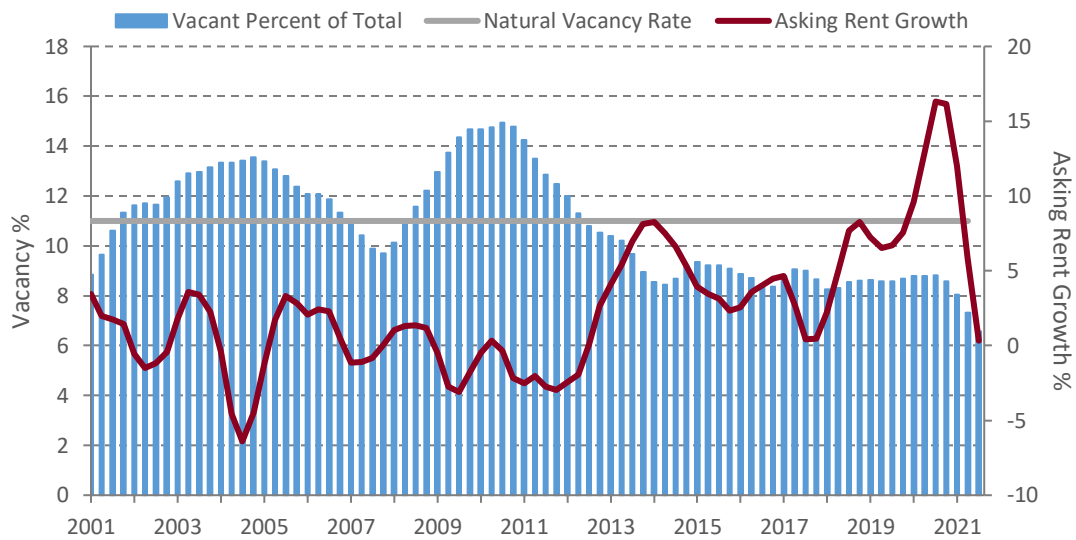
Figure 47. DFW Retail Vacancy and Construction Index (SA and TC)*
(Index 2000 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

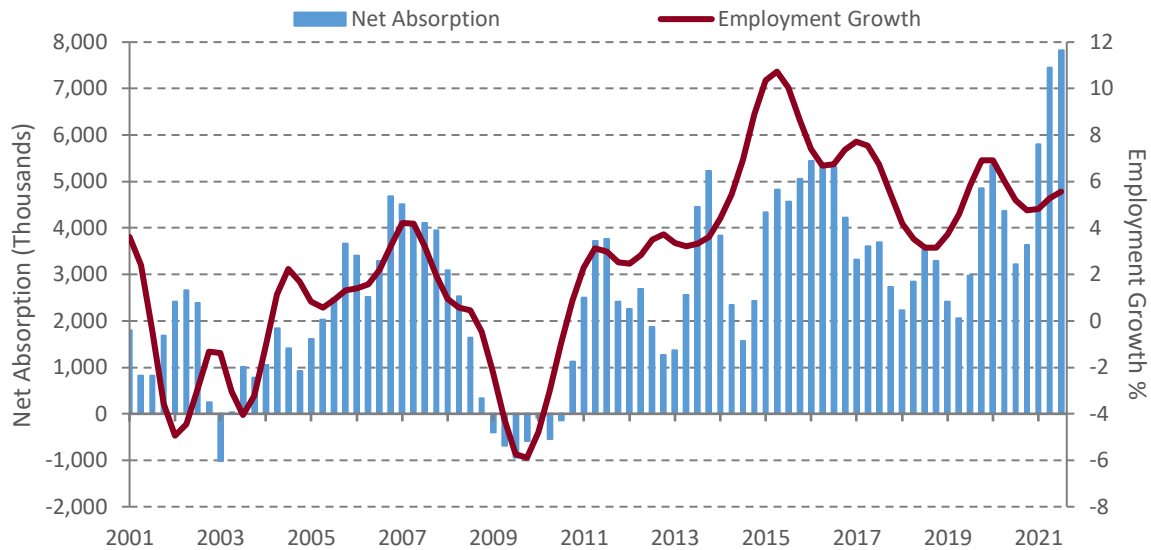
Figure 48. DFW Warehouse Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

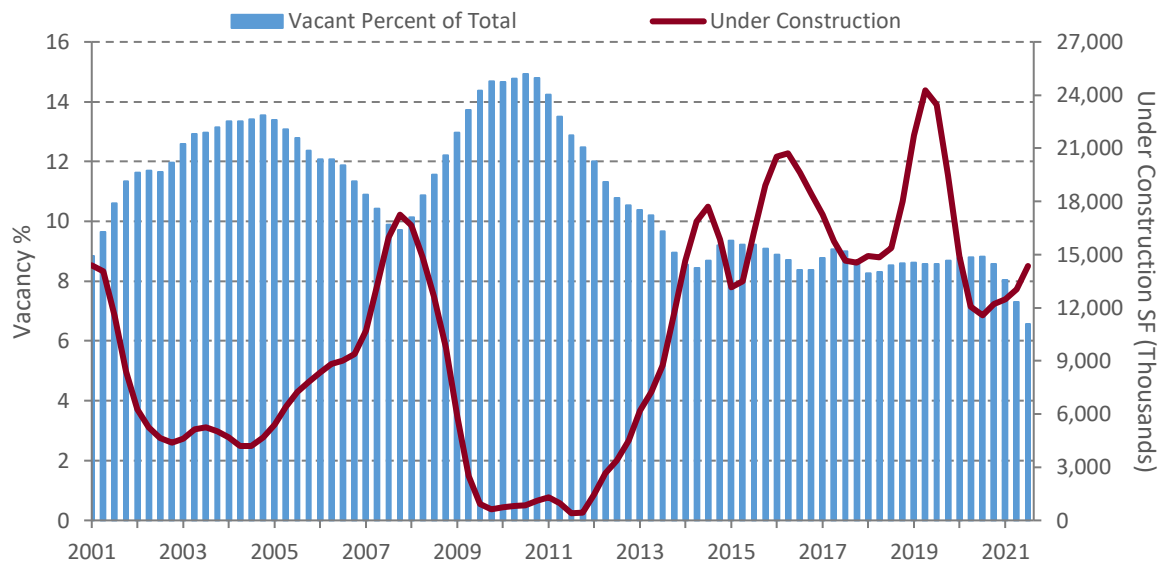
Figure 49. DFW Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

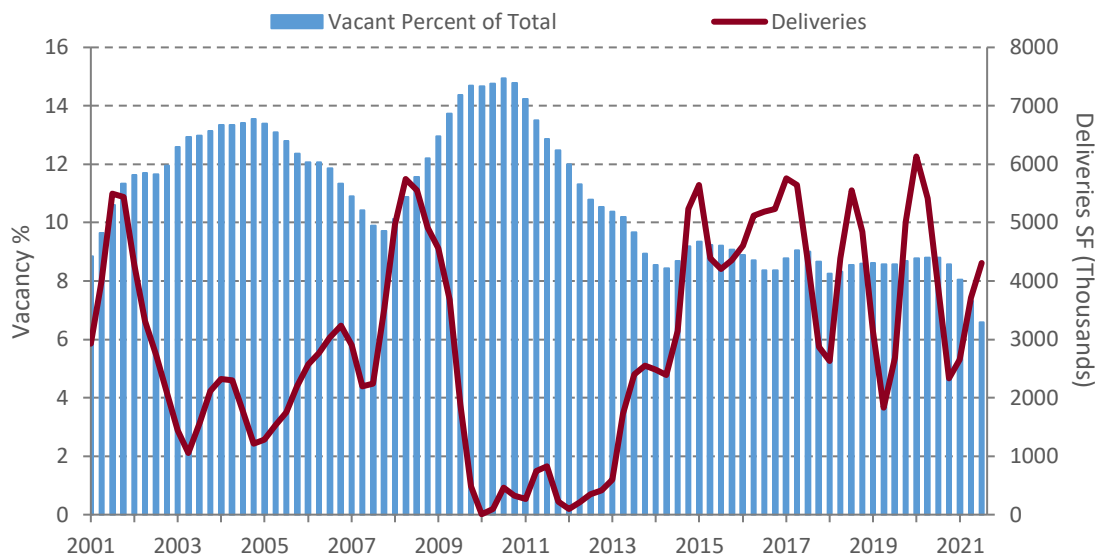
Figure 50. DFW Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

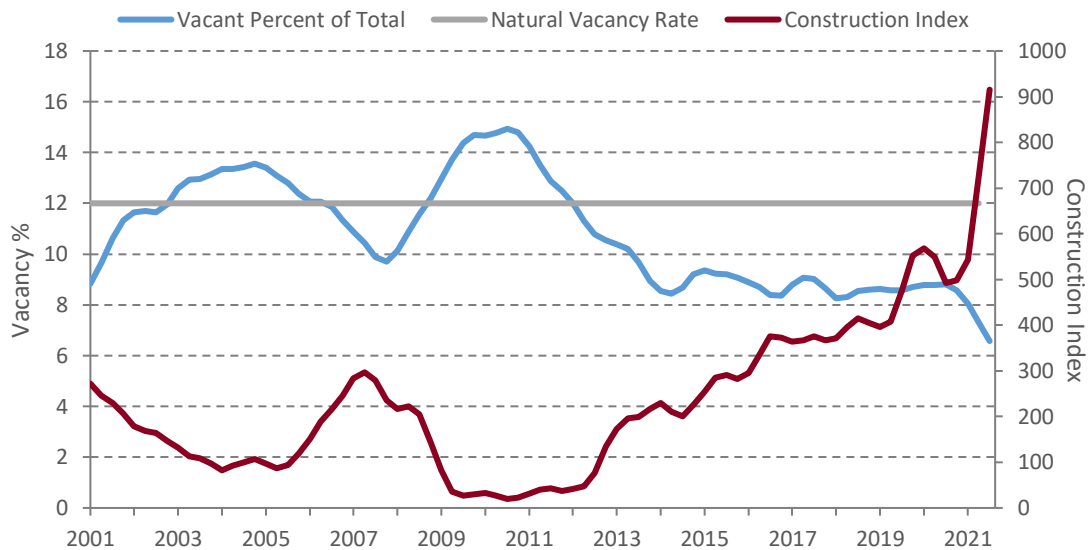
Figure 51. DFW Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

Figure 52. DFW Warehouse Vacancy and Construction Index (SA and TC)*
(Index 1995 Q1 = 100)

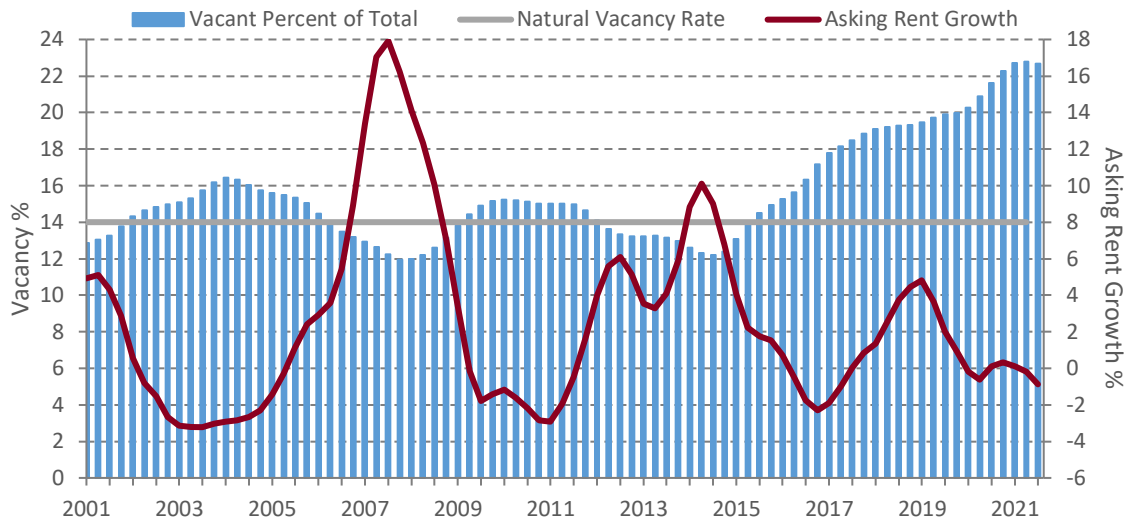


*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

Houston

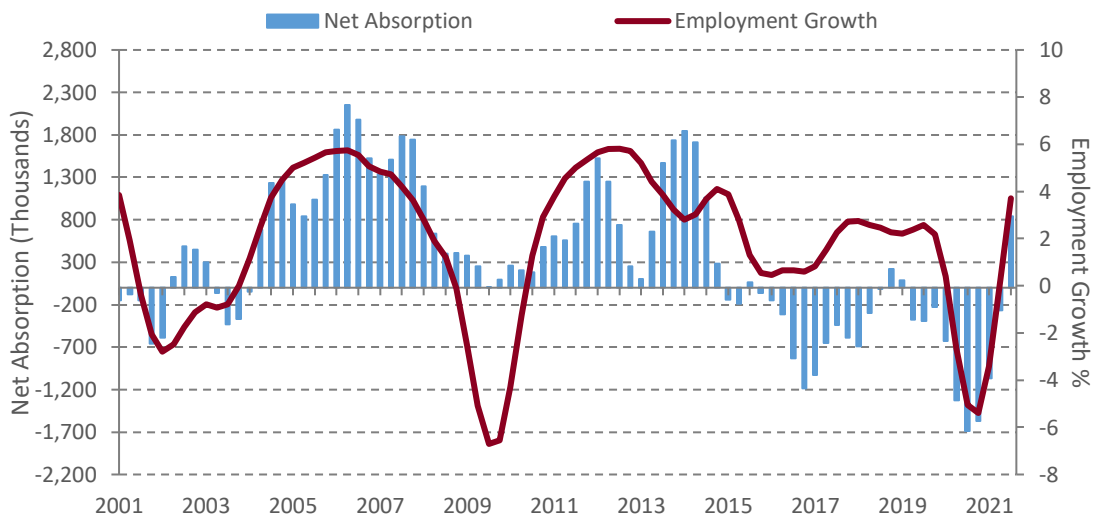
Figure 53. Houston Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

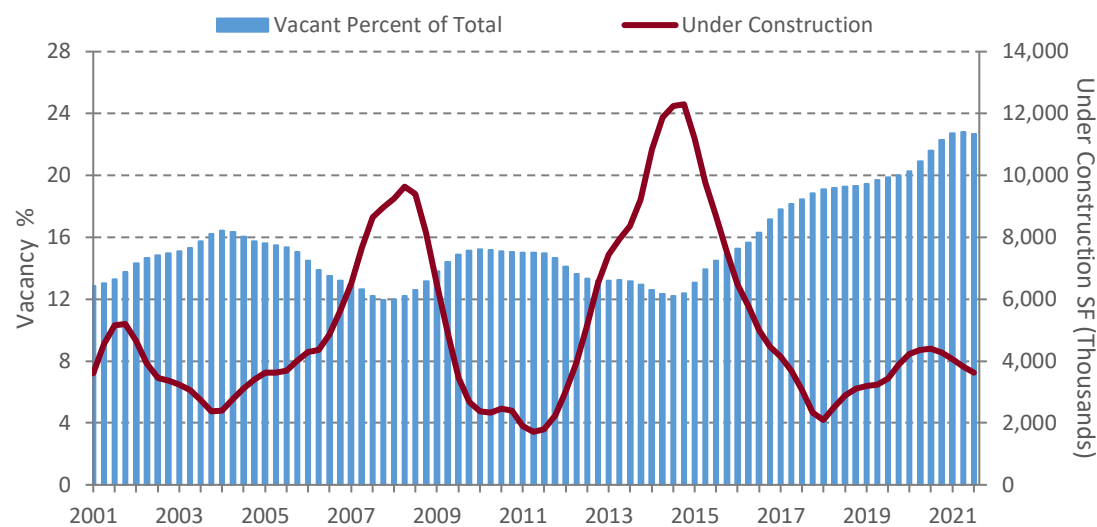
Figure 54. Houston Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

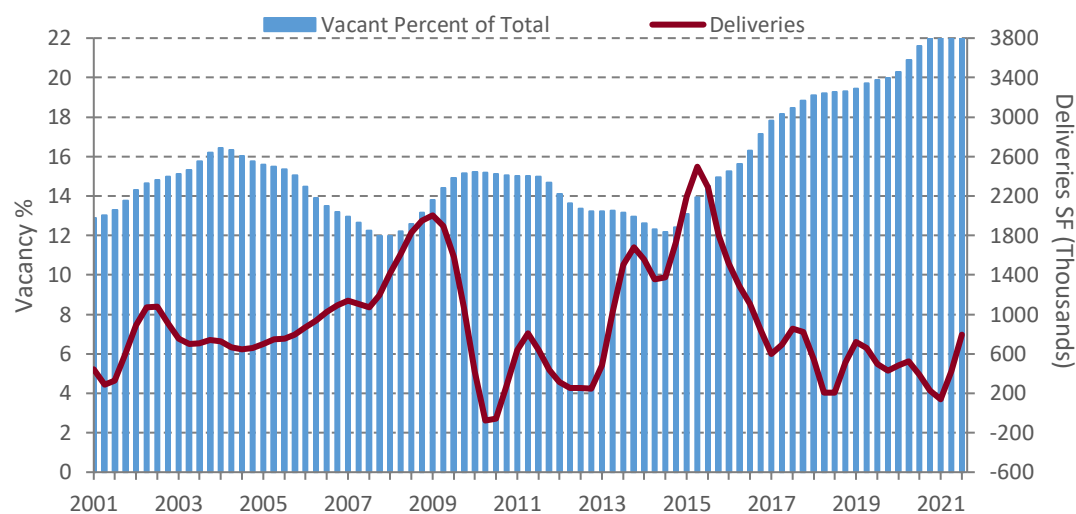
Sources: Bureau of Labor Statistics, CoStar, and Texas Real Estate Research Center at Texas A&M University

Figure 55. Houston Office Overall Vacancy and Under Construction (SA and TC)*



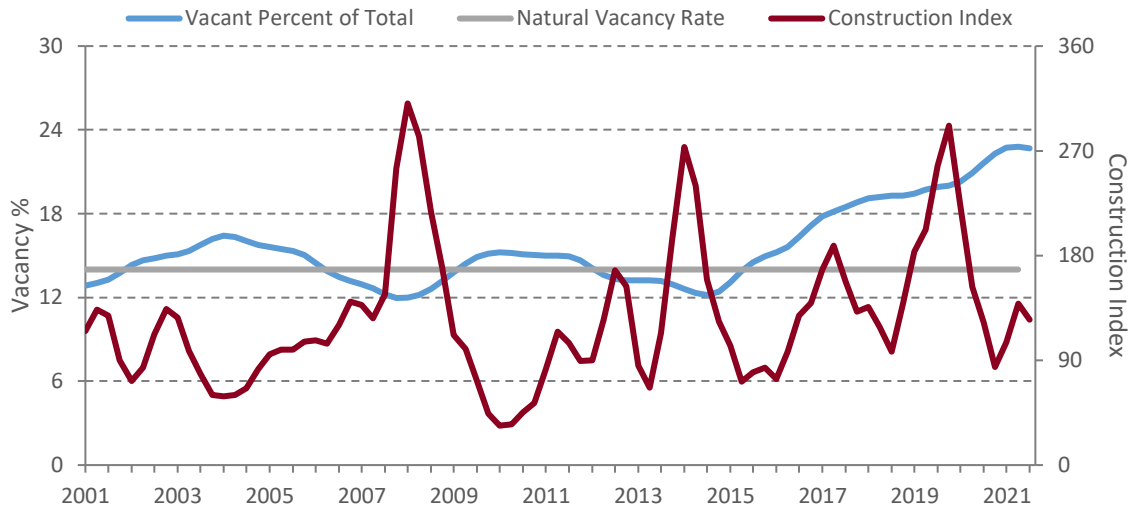
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Texas Real Estate Research Center at Texas A&M University

Figure 56. Houston Office Overall Vacancy and Deliveries (SA and TC)*



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

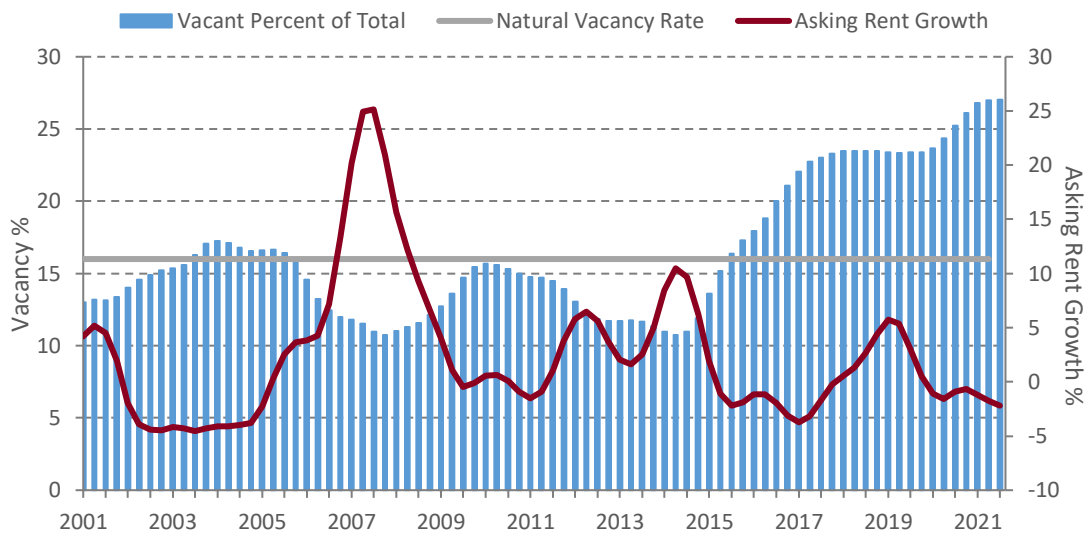
Figure 57. Houston Office Overall Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

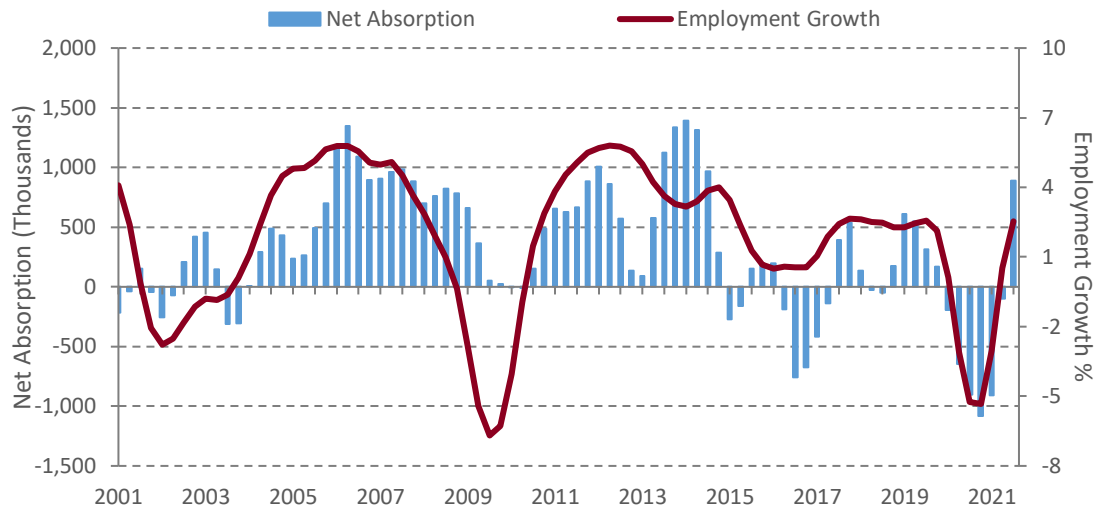
Figure 58. Houston Office Class A Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

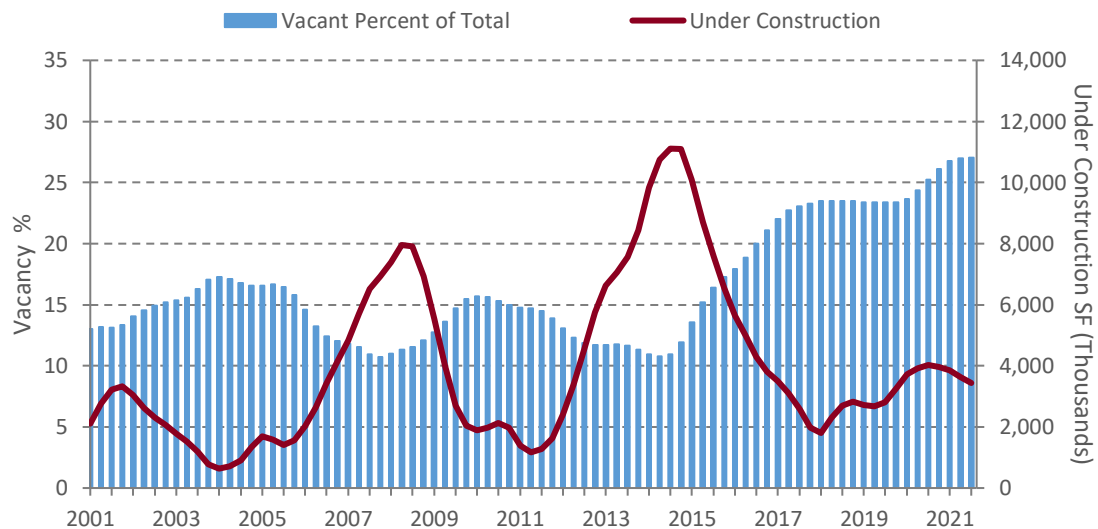
Figure 59. Houston Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

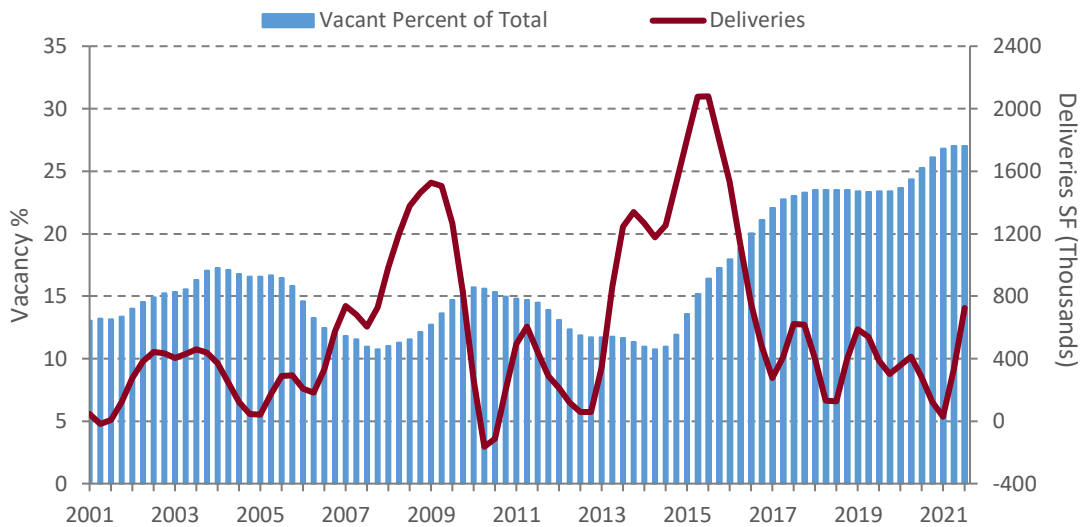
Figure 60. Houston Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

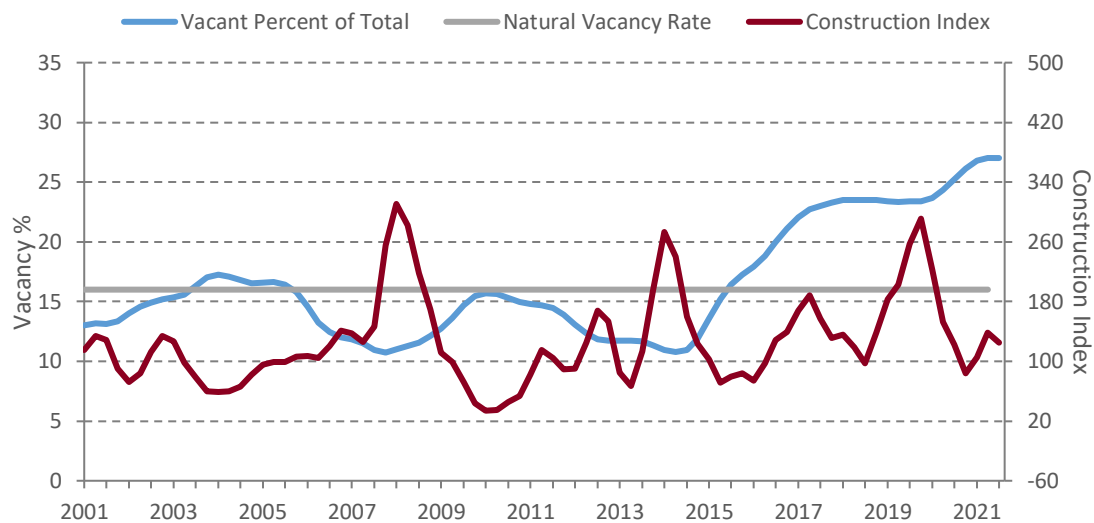
Figure 61. Houston Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

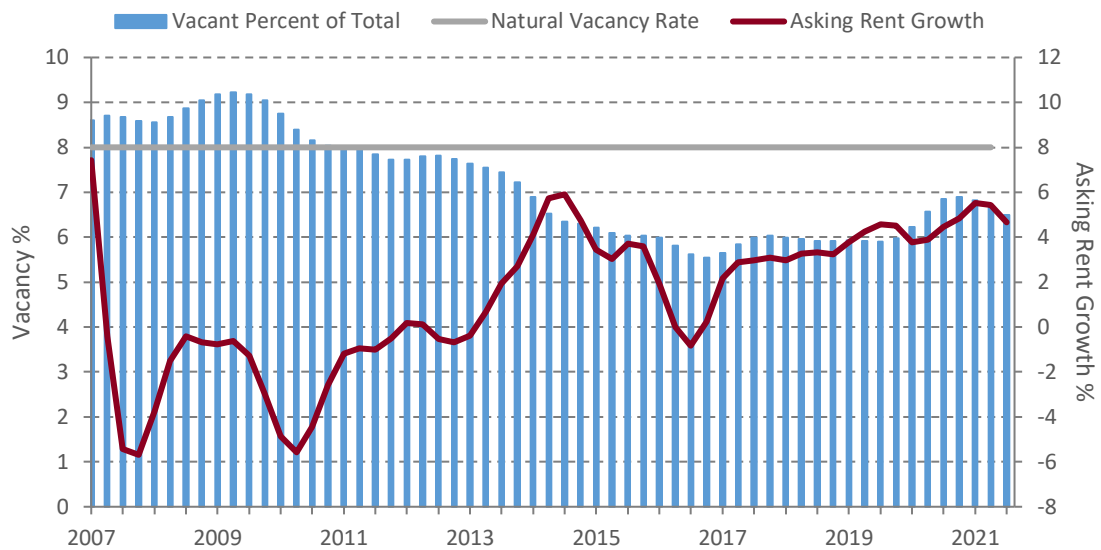
Figure 62. Houston Office Class A Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

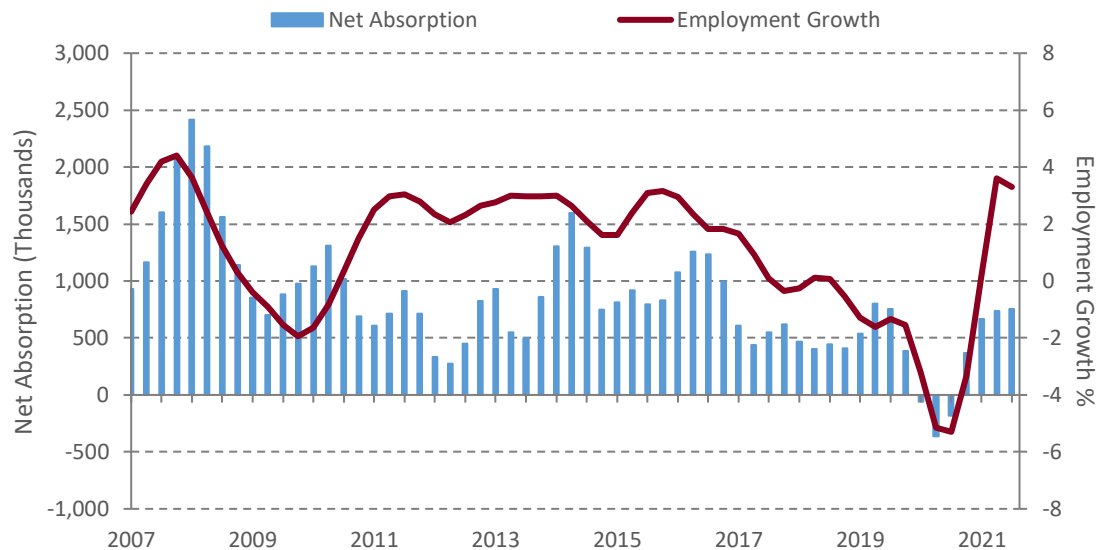
Figure 63. Houston Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

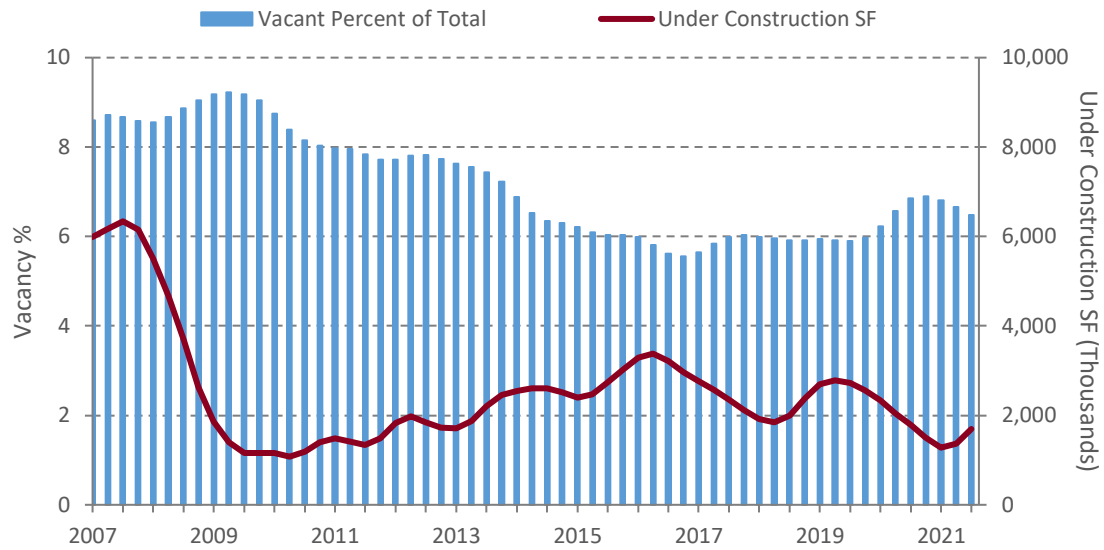
Figure 64. Houston Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

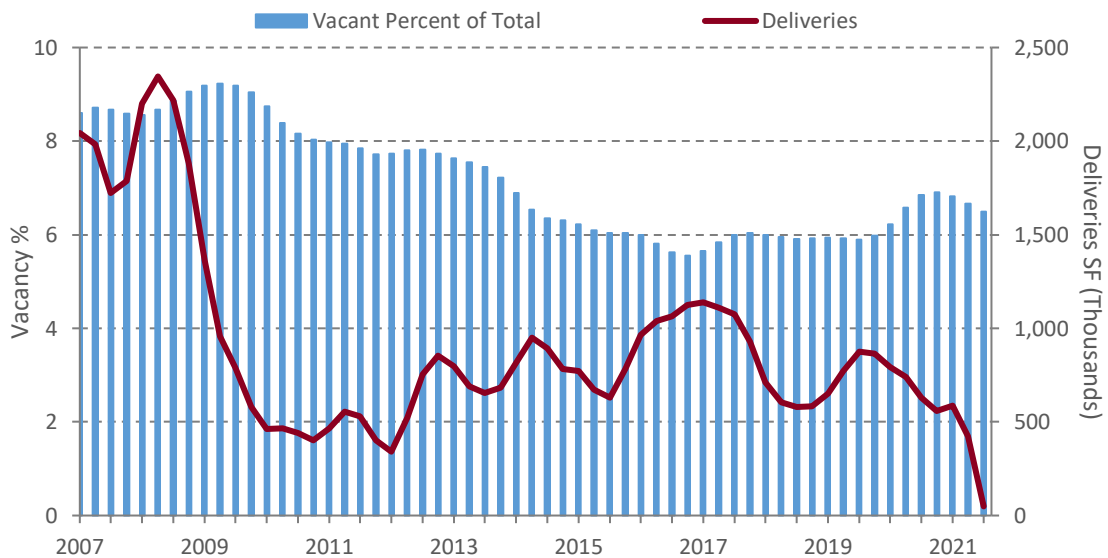
Figure 65. Houston Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

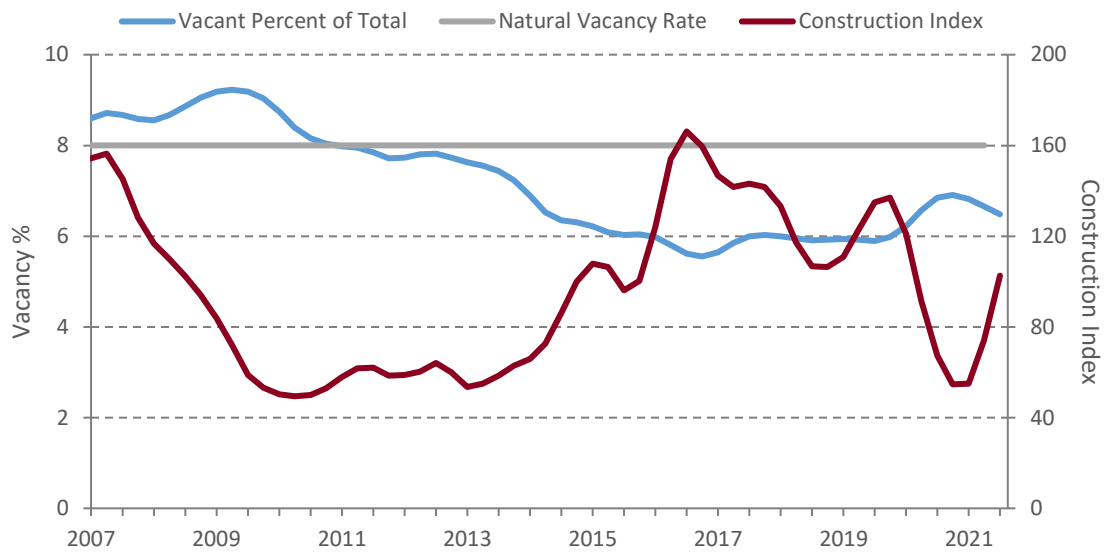
Figure 66. Houston Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

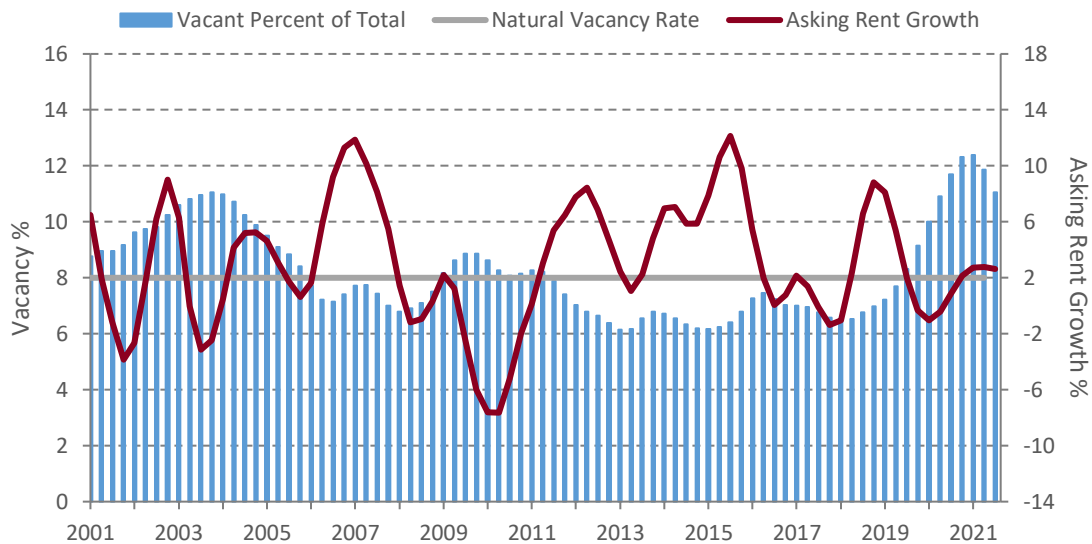
Figure 67. Houston Retail Vacancy and Construction Index (SA and TC)*
(Index 2006 Q1 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

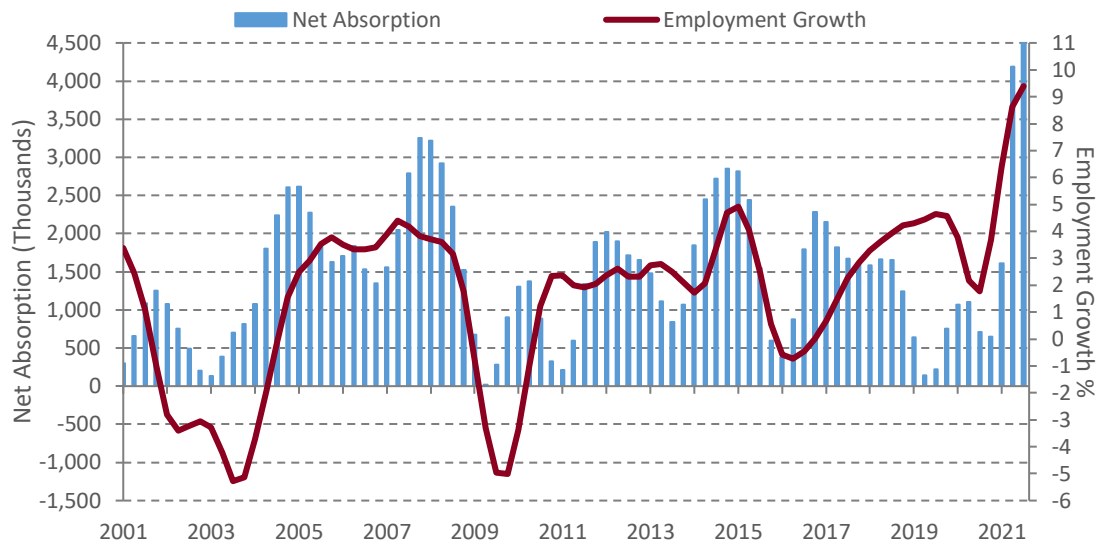
Figure 68. Houston Warehouse Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

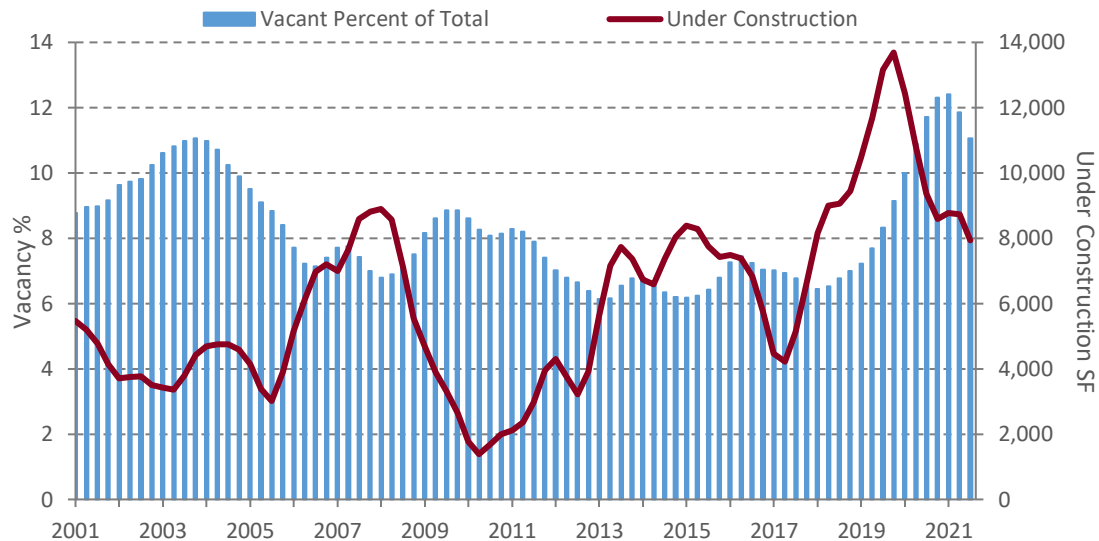
Figure 69. Houston Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

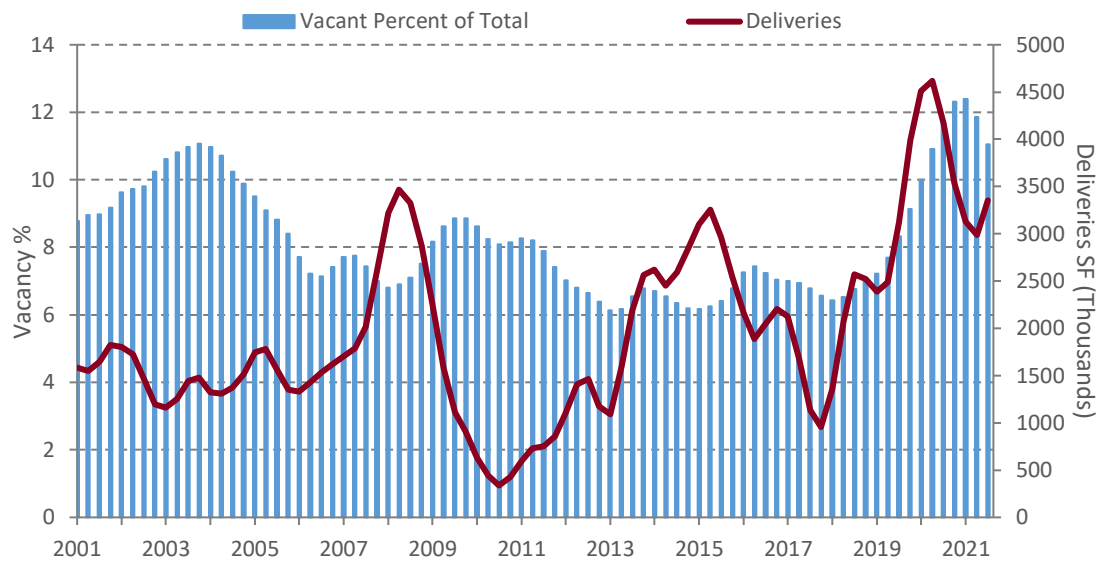
Figure 70. Houston Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

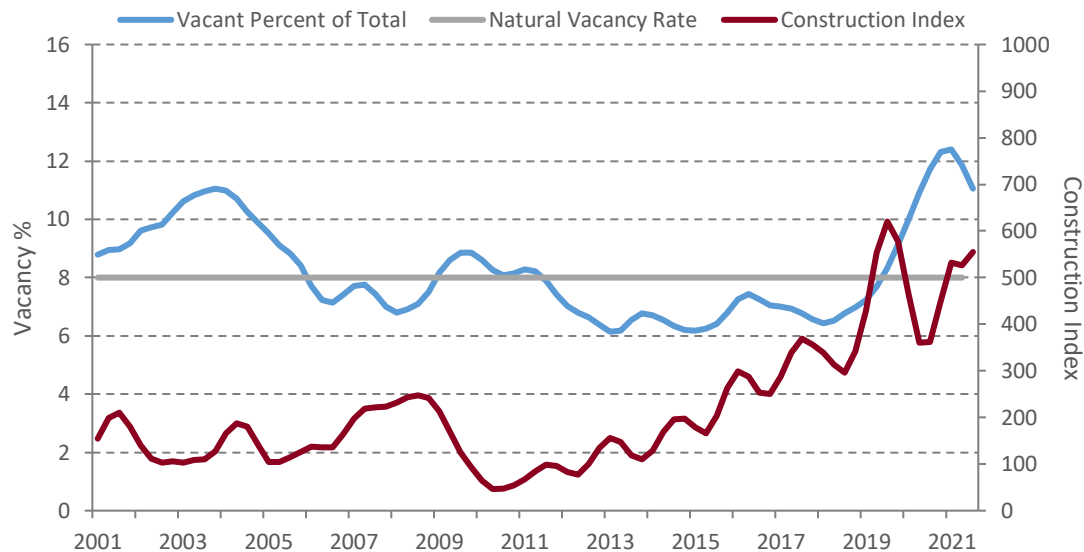
Figure 71. Houston Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

Figure 72. Houston Warehouse Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)

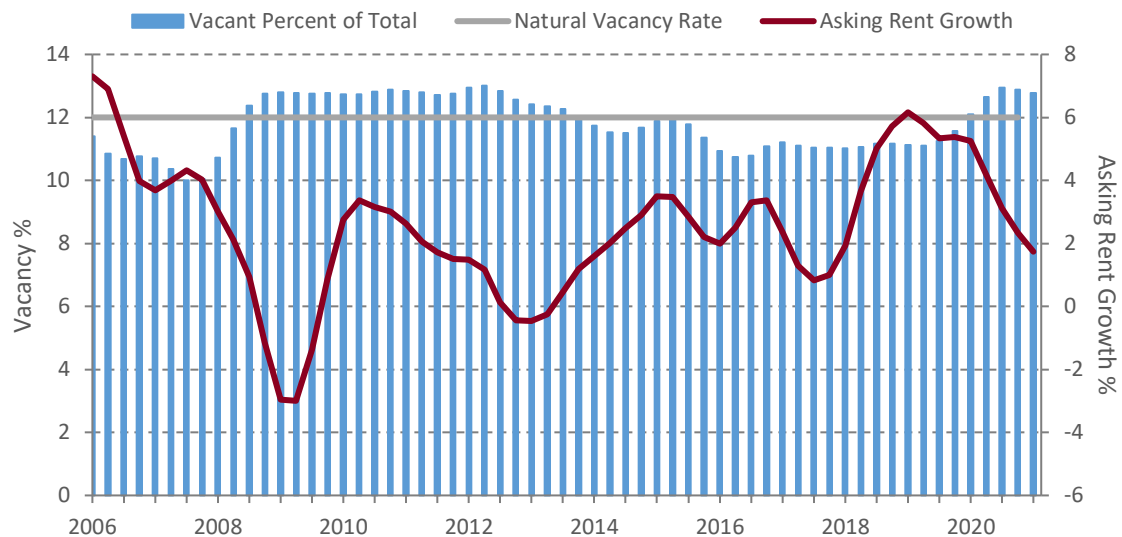


*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

San Antonio

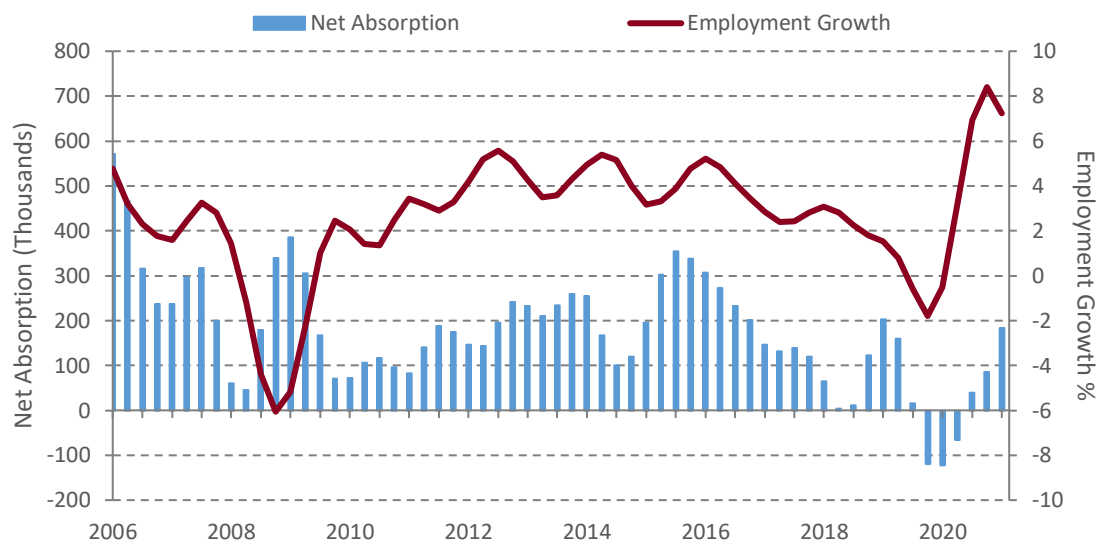
Figure 73. San Antonio Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

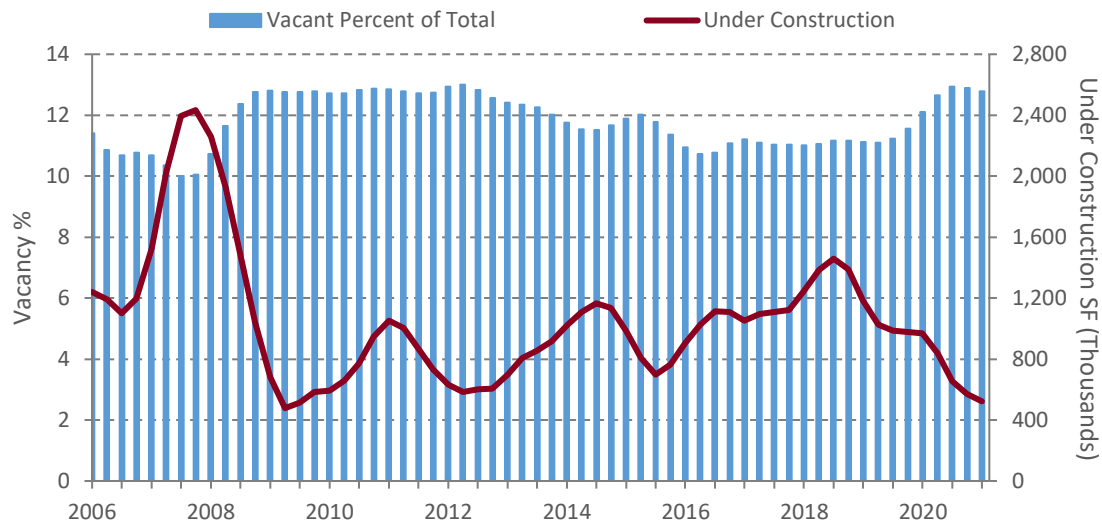
Figure 74. San Antonio Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

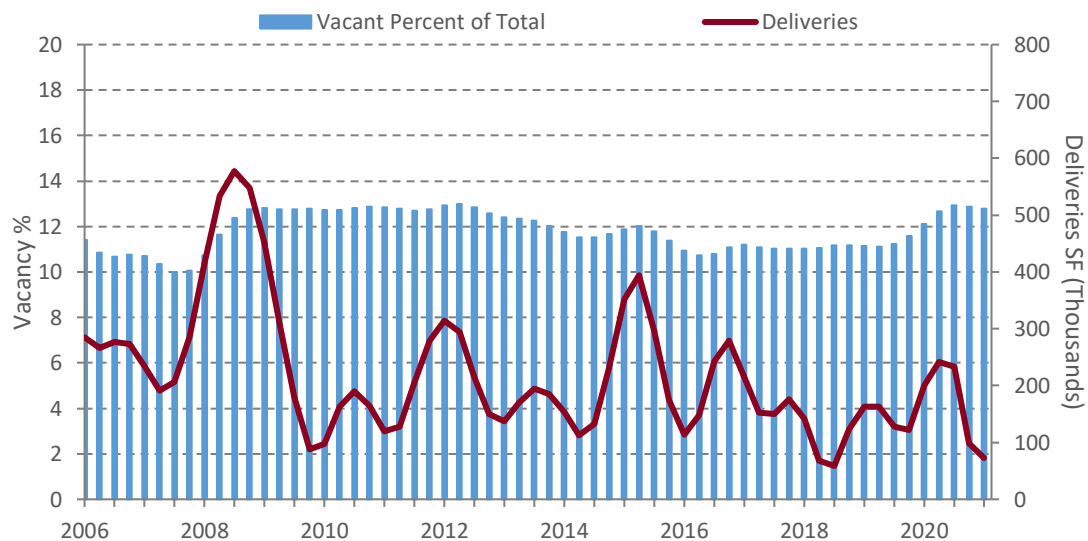
Figure 75. San Antonio Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

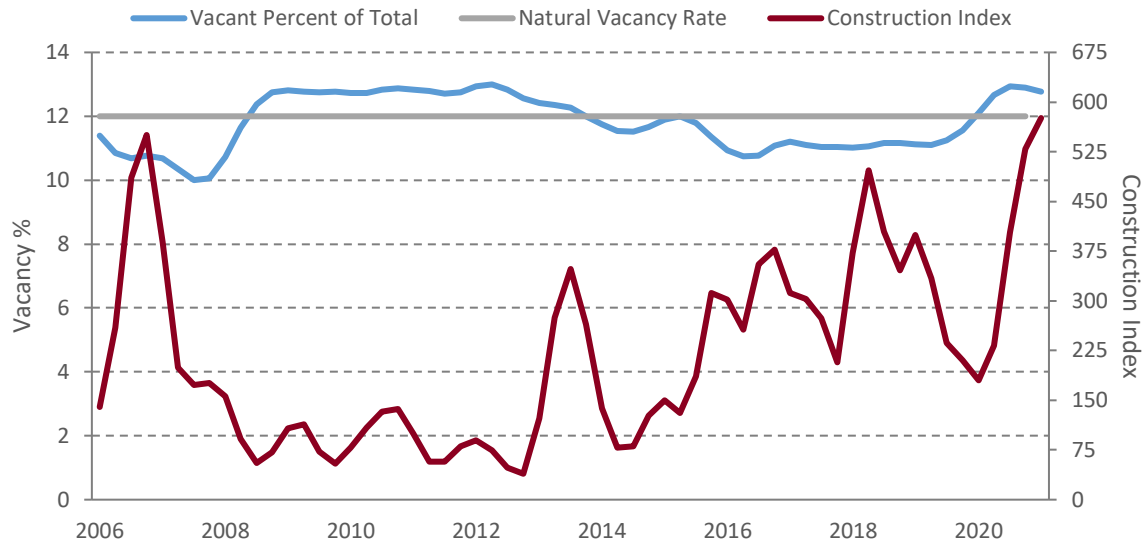
Figure 76. San Antonio Office Overall Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

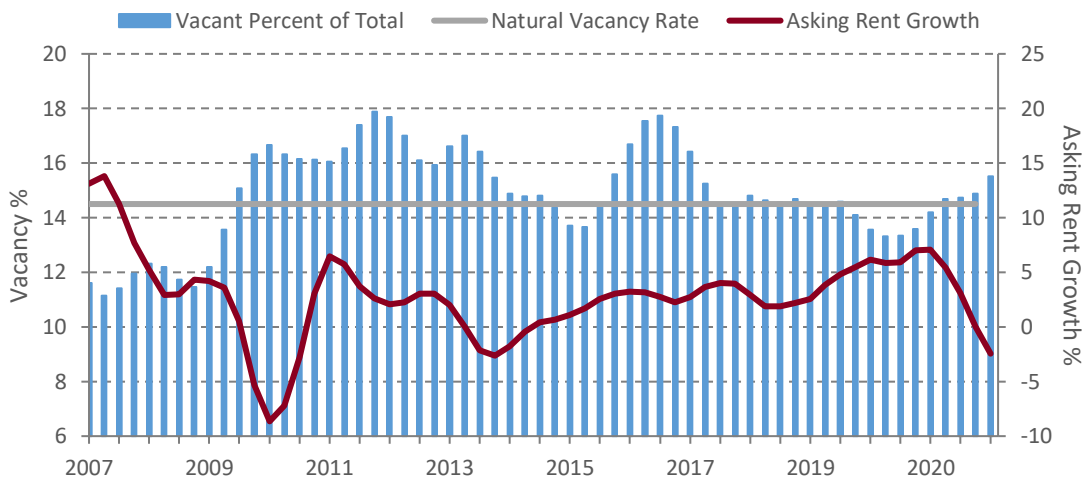
Figure 77. San Antonio Office Overall Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

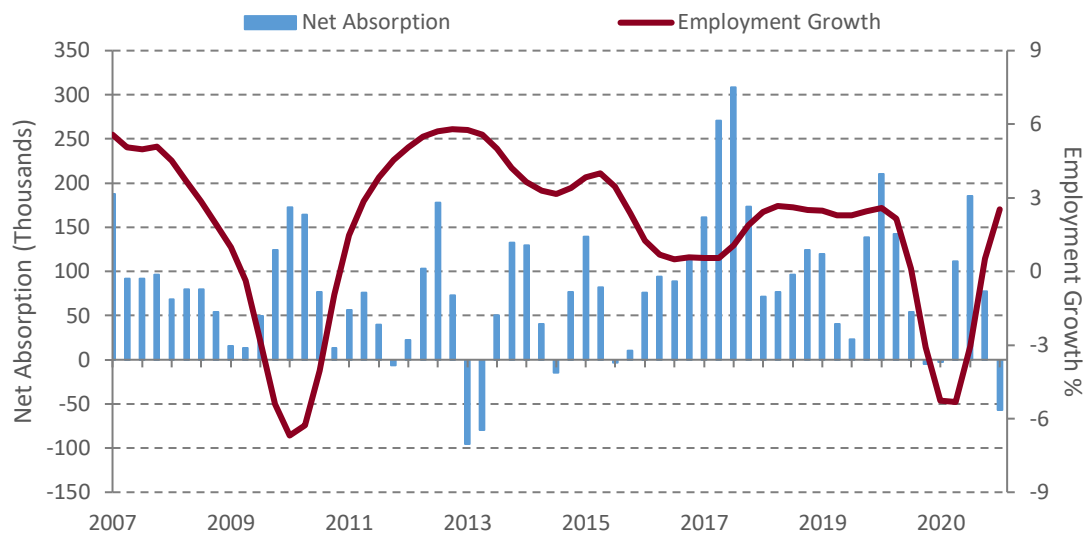
Figure 78. San Antonio Office Class A Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

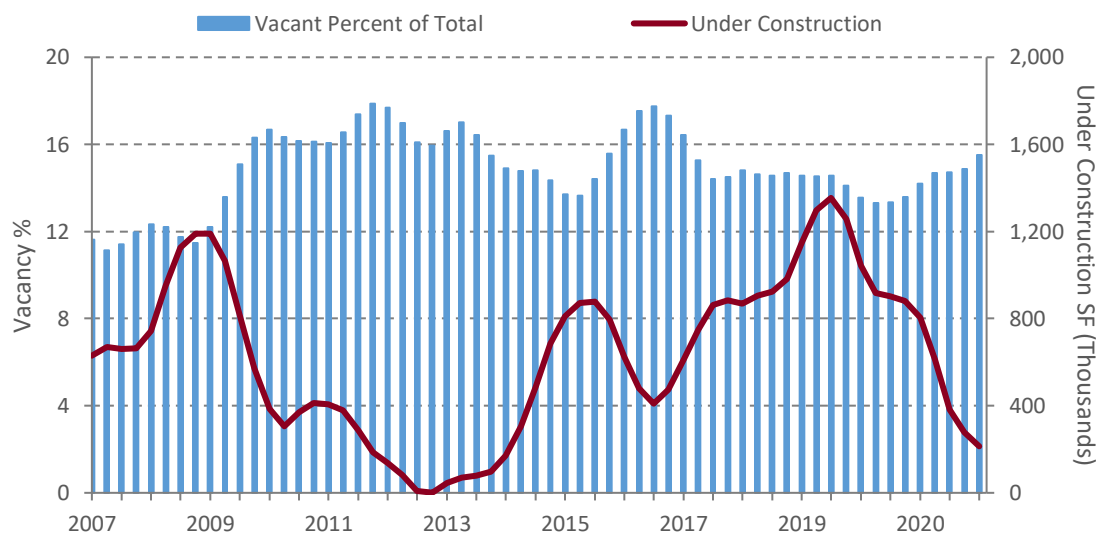
Figure 79. San Antonio Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

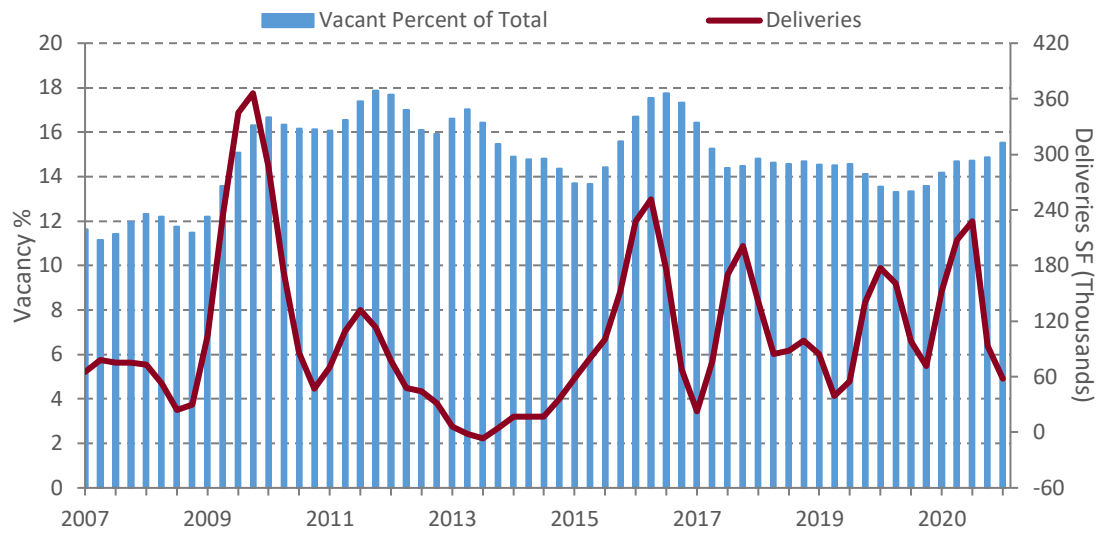
Figure 80. San Antonio Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

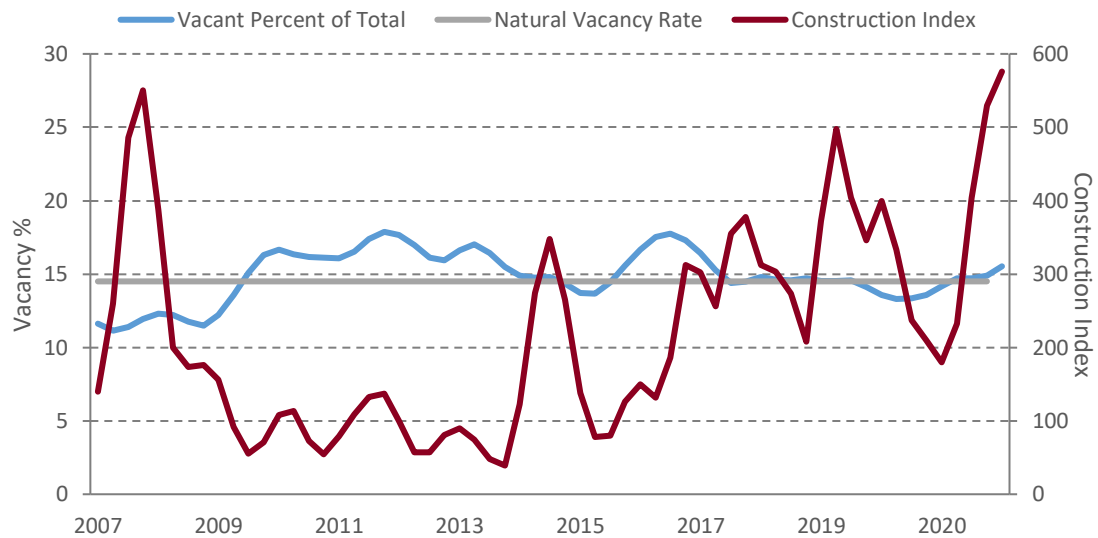
Figure 81. San Antonio Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

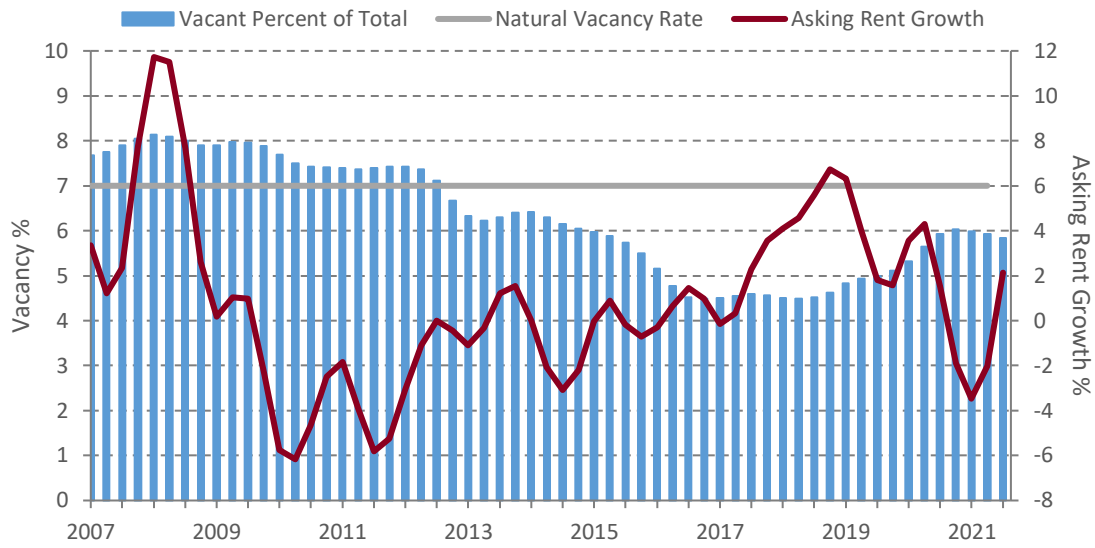
**Figure 82. San Antonio Office Class A Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)**



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

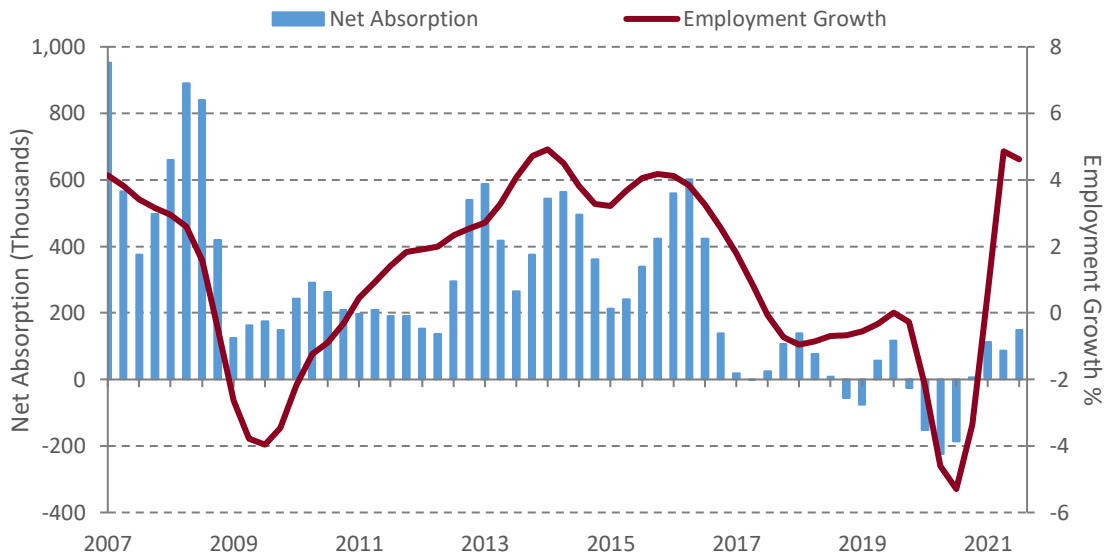
Figure 83. San Antonio Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

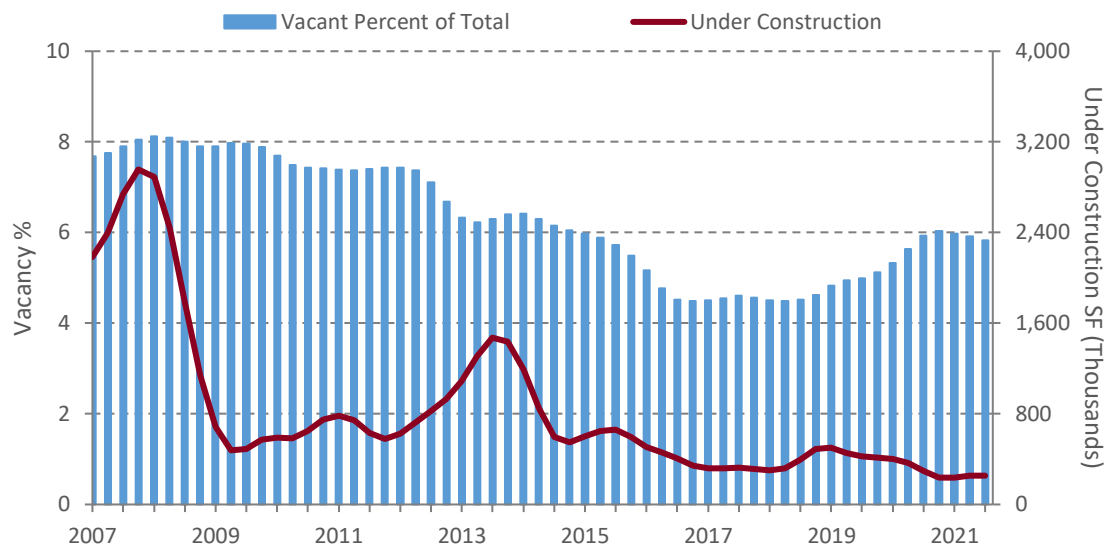
Figure 84. San Antonio Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

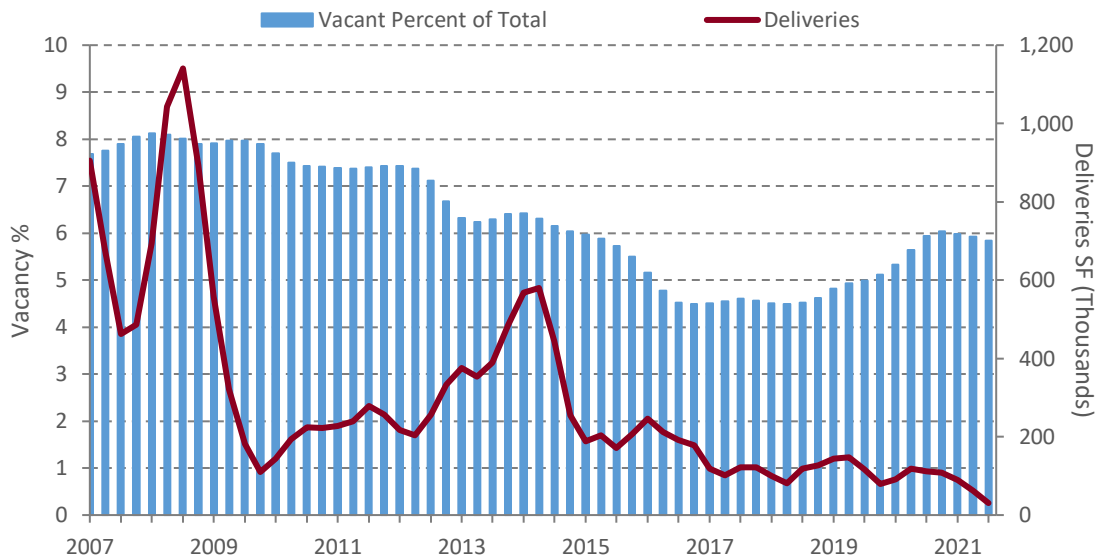
Figure 85. San Antonio Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

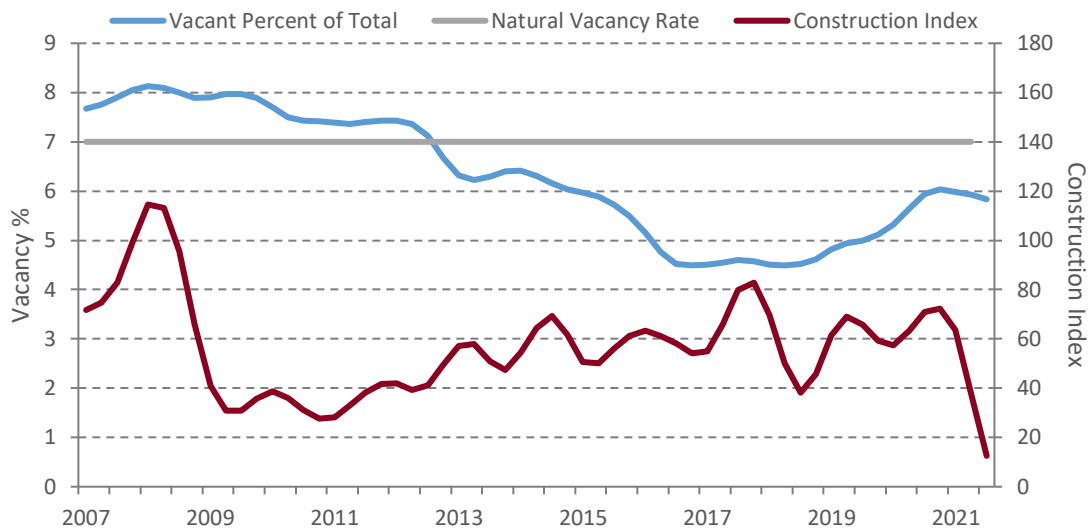
Figure 86. San Antonio Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

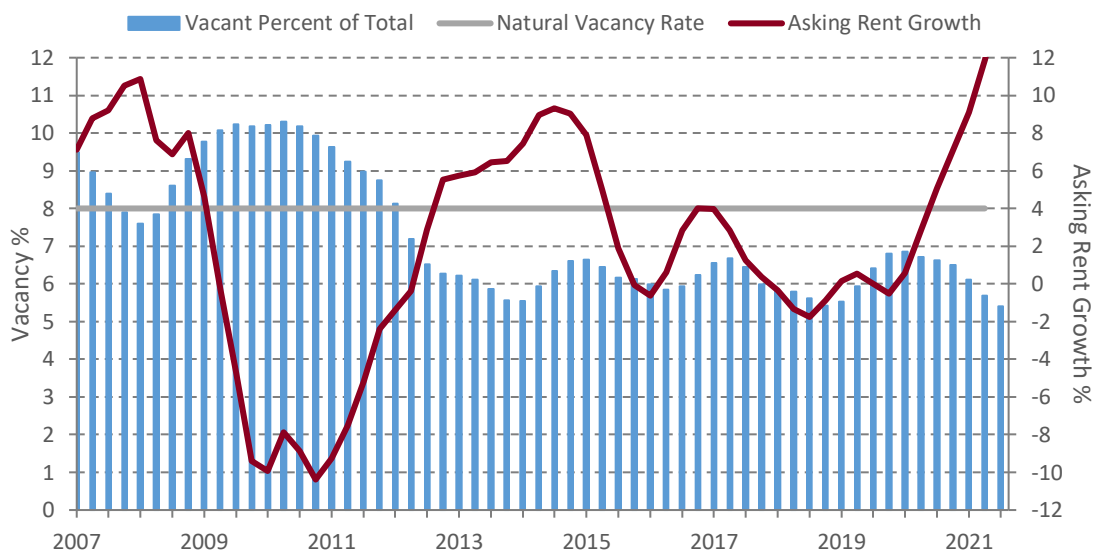
Figure 87. San Antonio Retail Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University

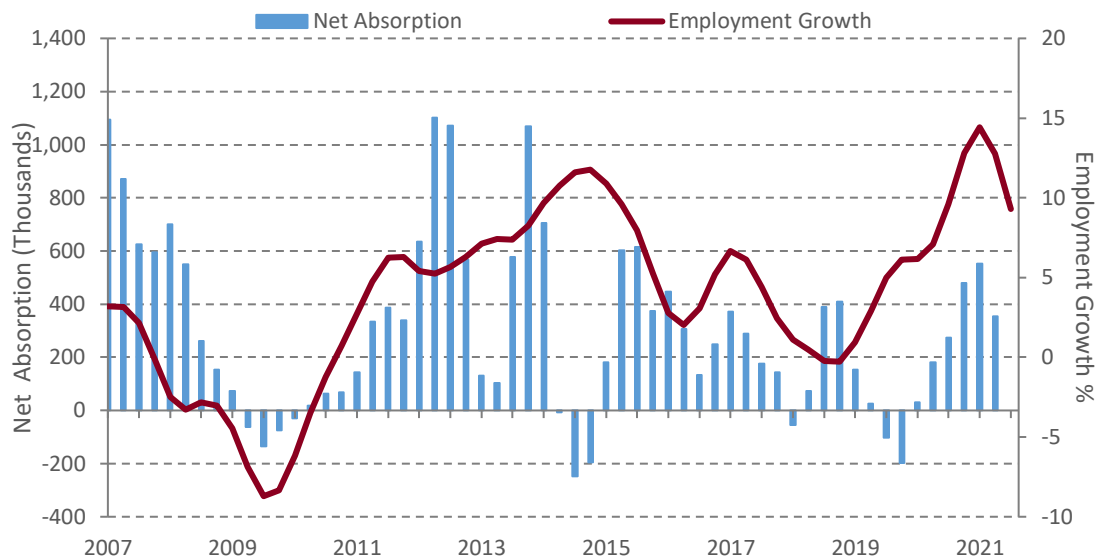
Figure 88. San Antonio Warehouse Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

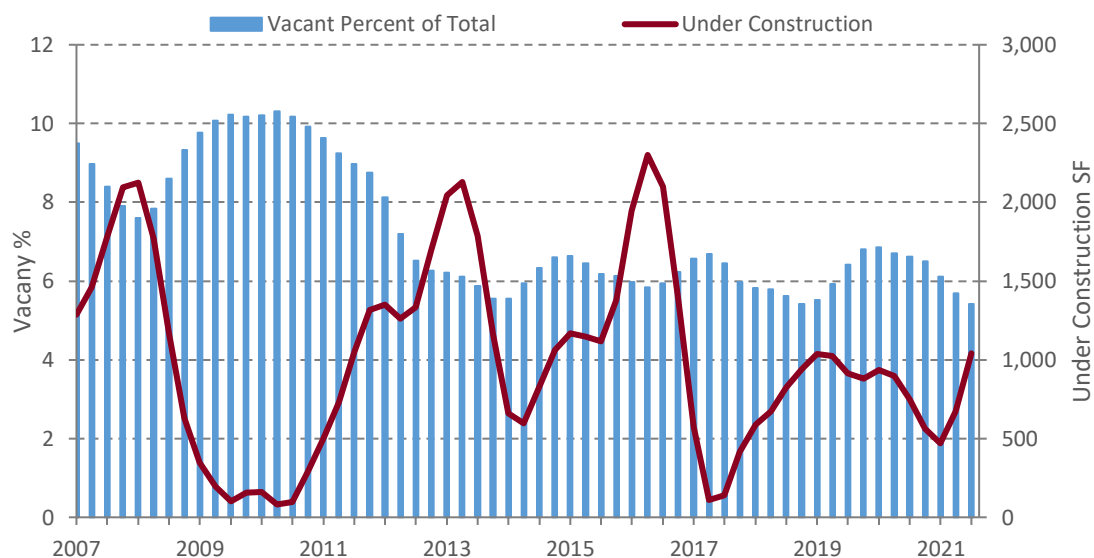
Figure 89. San Antonio Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

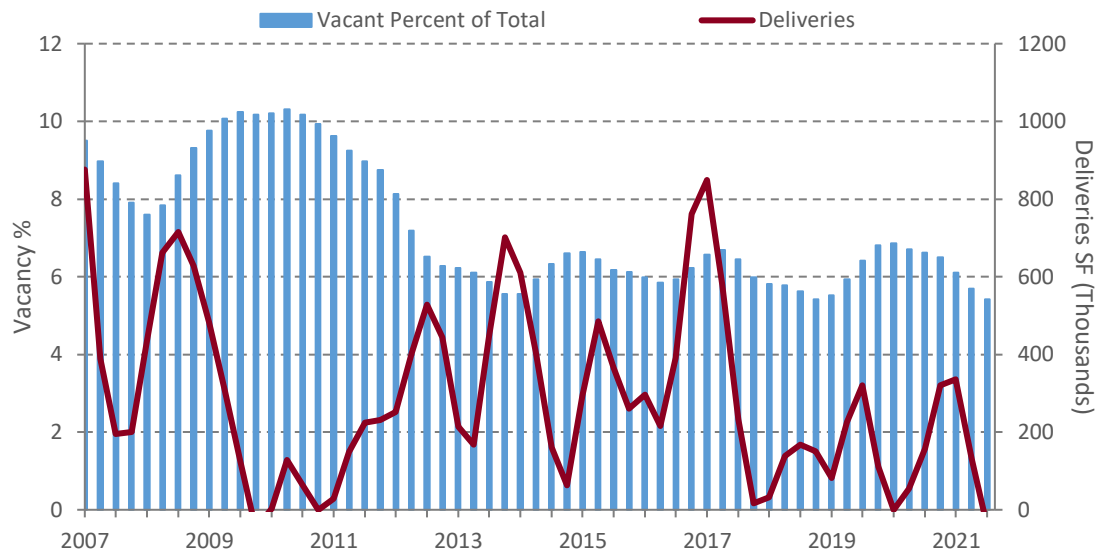
Figure 90. San Antonio Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

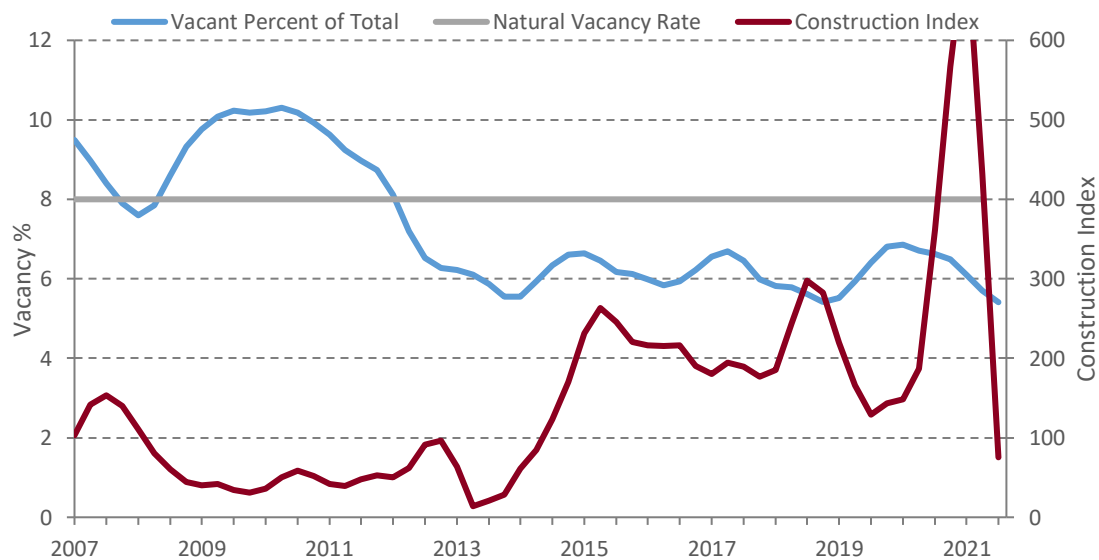
Figure 91. San Antonio Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

**Figure 92. San Antonio Warehouse Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)**



*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

Sources: CoStar, Dodge Analytics, and Texas Real Estate Research Center at Texas A&M University



Definitions

Asking rents. The dollar amount per square foot the landlord requests from a tenant, excluding tenant improvements and concessions. Leases typically dictate this amount paid annually.

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 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.

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

FIRE & PBS. A sector of the economy composed of finance, insurance, and real estate. PBS employment represents professional and business services.

Net absorption. The net change in occupied space, measured in square feet, over a given period. Net absorption reflects the amount of space occupied as well as the amount of space vacated. Net absorption includes direct and sublease space.

Nominal. Value or rate reflecting current prices or rates without adjusting for inflation.

Real. Value or rate reflecting current prices or rates adjusted for inflation.

Seasonal adjustment. A statistical method for removing the seasonal patterns in time series data.

SF. Square feet.

Under construction. The square footage being built 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 space divided by the total amount of existing inventory.

Natural and actual vacancy.

The projected vacancy rates and rents for each commercial use in the four major metro areas are made relative to each area's natural vacancy rate for each property type.

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

The actual vacancy rate is seasonally adjusted and trend-cycled to smooth fluctuations in the data and provide a clearer, less volatile view of upward and downward movements.

Natural vacancies used to estimate 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 could 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.

When actual vacancy in a local market falls below (rises above) natural vacancy, building managers may consider increasing (decreasing) rents. A comparison of natural vacancy and actual vacancy along with historical vacancy trends allows researchers to anticipate the future direction of CRE rental rates in real terms. However, changes in asking rents in this report reflect nominal changes since real estate professionals typically think in nominal terms.

Aggregate natural vacancy in an overall market may not reflect the 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 within the broader market.



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