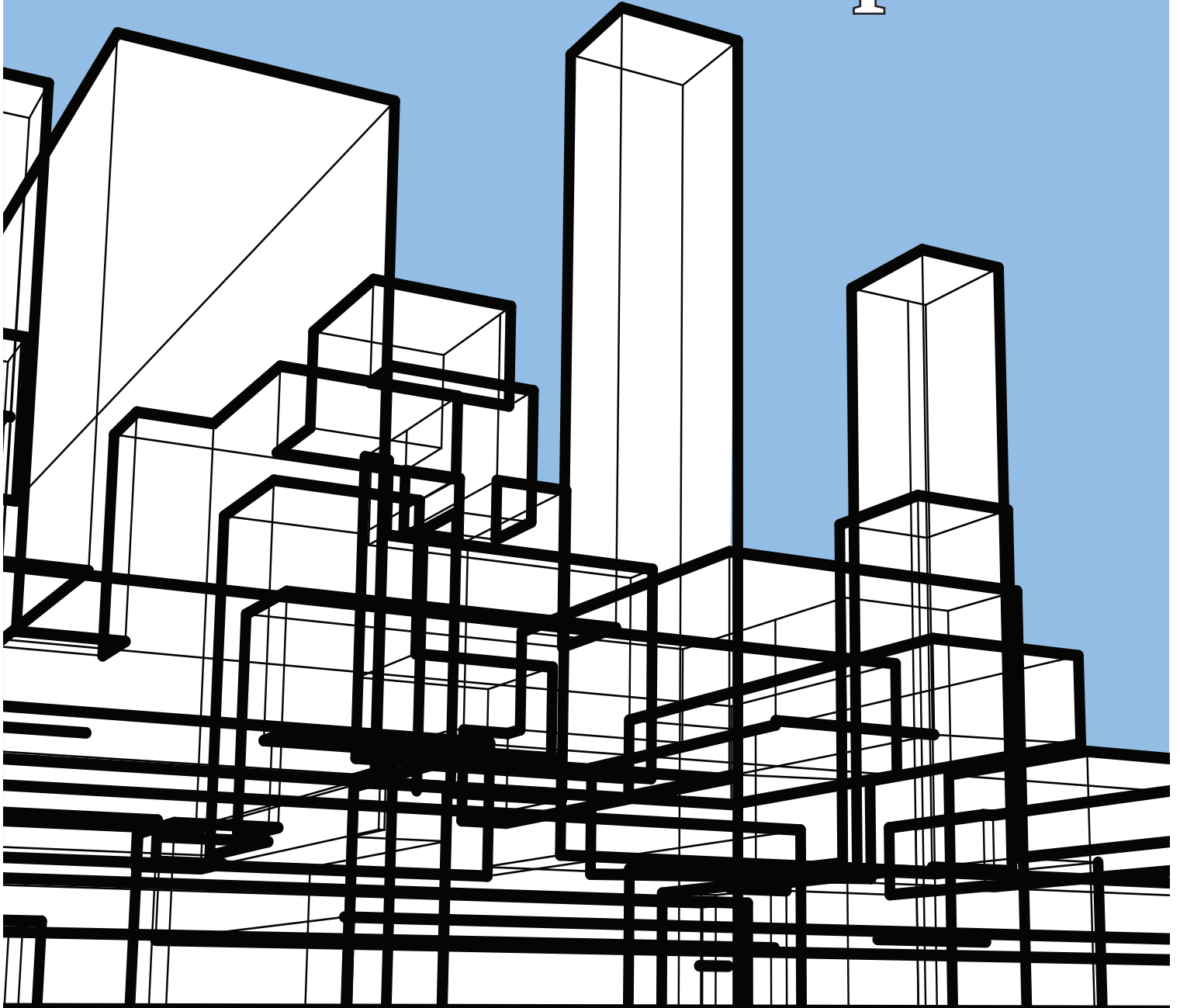




TEXAS A&M UNIVERSITY
Real Estate Center

Texas Quarterly Commercial Report



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Technical Report
2211
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Texas Quarterly Commercial Report: 4th Quarter 2019

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OFFICE	82.4% ▲	1.1% ▼
OFFICE CLASS A	80.1% ▲	1.8% ▼
RETAIL	94.3% ▬	-3.3% ▼
WAREHOUSE	91.6% ▼	8.0% ▲

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OFFICE	89.2% ▼	1.1% ▼
OFFICE CLASS A	87.5% ▼	2.8% ▼
RETAIL	95.5% ▬	1.1% ▬
WAREHOUSE	92.8% ▬	-2.6% ▼

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OFFICE	88.4% ▬	2.3% ▼
OFFICE CLASS A	87.0% ▬	1.5% ▬
RETAIL	94.7% ▲	-3.8% ▼
WAREHOUSE	92.6% ▲	2.5% ▬

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OFFICE	80.0% ▬	87.4% ▲
OFFICE CLASS A	77.6% ▲	0.8% ▼
RETAIL	94.1% ▬	6.7% ▲
WAREHOUSE	90.5% ▼	-1.7% ▼



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Sources: CoStar and the 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 Commercial Report* is a summary of important economic indicators that help discern commercial real estate (CRE) trends in four major Texas Metropolitan Statistical Areas (MSAs)—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, employment data for the office sector include 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. James Gaines, Dr. Luis Torres, Dr. Harold Hunt, Clare Losey, and Trenton Forbes



Overview of the Texas Economy

The Texas economy grew at a solid pace in 2019 in the midst of one of the longest expansionary cycles in state history. Crude oil production, residential construction, housing sales, and commodity exports increased. The labor market remained strong with record-low unemployment, stable job growth, and improved labor force participation, although initial unemployment claims rose modestly. The manufacturing sector, however, struggled amid the slowing global industry and trade-related uncertainty. Overall favorable economic conditions attracted migrants from other states, boosting population growth, in spite of reduced international migration.

One of the headwinds to Texas' continued expansion in 2020 is the COVID-19's (coronavirus) negative shock to the economy and financial markets lowering growth expectations and increasing uncertainty. Even before the coronavirus, the state's economy was facing headwinds from the slowing national and global economies, downward pressures on oil prices, and ongoing political and trade-related uncertainty. For additional commentary and statistics, see [Outlook for the Texas Economy](https://recenter.tamu.edu/outlook) at recenter.tamu.edu.

The Texas Nonresidential Construction Coincident Index, which measures current construction activity, indicates further expansion. Strong construction activity should continue into 2020 as indicated by the Texas Nonresidential Construction Leading Indicator, which measures potential future construction activity. See Figures 1-5 for the Nonresidential Coincident Index and Leading Indicator for Texas and the four major metros.

Texas' annual nonfarm employment before expected downward revisions from the Bureau of Labor Statistics (BLS) increased by nearly 309,700 jobs, exceeding national growth by a full percentage point at 2.5 percent. The Real Estate Center's [2020 Texas Housing Economic Outlook](#), however, projects hiring to decelerate due to slower economic growth at the national and state levels and a stagnant energy sector. The Dallas Fed's annual employment projection is 2.1 percent for 2020, based on the forecast that 274,000 jobs will be added. Overall labor market conditions, however, remained strong. Even though the statewide unemployment rate ticked up at year end, it had fallen to a new annual low of 3.5 percent. The U.S. economy slowed in 2019, from growing 2.9 percent in 2018 to 2.3 percent last year. The U.S. economy is expected to slow in 2020 but still maintain positive growth, achieving a growth rate of around 2.1 percent.

Dallas employment before revisions led the state in both absolute and percentage terms, adding 94,300 jobs for 3.6 percent growth in 2019. Houston's payrolls expanded by 82,700 positions, or 2.7 percent, with strong growth in the durable goods manufacturing and professional/business services. San Antonio's workforce added 24,400 employees, increasing 2.3 percent. On the other hand, hiring in Austin recorded its slowest pace since 2010 at 2.4 percent, still managing to add 25,700 jobs. The tightness in the state's labor market is greater in the major metros. Austin maintained the lowest unemployment rate at 2.7 percent, while DFW and San Antonio joblessness fell to 3.2 and 3.1 percent, respectively. Houston was the exception with an unemployment rate above the statewide average at 3.7 percent but still boasted a historical low. (For additional commentary and statistics, see [*Outlook for the Texas Economy*](#) at recenter.tamu.edu.)

Both low inflation expectations and modest future growth prospects continue to weigh down nominal interest rates. Particularly, capital flows have flooded the Treasury market seeking positive returns and low risk, pushing the ten-year Treasury bill further down. The fall in the ten-year yield at the end of 2019 caused the spread in commercial capitalization rates to increase, indicating increased risk in commercial real estate as well as general profitability.

Office cap rates (Figure 6) for San Antonio and Houston remained the highest in 2019, with both cap rates increasing in 2019. DFW also registered an increase last year, with Austin trailing the other major MSAs. Austin has become the least risky market for office real estate based on the spread with the ten-year Treasury bill.

Retail cap rates (Figure 7) increased in 2019 in all four MSA markets. Houston and DFW depicted the highest, followed by San Antonio and Austin. The spread in the ten-year Treasury bill also increased in 2019. Austin is also the least risky and lowest return market for retail real estate.

Industrial cap rates (Figure 8) for San Antonio and Austin were the highest in 2019. San Antonio cap rates increased last year, while in Austin they were unchanged. Houston and DFW cap rates increased in 2019. Similar to the other two commercial markets, the spread in the ten-year Treasury increased in all four markets. DFW is the least risky and lowest return market for industrial real estate based on the spread with ten-year Treasury bill.



OCCUPANCY
▼ 89.2%

ASKING RENT GROWTH
▼ 1.1%

EMPLOYMENT GROWTH
▲ 4.0%

NET ABSORPTION SF
▲ -400,520

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 Real Estate Center at Texas A&M University

Overall Office (Figures 9 - 13)

Despite falling below 9 percent in 2Q2019, actual vacancy continued to climb in 4Q2019, averaging 10.8 percent. While actual vacancy is trending upward, it has not risen above the natural vacancy rate of 13.0 percent since 3Q2012. Finance, Insurance, and Real Estate & Professional Business Services (FIRE & PBS) employment growth have generally slowed since 2014 but slightly increased over the last two quarters. Despite its long-run downward trend, employment growth remains strong and positive and registered just shy of 4 percent in 4Q2019. Net absorption has declined since the beginning of 2019, posting a large negative number to close out the year. Coupled with declining deliveries and sluggish, albeit moderately optimistic demand, negative net absorption indicates this market is slowing. Vacancy averaged 9.9 percent over 2019 and is forecasted to average 10.9 percent through 2020 and 11.2 percent in 2021. While rents continued to increase, asking rent growth slowed over 2019 in response to the moderating demand, averaging 3.4 percent over 2019. Despite the declining trend, rent growth is expected to remain positive, registering 1.0 percent and 1.1 percent in 2020 and 2021, respectively.

After peaking in 2018, construction starts (inclusive of Class A) declined sharply through 3Q2019. However, 4Q2019 posted an increase in construction starts, in large part due to the Arena Tower, a large class A development. Square footage under construction continued to remain flat through 2019. However, expectations dictate construction will pick up in the coming quarters. Deliveries declined in 4Q2019 in line with the modest construction activity.



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

Class A Office (Figures 14 - 18)

Actual vacancy trended upward during the previous nine quarters, averaging 10.8 percent in 2019. Regardless, the demand for Austin's Class A office space has been consistently strong over the years as actual vacancy remained comfortably below the natural vacancy of 15.0 percent since mid-2012. Employment growth remains positive despite the long-term declining trend. Following five robust quarters of positive net absorption, the second half of 2019 experienced a significant decline in space absorbed, turning negative in both quarters. Though slowing, the outlook for Class A office space demand in Austin remains positive. Vacancy rates are forecasted to average 11.1 and 11.3 percent in 2020 and 2021, respectively. Asking rent growth averaged 2.7 percent over 2019 while slowing in the final three quarters of the year. Rent growth is forecasted to average 2.0 percent over 2020 and 3.2 percent over 2021.

Construction starts (all office classes) declined significantly through the first three quarters of 2019, but rebounded in 4Q2019. This is largely attributable to the planned Arena Tower, a 500,000-sf, 19-story office tower in North Austin with an estimated cost of \$122 million. Space under construction was flat through 2019; 4Q2019 was no exception. Square footage under construction should trend upward in the coming quarters as construction starts indicate. Deliveries dampened in the last two quarters, and this trend should continue.

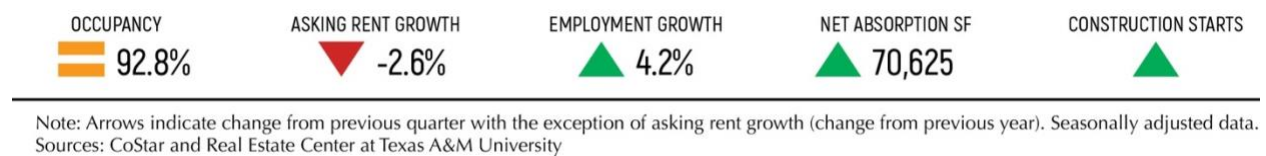


Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University

Retail (Figures 19 - 23)

Actual vacancy has remained under 5 percent for over three years, well below the natural vacancy (6.0 percent), averaging 4.4 percent in 2019. Retail employment growth trended upward in the past two quarters, reversing the overall downward trend since 2016 and reinforcing the demand for retail space. Following three consecutive quarters of negative net absorption, space absorbed was positive for 2Q2019-4Q2019. The demand for retail space is expected to remain fairly strong. Vacancies are projected to rise slightly, averaging 4.5 percent in 2020 and 4.6 in 2021. Despite relatively strong demand, asking rent growth declined dramatically through 1Q2018, eventually causing rents to fall. Asking rent growth began to rebound slightly in 2019, averaging no growth for 2019. Rents are expected to decrease in the coming years as rent growth is forecasted to average -0.6 percent and -0.8 percent in 2020 and 2021, respectively.

After increasing in late-2018, construction starts slowed in 2Q2019-3Q2019 trending slightly upward to close the year. Square footage under construction increased and then flattened out in 2019. Deliveries remain low and continue to decline. However, deliveries should begin to increase due to a modest increase in construction activity. Concerns surrounding increasing E-commerce sales continue to discourage construction growth.



Warehouse (Figures 24 - 28)

The increasing trend in actual vacancy since mid-2016 has leveled off, averaging 7.2 percent over 2019, comfortably below the natural vacancy (11.0 percent). Warehouse employment growth fell from an all-time high of more than 16.0 percent in 2017, bottoming out at 2.0 percent in 2Q2019 and increasing to just over 4.0 percent to close out the year. Net absorption remained close to zero in all four quarters of 2019. Despite slowing warehouse employment growth and the lack of space absorbed, low vacancy rates suggest demand for warehouse space remains strong in the MSA. Vacancies are forecasted to average 7.4 percent in both 2020 and 2021. After increasing in the first half of 2019, asking rent growth decline in the second half. 2019 rent growth averaged 2.2 percent. Rents are expected to increase modestly in the future as rent growth is forecasted at 1.0 percent and 2.0 percent in 2019 and 2020, respectively.

Construction starts decreased sharply after reaching an all-time high in late 2017. Construction starts briefly stabilized in 4Q2018-1Q2019, only to continue the declining trend through the rest of the year. Square footage under construction slightly increased and deliveries followed suit due to the brief stabilization in construction starts (4Q2018-1Q2019).

Table 1. Projected Overall Vacancy Rates and Asking Rent Growth

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2019	2020	2021	2019	2020	2021
Office Overall	13.0	9.9	10.9	11.2	3.4	1.0	1.1
Office Class A	15.0	10.8	11.1	11.3	2.7	2.0	3.2
Retail	6.0	4.4	4.5	4.6	0.0	-0.6	-0.8
Warehouse	11.0	7.2	7.4	7.4	2.2	1.0	2.0

Note: Annual numbers represent the four-quarter average of the seasonally adjusted data. Rent growth is nominally estimated from the previous year's average.

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



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

Overall Office (Figures 29 - 33)

Actual vacancy hovered just below the natural vacancy of 18.0 percent for over a year now, averaging 17.7 percent in 2019. FIRE & PBS employment growth rose from 4Q2018-3Q2019, slightly moderating to 4.2 percent this quarter. Net absorption remains strong, increasing over the previous three quarters. The consistent levels of absorption and strong employment growth suggest that the demand for office space in the MSA is strong despite actual vacancy nearing the natural vacancy. Vacancy averaged 17.7 percent and rent growth averaged 1.8 percent over 2019. Vacancy rates are forecasted to hover near the natural vacancy rate, averaging 17.6 percent in 2020 and 17.5 percent in 2021. Despite the asking rent growth rate trending lower since 2016, they were positive throughout this time. The steady decline in asking rent growth is expected to moderate. The forecast for average rent growth in 2020 and 2021 is 1.8 percent.

Construction starts (inclusive of Class A) increased over 2019. However, this increasing trend showed signs of moderating in 4Q2019. Square footage delivered continued its decline in tandem with the levels of square footage under construction. The recent increase in construction starts is likely developers' response to widespread population growth, employment growth, and consistently positive asking rent growth.



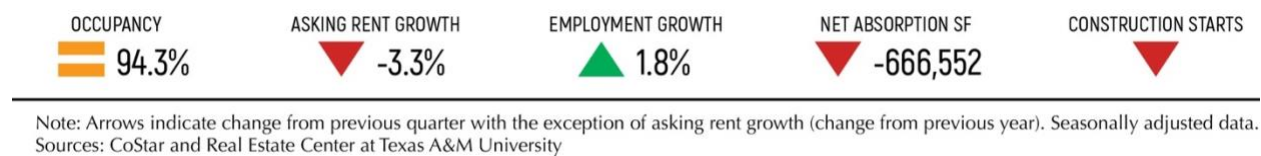
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University

Class A Office (Figures 34 - 38)

While still remaining just below the natural vacancy of 21.0 percent, actual vacancy gradually declined over the year, averaging 20.3 percent in 2019. Employment growth remains consistently strong in the MSA, recently moving upward slightly. The increasing net absorption mirrors that of the overall market, only stronger, suggesting demand is stronger for new Class A office space. Vacancy rates are projected to stay just below the natural vacancy, averaging 20.2 percent in 2020 and 2021. Asking rent growth took a nosedive in the last half of 2016 in

response to increased vacancies. In recent years, rents have increased moderately with asking rent growth averaging 1.8 percent in 2019. Rent growth is forecasted to average 2.2 and 2.0 percent in 2020 and 2021, respectively.

Construction starts (all office classes) spiked since mid-2018. The spike has not shown a strong impact in the square footage under construction. However, the declining trend of space under construction moderated slightly over 2019. Expect space under construction to pick up in the coming quarters. Space delivered declined in line with the levels of construction. The recent increase in construction starts is likely developers' response to widespread population growth, employment growth, and consistently positive asking rent growth.



Retail (Figures 39 - 43)

Actual vacancy trended slightly upward through 2019, averaging 5.5 percent in 2019, while remaining comfortably below the natural vacancy (9.0 percent). Retail employment growth has generally trended downward since 2015 but still remains positive. Similar to retail employment growth, net absorption indicates weakening demand for space in the DFW market. Hardly any square footage was absorbed in the first three quarters of 2019, and 4Q2019 measured a relatively significant loss in space absorbed. Vacancy is expected to continue a slight upward trend, averaging 5.6 and 5.7 percent in 2020 and 2021, respectively. Despite low vacancy rates, asking rent growth dropped after peaking in 4Q2017, and by 2Q2019 it registered negative growth. Asking rents are expected to decrease over the next year as rent growth is forecasted to average -1.0 and 0.6 in 2020 and 2021, respectively.

Construction starts increased slightly over the latter half of 2019 despite weakening demand for retail space in the MSA. Square footage under construction and delivered is low and is continuing to decrease as new projects are not being sought out by developers. E-commerce sales continue to take their toll on the demand for retail space in the market.

OCCUPANCY
▼ 91.6%

ASKING RENT GROWTH
▲ 8.0%

EMPLOYMENT GROWTH
▼ 2.1%

NET ABSORPTION SF
▲ 3,514,240

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 Real Estate Center at Texas A&M University

Warehouse (Figures 44 - 48)

Since 2014, actual vacancy has hovered between 7 and 9 percent, well below the natural vacancy of 11.0 percent. Vacancy in 2019 was no different, averaging 8.1 percent for the year. While vacancy rates suggest a growing demand for industrial space, warehouse employment growth and net absorption tell a different story. Employment growth decreased after a record increase in 2015 but remains positive. Net absorption, while remaining positive, declined after peaking in mid-2016. However, net absorption rebounded in 4Q2019, providing some hope of a potential increase in demand to come. Despite both employment growth and net absorption generally trending downward, the demand for warehouse space remains strong. Vacancy rates are projected to average 8.3 and 8.4 percent for 2020 and 2021, respectively. From 4Q2017 to 4Q2018, asking rent growth increased rapidly, averaging 7.6 percent by 2019. Asking rent growth is forecasted to average 1.9 and 2.2 percent for 2020 and 2021, respectively.

After reaching record levels in 2016-18, construction starts declined until this quarter (4Q2019). The square footage under construction increased moderately during 2018 and the first half of 19, slowing in the last two quarters of the year. 4Q2019 deliveries reflected the 2018-19 rise in construction as projects came online. The supply of new warehouse space caught up to the large spike in demand experienced in the MSA during 2015 and 2016. As vacancies continue to decrease and rent and employment growth remain strong, developers may consider starting new projects.

Table 2. Projected Overall Vacancy Rates and Asking Rent Growth

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2019	2020	2021	2019	2020	2021
Office Overall	18.0	17.7	17.6	17.5	1.8	1.8	1.8
Office Class A	21.0	20.3	20.2	20.2	1.8	2.2	2.0
Retail	9.0	5.5	5.6	5.7	-0.9	-1.0	0.6
Warehouse	11.0	8.1	8.3	8.4	7.6	1.9	2.2

Note: Annual numbers represent the four-quarter average of the seasonally adjusted data. Rent growth is nominally estimated from the previous year's average.

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



OCCUPANCY
80.0%

ASKING RENT GROWTH
0.9%

EMPLOYMENT GROWTH
4.9%

NET ABSORPTION SF
1,120,715

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 Real Estate Center at Texas A&M University

Overall Office (Figures 49 - 53)

Following the oil downturn that began in mid-2014, vacancy rates soared and have yet to recover. Actual vacancy continued to increase, exceeding the natural vacancy of 14.0 percent and averaging 19.9 percent over 2019. FIRE & PBS employment growth have trended upward since 1Q2017, coming in at 4.9 percent in 4Q2019. Net absorption was positive in 4Q2019 after decreasing for four consecutive quarters and registering negative in the last two. Despite strong employment growth, the high vacancy rates and recent negative net absorption paint a less-than-positive picture for overall demand in Houston office space. Forecasted at 20.2 percent in 2020 and 20.6 in 2021, vacancy is expected to continue increasing and remain well above the natural vacancy rate. Asking rent growth plummeted in the wake of the 2014 oil downturn leading to eventual rent decreases. Rents and rent growth began to bounce back in 2Q2017, trending upward until recently. Since 1Q2019, rent growth has again declined in response to struggling demand in the MSA, averaging 2.6 percent over 2019 and coming in at 0.9 percent this quarter. Rents should begin to increase as rent growth is expected to average 1.0 and 2.0 percent in 2020 and 2021, respectively.

Construction starts (inclusive of Class A) for the MSA are historically sporadic. Construction starts increased from 3Q2018 through 4Q2019. Recent spikes in previous years can, in part, explain recent negative absorption and high sustained vacancy rates. Square footage under construction and delivered declined significantly since the oil downturn. The amount of space under construction trended upward since late-2018, in response to the spike in construction starts. Deliveries followed suit in the first half of 2019, dropping significantly in the last two quarters.



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

Class A Office (Figures 51 - 55)

Parallel to the Houston overall office market, Class A office vacancies climbed sharply in the wake of the 2014 oil downturn. Actual vacancy exceeded the natural vacancy of 16.0 percent for 17 consecutive quarters, averaging 22.8 percent in 2019. Having remained positive following the Great Recession, employment growth increased since 1Q2017, registering 4.9 percent this quarter. Net absorption has remained modestly positive since mid-2017. Demand for Class A office space is weak with high vacancy rates and absorption remaining low in the short term. These negatives overshadow the strong employment growth. Vacancies are forecasted to remain high, averaging 23.0 and 23.2 percent in 2020 and 2021, respectively. Asking rent growth collapsed and rents decreased following the oil downturn. After bottoming out in 2Q2017, rent growth began a strong recovery until 2019. Through 2019, rents continued to increase slightly despite rent growth slowing, averaging 3.2 percent. Asking rent growth is expected to average 1.0 and 2.5 percent in 2020 and 2021, respectively.

A rise in construction starts (all office classes) over the previous six quarters can, in small part, explain the high sustained vacancy rates. Office space under construction and delivered has declined since the oil downturn. Space under construction moved upward slightly through 2018, flattening through the current quarter. Following the construction activity, deliveries spiked in the first half of 2019 as projects reached completion. Deliveries fell over the second half of 2019.



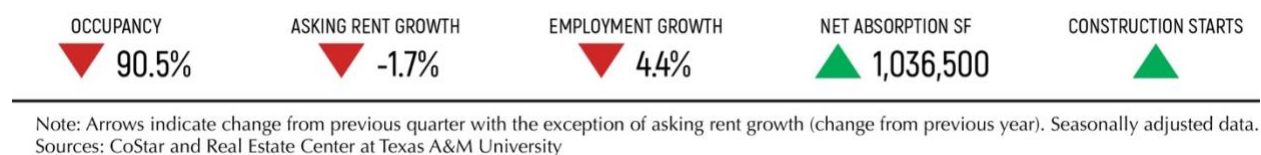
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University

Retail (Figures 59 - 63)

Actual vacancy remained below the natural vacancy (8.0 percent), stabilizing between 5.5 and 6.0 percent since 2Q2015. Retail employment growth has trended downward from 2016 to the beginning of 2019, entering negative growth in 3Q2017. Employment growth remains negative, despite increasing from 2Q2019-4Q2019. Net absorption for retail space in the MSA has remained positive since before the Great Recession. All four quarters of 2019 posted strong net absorption. Despite negative employment growth, low vacancies and solid net absorption suggest strong demand for retail space in Houston. Actual vacancy averaged 6.0 percent in 2019 and is projected to average 5.8 and 5.7 percent for 2020 and 2021, respectively. Asking rents slightly decreased in mid-2016 following the oil downturn in 2014. Asking rent growth

trended upwards through 2019, averaging 5.6 percent. Rent growth is expected to remain healthy, averaging 4.5 percent in 2020 and 4.0 percent in 2021.

Construction starts finished 2019 with strong values, increasing for the first time since late-2016. Much of the increase in construction starts will likely be delivered in increasingly popular mixed-use development projects. Square footage under construction and delivered mirrored the previous decline in construction starts, though the trend is much more gradual. A brief increase in the square footage under construction occurred during the first half of 2019. Deliveries increased in the last four quarters as these projects reached completion.



Warehouse (Figures 64 - 68)

Actual vacancy climbed above natural vacancy (8.0 percent) for the third consecutive quarter in 4Q2019, averaging 8.5 percent for the year. Vacancies have risen since the last half of 2018. Warehouse employment growth has skyrocketed over the last three years, reaching new highs in the latter half of 2019. Contrary to employment growth, net absorption generally declined in recent years, posting near zero in 2Q2019. Net absorption increased in 3Q2019 and again this quarter to close the year. Despite high vacancies, which can likely be explained by record levels of deliveries, record employment growth and increasing net absorption suggest strengthening demand in Houston. Actual vacancy is forecasted to average 8.7 and 8.9 percent in 2020 and 2021, respectively. Asking rent growth fell sharply after the oil downturn of 2014, with rents decreasing for five consecutive quarters (1Q2017-1Q2018). After rebounding, asking rent growth declined over 2019, averaging 2.5 percent. Asking rents once again declined in 4Q2019. Asking rent growth is expected to average 1.0 and 2.0 percent in 2020 and 2021, respectively.

Construction starts have trended upward since the recovery from the Great Recession. Despite increased volatility over 2019, construction starts appear to be in line with an overall increasing trend. The amount of space under construction surged since 2Q2017 due to the high value of construction starts. As expected, deliveries lagged just behind the space under construction, having begun their surge in 2Q2018. Construction starts, space under construction, and space delivered were at all-time highs to finish out 2019. The rapid rise in vacancies is explained largely by the flood of space being delivered in the market. While positive net absorption, in spite of record deliveries, offers comfort, there is concern that supply may outpace demand.

Table 3. Projected Overall Vacancy Rates and Asking Rent Growth

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2019	2020	2021	2019	2020	2021
Office Overall	14.0	19.9	20.2	20.6	2.6	1.0	2.0
Office Class A	16.0	22.8	23.0	23.2	3.2	1.0	2.5
Retail	8.0	6.0	5.8	5.7	5.6	4.5	4.0
Warehouse	8.0	8.5	8.7	8.9	2.5	1.0	2.0

Note: Annual numbers represent the four-quarter average of the seasonally adjusted data. Rent growth is nominally estimated from the previous year's average.

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



OCCUPANCY
= 88.4%

ASKING RENT GROWTH
▼ 2.3%

EMPLOYMENT GROWTH
▲ 3.7%

NET ABSORPTION SF
▼ 92,339

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 Real Estate Center at Texas A&M University

Overall Office (Figures 69 - 73)

Actual vacancy has gradually increased toward the natural vacancy rate (12.0 percent) since 1Q2017. Through all four quarters of 2019, actual vacancy remained just below the natural vacancy, averaging 11.6 percent. FIRE & PBS employment growth has remained strong and steady since the Great Recession. Employment growth hovered between 2.0 and 3.0 percent since the start of 2017 until increasing over 3.0 percent in 4Q2019. Net absorption remained weak from 3Q2017 to 1Q2019. However, net absorption did strengthen in the last three quarters. It is hard to determine whether the demand for office space in the MSA is weakening, strengthening, or holding with years past. Actual vacancy is expected to average 11.5 percent in both 2020 and 2021, continuing to hold just below natural vacancy. Asking rent growth has fluctuated since 2015, yet rents still remain positive. Recently, rent growth has trended slightly downward. After averaging 3.1 percent over 2019, asking rent growth is forecasted to average 2.1 and 1.9 percent in 2020 and 2021, respectively.

Construction starts (inclusive of Class A) continued its decline since 4Q2018. Square footage under construction trended downward since 2017. However, a modest spike in deliveries occurred in 3Q2019 and 4Q2019.

OCCUPANCY
= 87.0%

ASKING RENT GROWTH
= 1.5%

EMPLOYMENT GROWTH
▲ 3.7%

NET ABSORPTION SF
▼ 78,601

CONSTRUCTION STARTS
▼

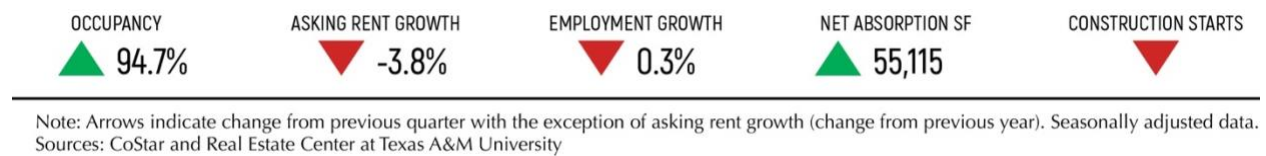
Note: Arrows indicate change from previous quarter with the exception of asking rent growth (change from previous year). Seasonally adjusted data.
Sources: CoStar and Real Estate Center at Texas A&M University

Class A Office (Figures 74 - 78)

Unlike overall office for San Antonio, Class A vacancies have trended downward over the past five quarters remaining under the natural vacancy rate of 14.5 percent. Actual vacancy averaged 13.3 percent over 2019. Before exceeding 3.0 percent in 4Q2019, employment growth remained between 2.0 and 3.0 percent since the beginning of 2017. Class A net absorption is relatively strong compared with the MSA's overall office market. The last three

quarters registered significant positive absorption. With vacancies trending downward, steady employment growth, and high volumes of net absorption in recent quarters, the demand for Class A office space in San Antonio is strengthening. Actual vacancy is projected to average 13.6 percent in both 2020 and 2021. Historically, asking rent growth fluctuated greatly. Rents have increased since 2Q2015. Despite strong demand, asking rent growth trended downward in all four quarters of 2019, averaging 2.8 percent. Asking rent growth is forecasted to average 2.1 and 1.2 percent in 2020 and 2021, respectively.

Construction starts (all office classes) declined over 2019. However, look for construction starts to increase in the coming quarters as developers may consider new projects in response to strong demand. Space under construction has trended downward since 2017. More recently, deliveries spiked in 2Q2019-3Q2019, then moderated this quarter.



Retail (Figures 76 - 80)

Since late 2016, vacancies have trended upward while remaining comfortably below the natural vacancy. Employment growth trended upward beginning in 2Q2018 and returned to positive territory in 2019. However, employment growth decreased slightly over 4Q2019. Negative employment growth took its toll on net absorption. Since 1Q2017, net absorption had been bleak for the MSA, registering positive in 4Q2019 for the first time in five quarters. Demand for retail space is weakening as vacancy rates rise, employment growth remains muted, and net absorption remains low. The rise of e-commerce sales is certainly a factor in the weakening demand for space. Actual vacancy averaged 5.2 percent over 2019 and is expected to average 5.4 and 5.5 percent in 2020 and 2021, respectively. Weakening demand impacted asking rent growth in the near term. After peaking in 4Q2018, asking rent growth plummeted and averaged 1.0 percent in 2019. Asking rents decreased in 4Q2019. Asking rent growth is projected to average 2.0 and 2.7 percent in 2020 and 2021.

Construction starts slowed in the second half of 2019. Space under construction has remained low throughout recent years. Following suit with construction activity, deliveries remained relatively flat over recent years as well.

OCCUPANCY
▲ 92.6%

ASKING RENT GROWTH
▬ 2.5%

EMPLOYMENT GROWTH
▲ 3.0%

NET ABSORPTION SF
▲ 125,720

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 Real Estate Center at Texas A&M University

Warehouse (Figures 84 - 88)

Actual vacancy has moderately increased toward natural vacancy (8.0 percent) since 2018 and averaged 7.1 percent in 2019. After registering negative for four consecutive quarters (3Q2018-2Q2019), warehouse employment turned positive during the second half of 2019. Net absorption was negative in the first three quarters of the year, and 4Q2019 was essentially zero. Demand for warehousing space in San Antonio looks to be weakening with rising vacancy and declining net absorption. While still low, increasing warehouse employment growth provides some hope of a future demand increase. Actual vacancy is expected to continue rising steadily, averaging 7.4 percent in 2020 and 7.5 percent in 2021. Asking rent growth followed a declining trend as rents began to decrease in late 2017. Despite weakening demand, rent growth increased in 2019, averaging 0.9 percent. Asking rent growth is forecasted to continue increasing, averaging 1.0 and 1.5 percent in 2020 and 2021, respectively.

Construction starts attained a record peak in 4Q2018, moving lower as developers responded to the declining demand for space. Square footage under construction remains low despite experiencing a slight increase in 4Q2019. Deliveries decreased since 1Q2019 from an already low amount of space coming on the market over recent years.

Table 4. Projected Overall Vacancy Rates and Asking Rent Growth

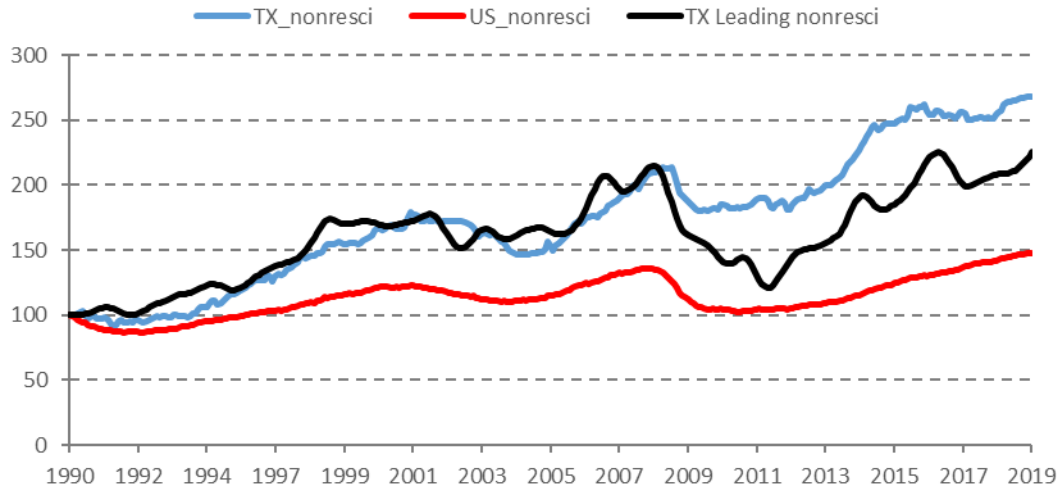
Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2019	2020	2021	2019	2020	2021
Office Overall	12.0	11.6	11.5	11.5	3.1	2.1	1.9
Office Class A	14.5	13.3	13.6	13.6	2.8	2.1	1.2
Retail	7.0	5.2	5.4	5.5	1.0	2.0	2.7
Warehouse	8.0	7.1	7.4	7.5	0.9	1.0	1.5

Note: Annual numbers represent the four-quarter average of the seasonally adjusted data. Rent growth is nominally estimated from the previous year's average.

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

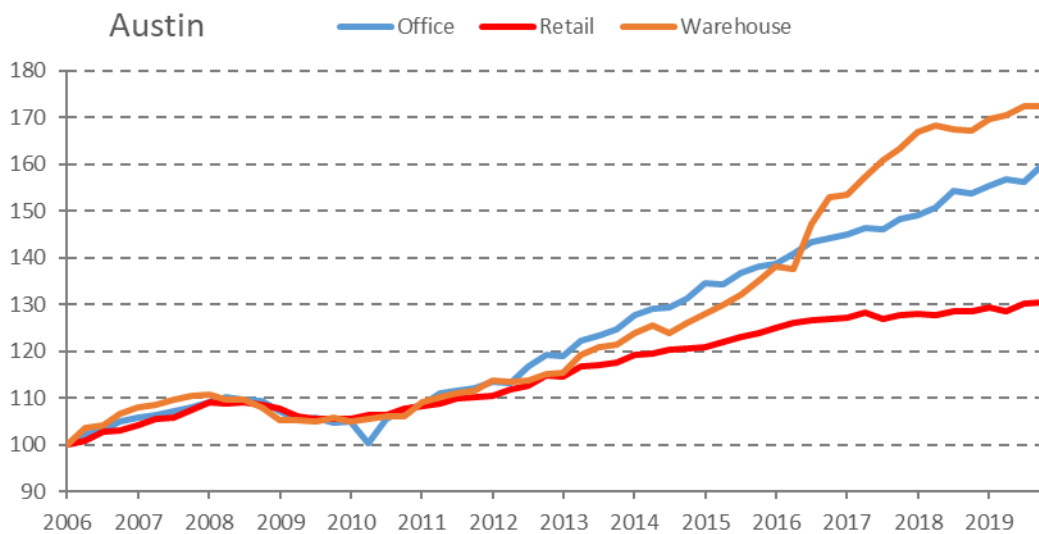


Figure 1. Texas Nonresidential Construction Coincident and Leading Indicators
(Index Oct. 1990 = 100)



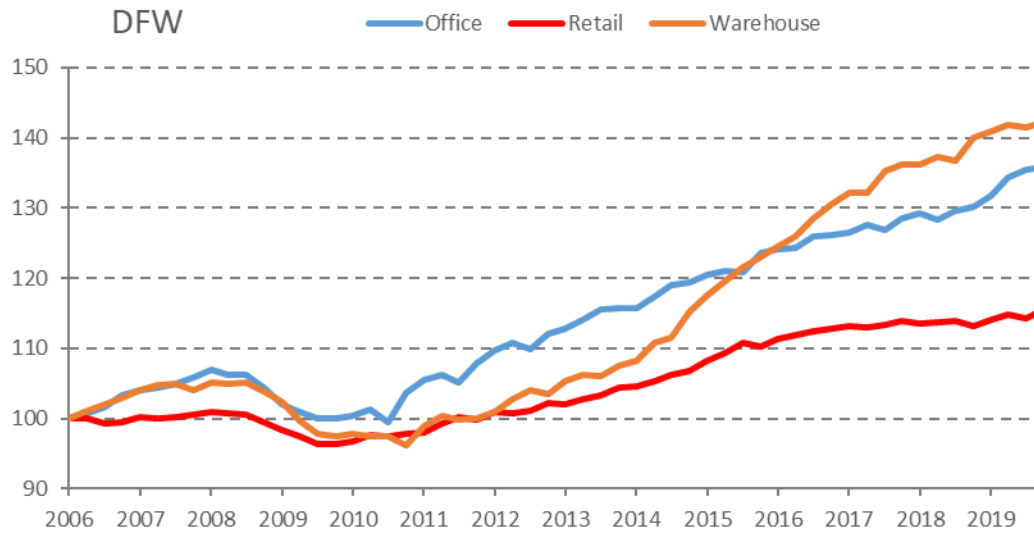
Source: Real Estate Center at Texas A&M University

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



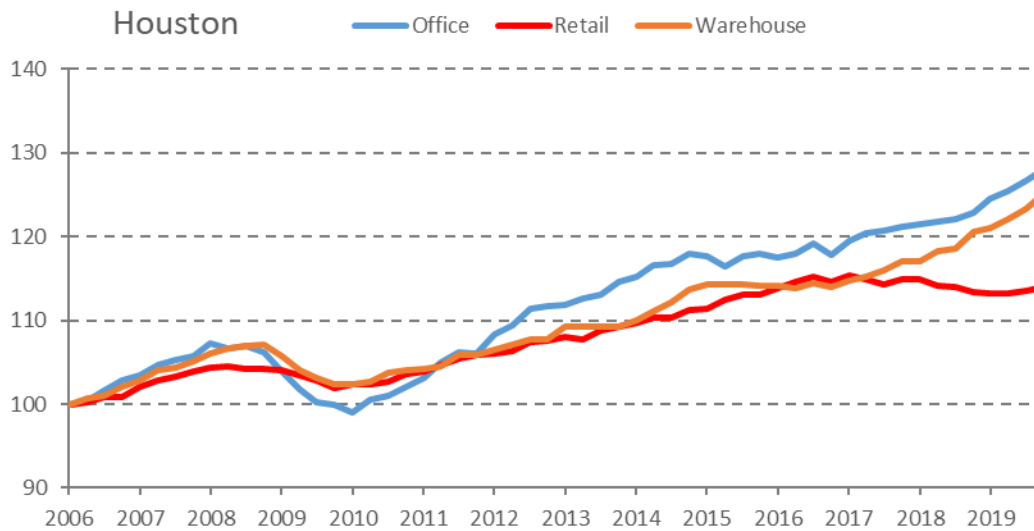
Source: Real Estate Center at Texas A&M University

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



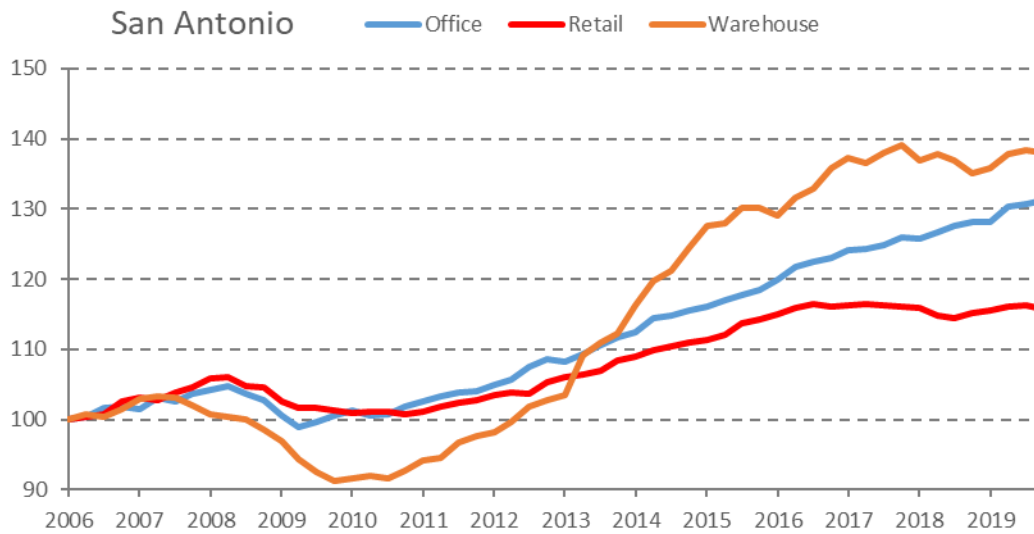
Source: Real Estate Center at Texas A&M University

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



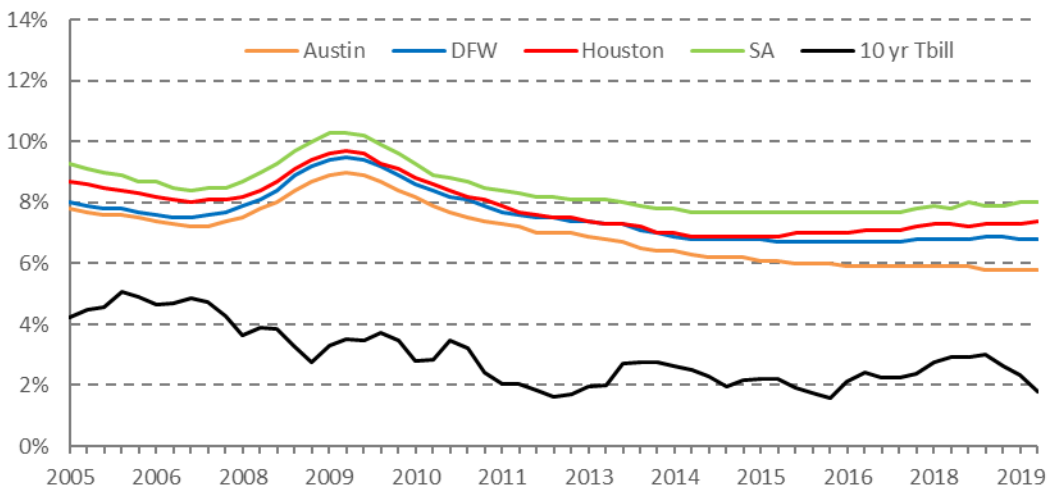
Source: Real Estate Center at Texas A&M University

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



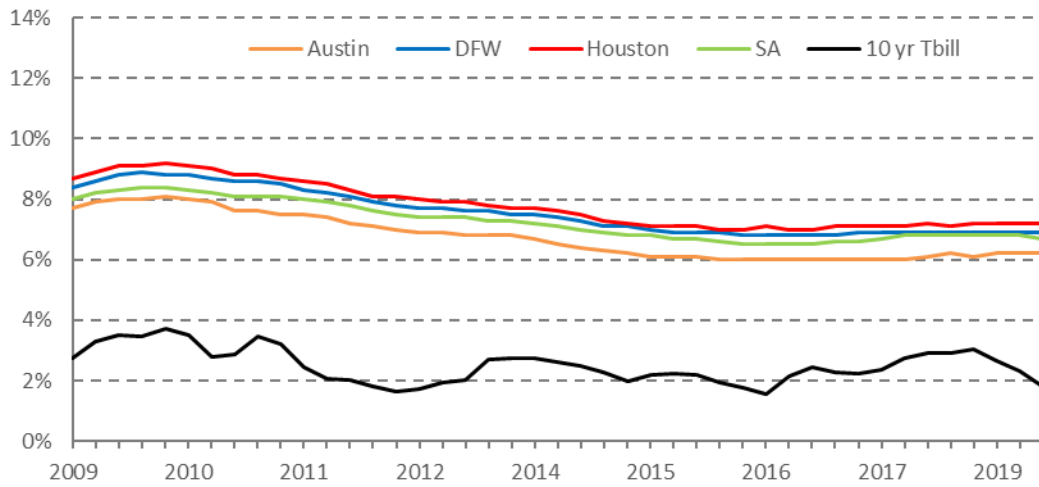
Source: Real Estate Center at Texas A&M University

Figure 6. Texas Major MSAs Office Cap Rates



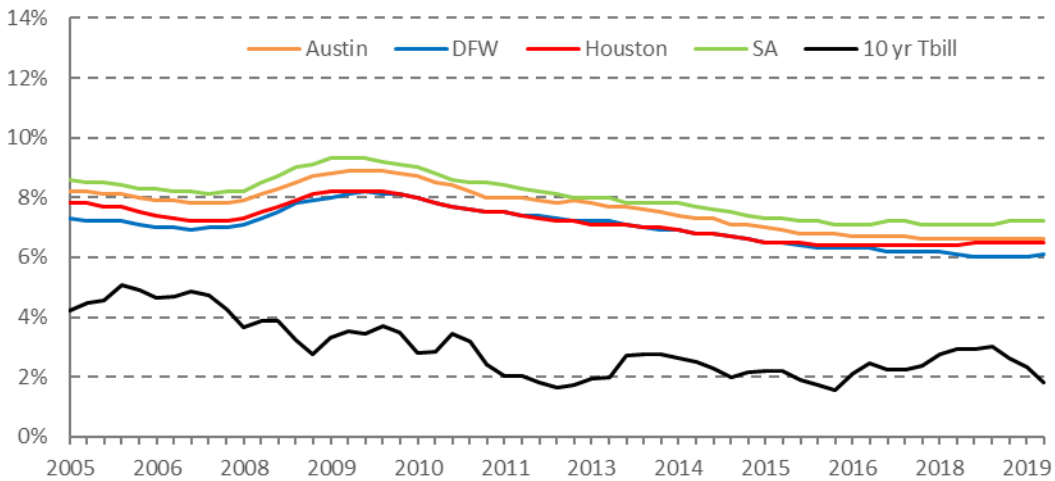
Source: CoStar and Real Estate Center at Texas A&M University

Figure 7. Texas Major MSAs Retail Cap Rates



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

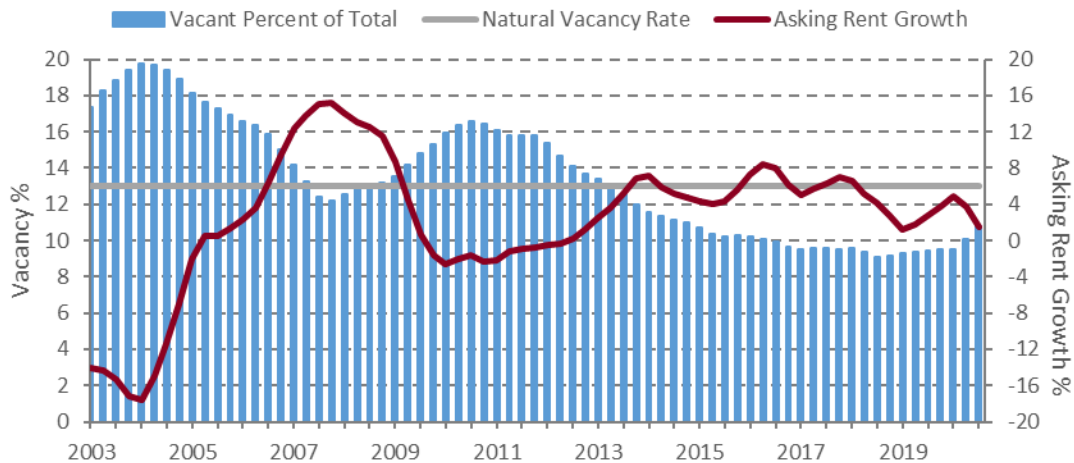
Figure 8. Texas Major MSAs Warehouse Cap Rates



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

Austin

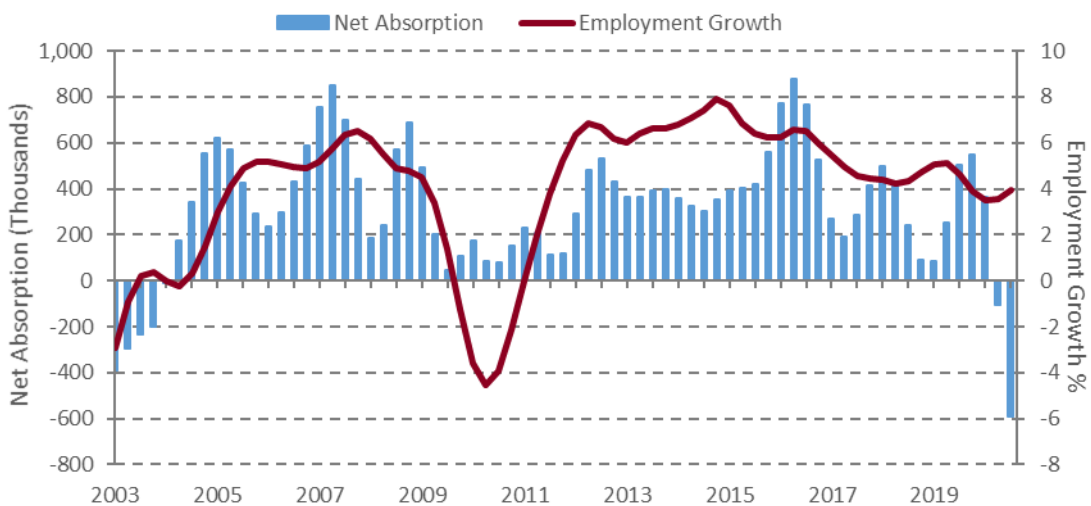
Figure 9. Austin Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

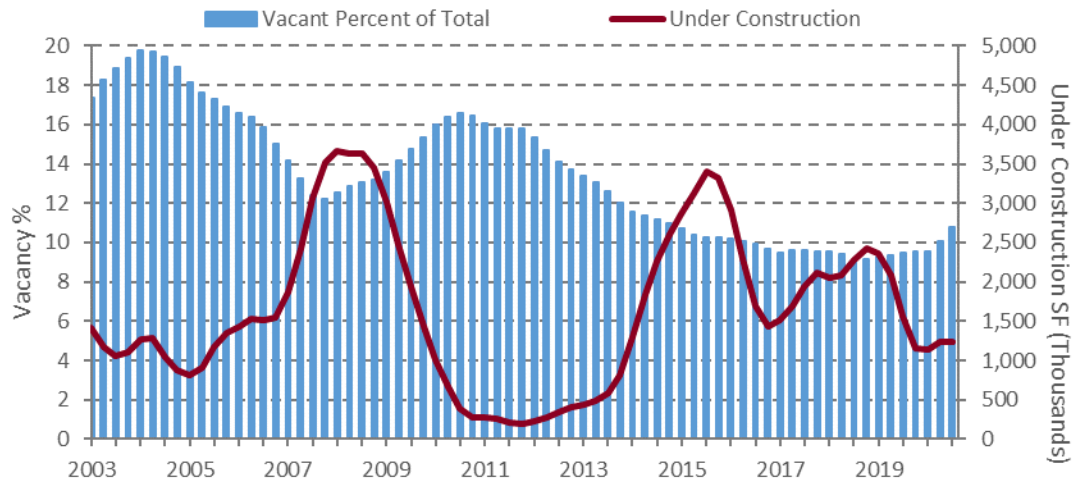
Figure 10. Austin Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

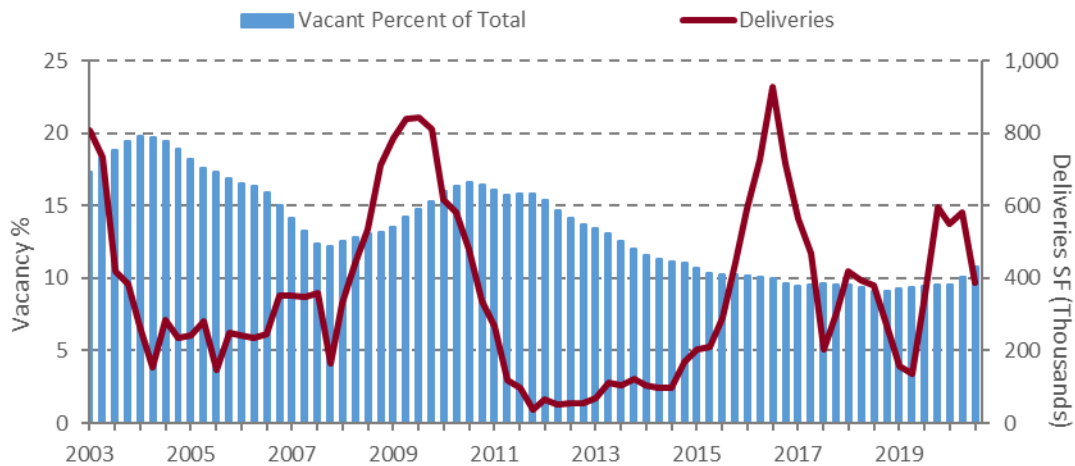
Figure 11. Austin Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

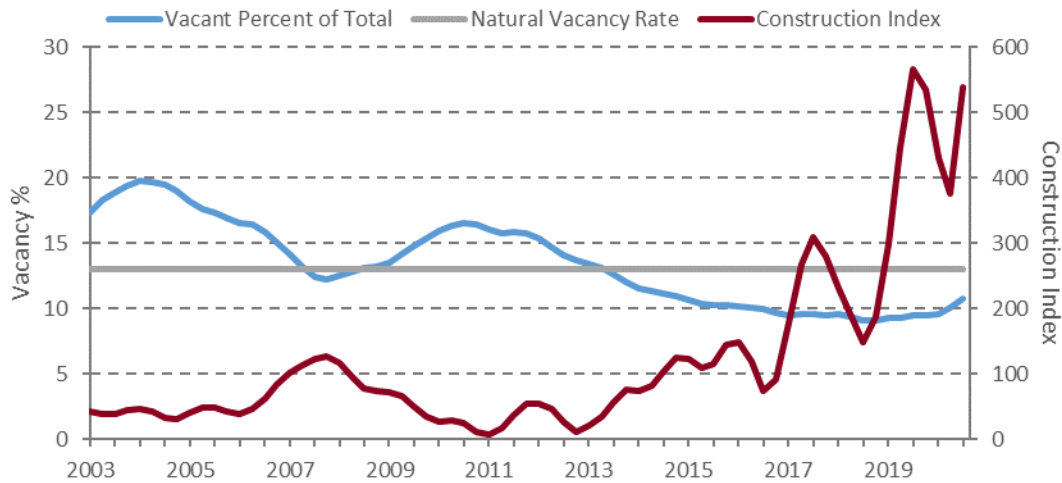
Figure 12. Austin Office Overall Vacancy and Deliveries (SA and TC)*



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

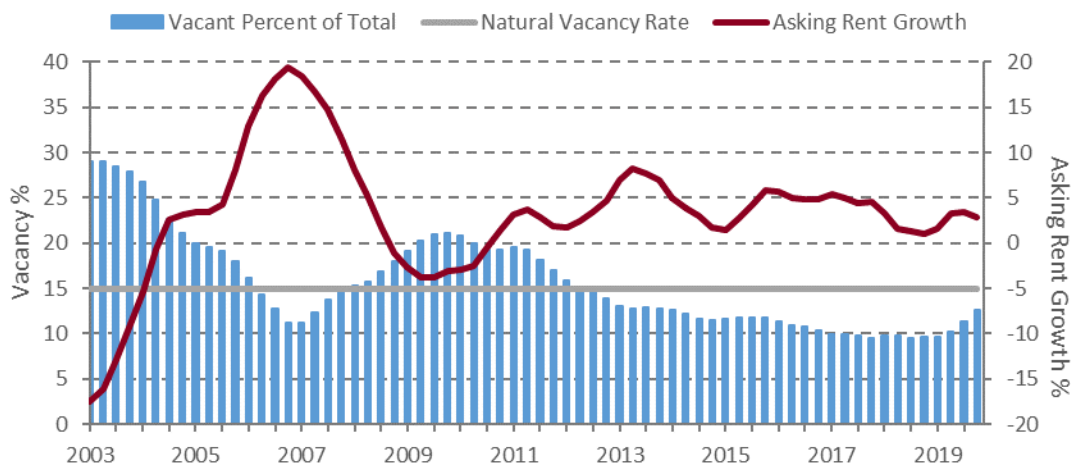
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 13. Austin Office Overall Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)



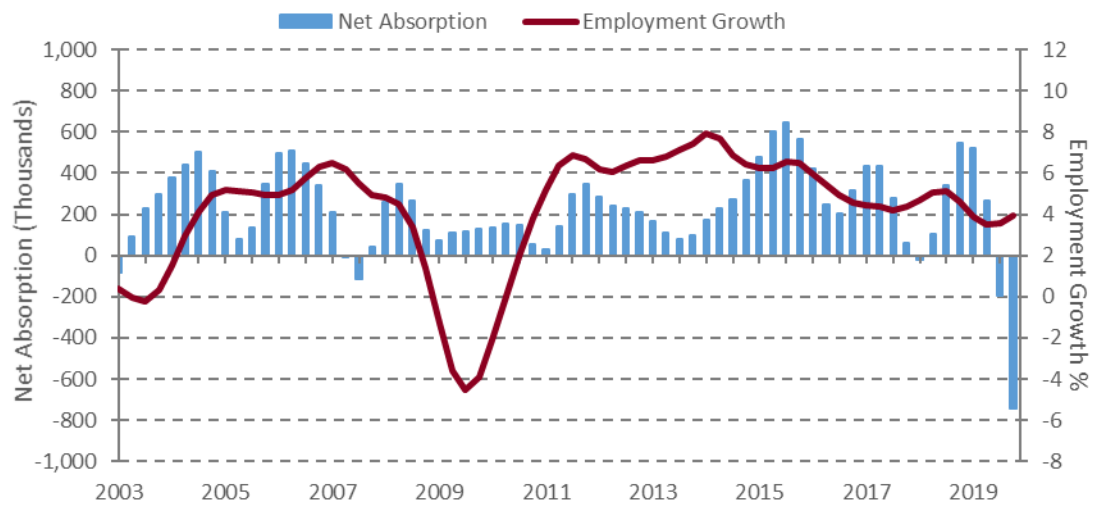
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 14. Austin Office Class A Vacancy and Asking Rent Growth (SA and TC)*



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

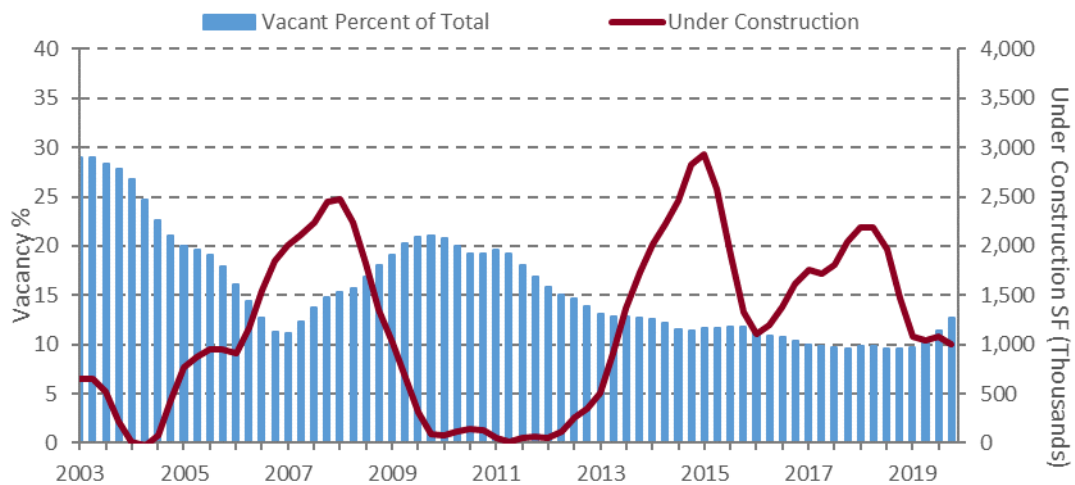
Figure 15. Austin Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

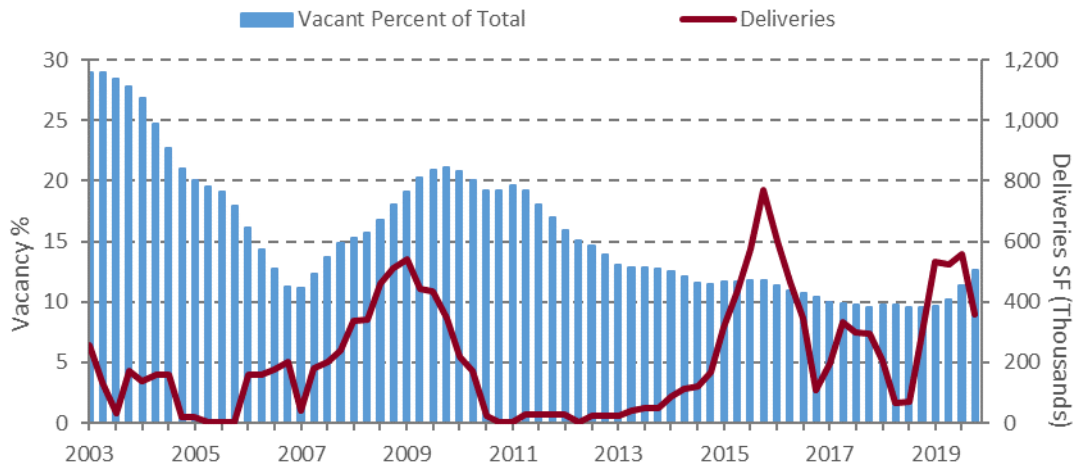
Figure 16. Austin Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

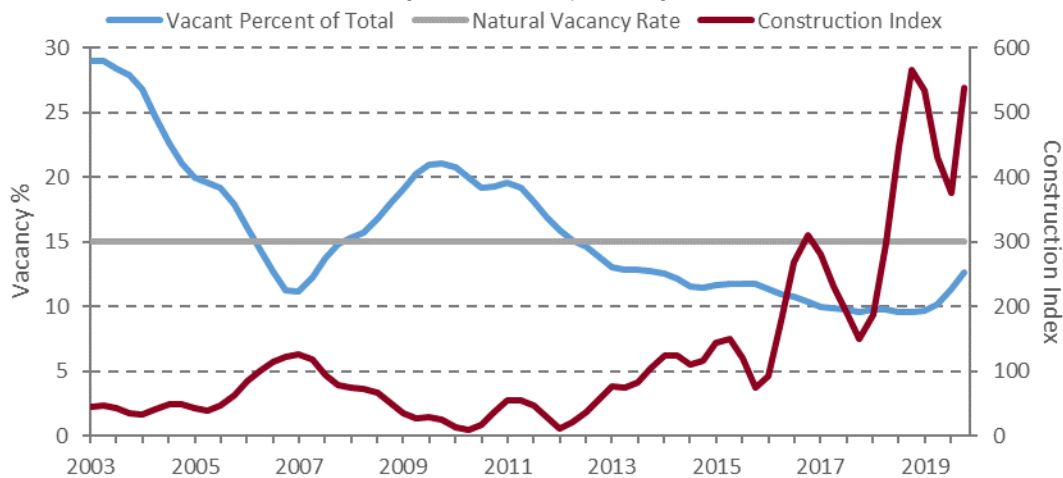
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 17. Austin Office Class A Vacancy and Deliveries (SA and TC)*



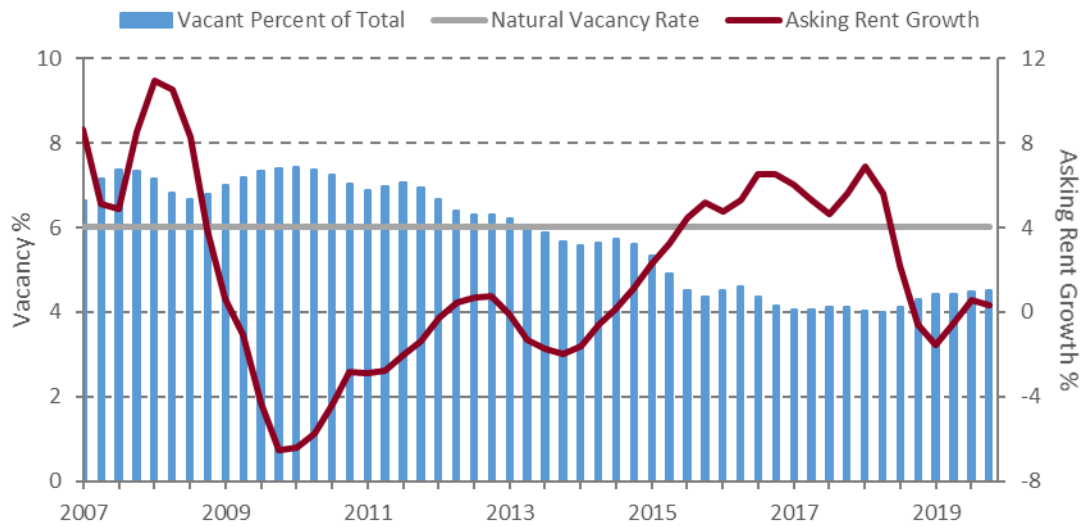
*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 18. 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 Real Estate Center at Texas A&M University

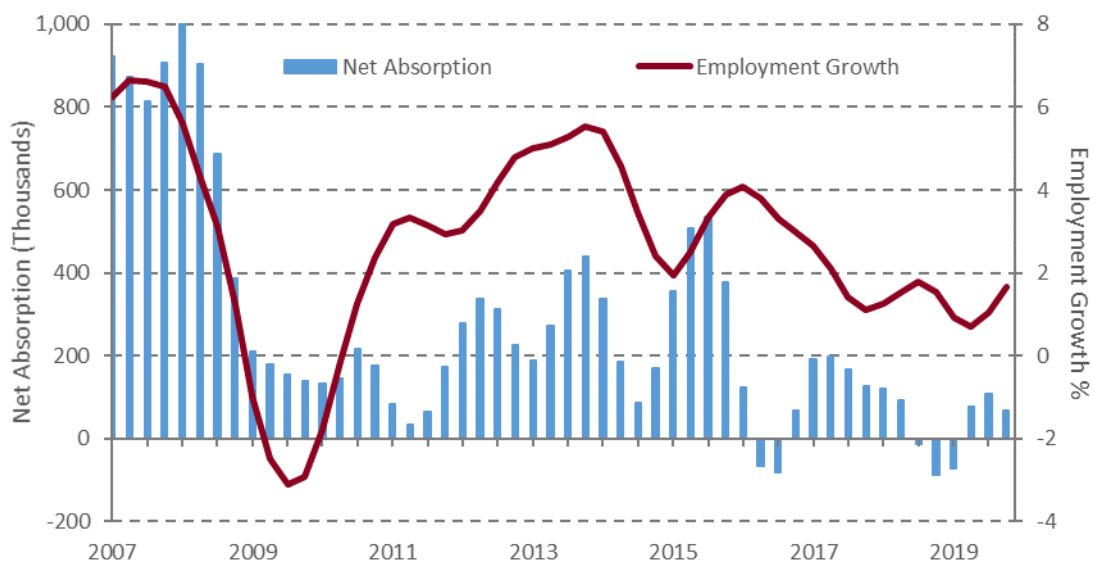
Figure 19. Austin Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

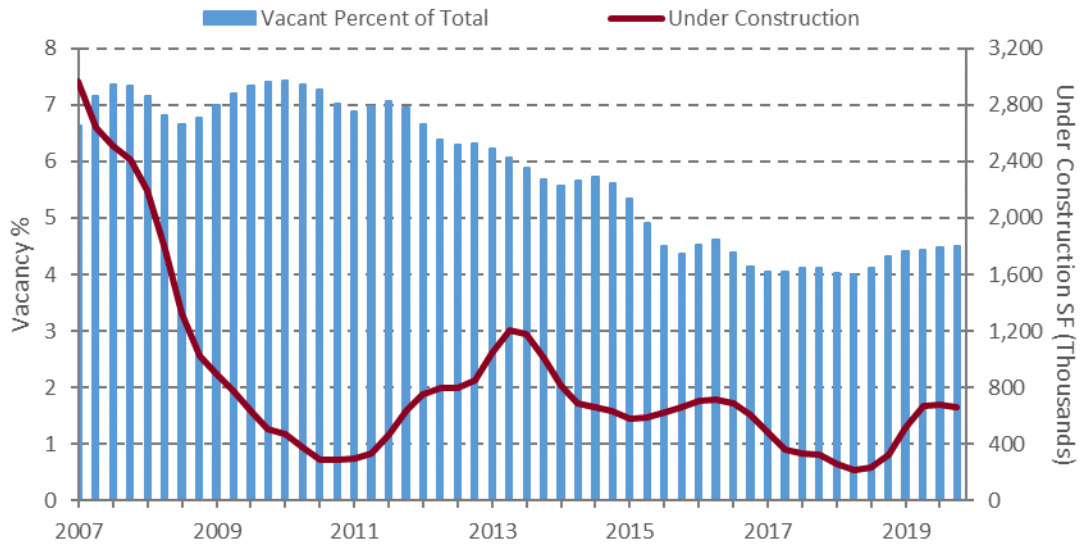
Figure 20. Austin Retail Net Absorption SF and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

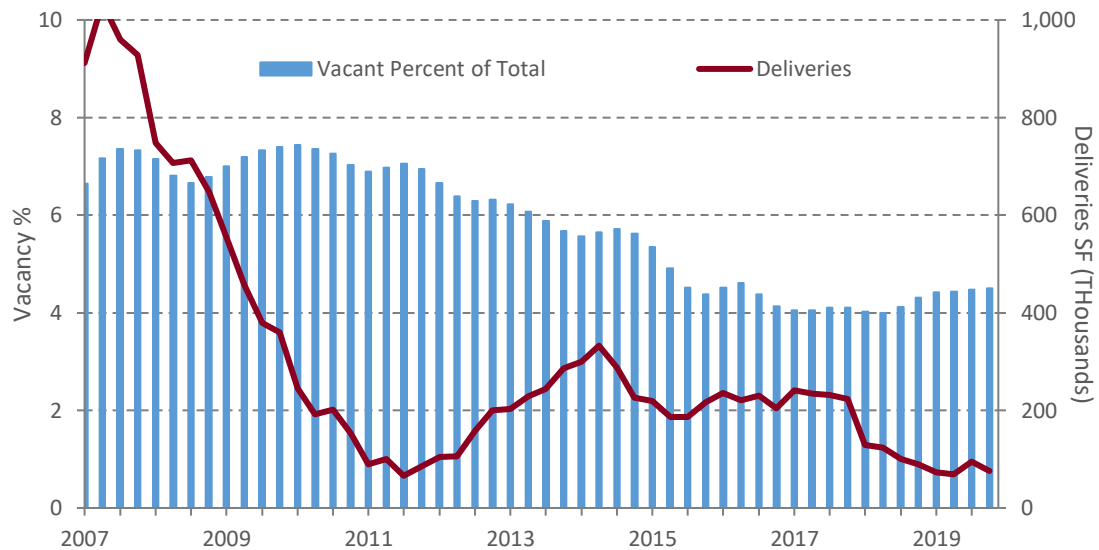
Figure 21. Austin Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

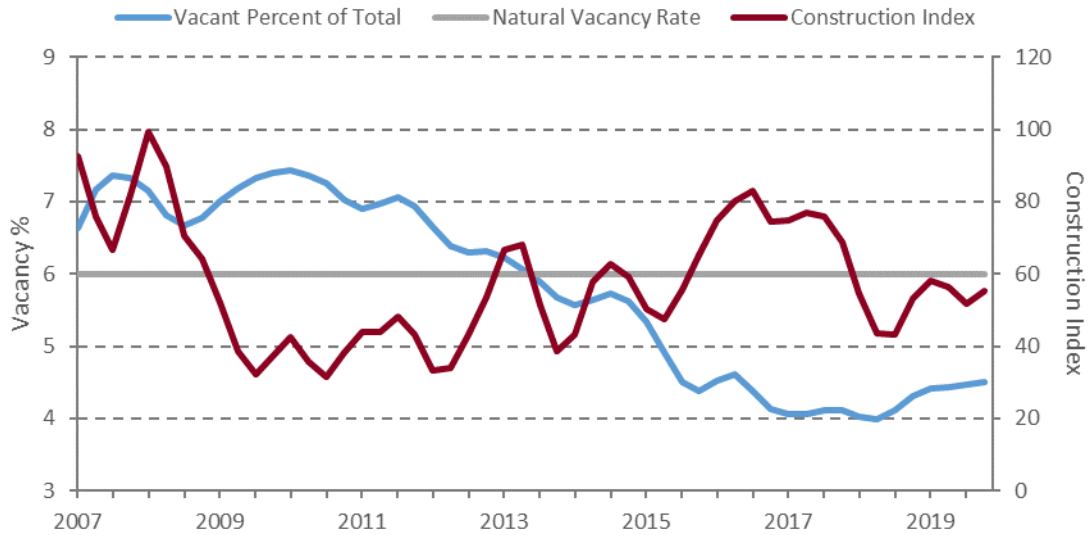
Figure 22. Austin Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

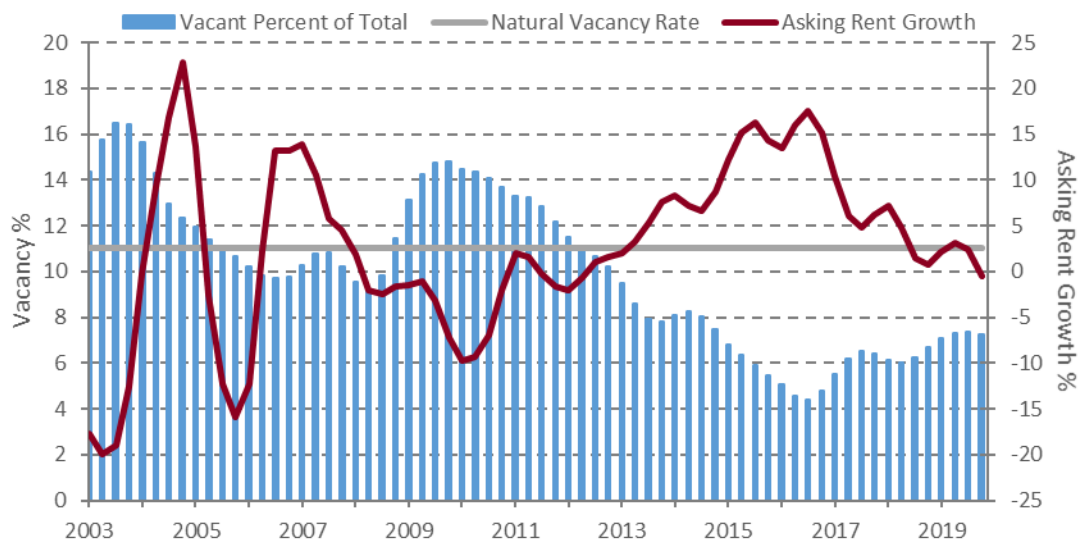
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 23. Austin Retail Vacancy and Construction Index (SA and TC)*
(Index 2006 Q1 = 100)



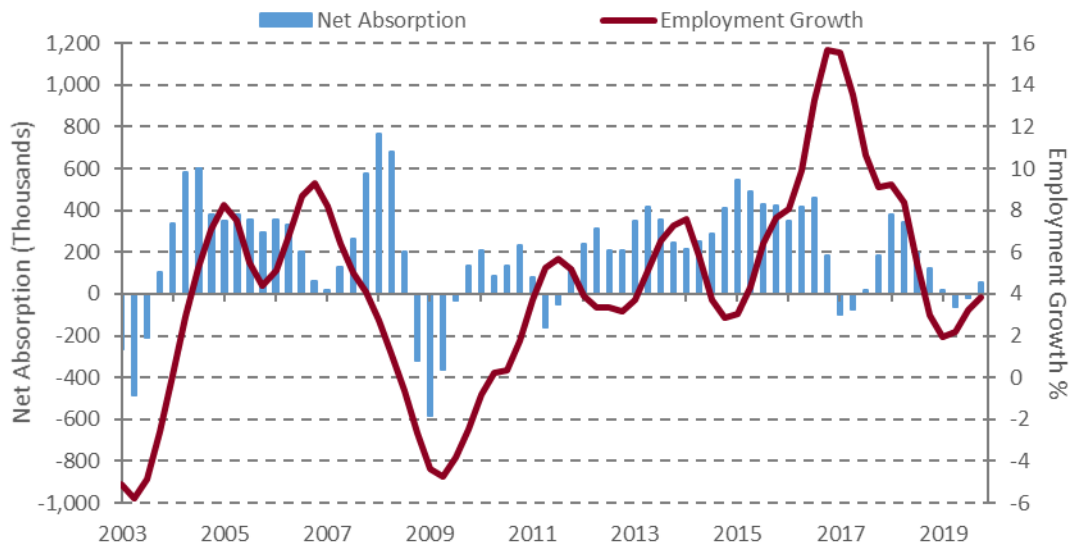
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 24. Austin Warehouse Vacancy and Asking Rent Growth (SA and TC)*



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

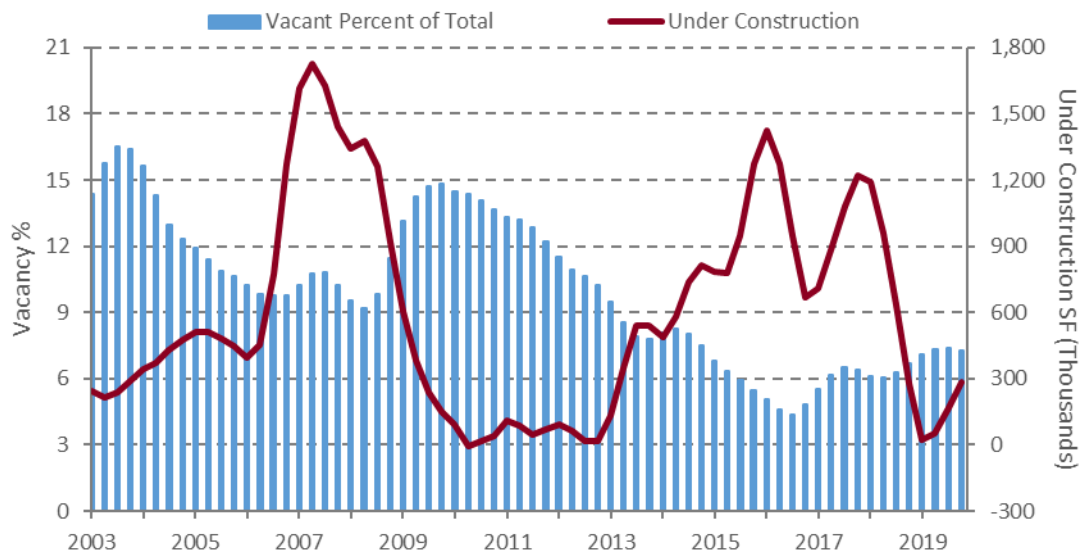
Figure 25. Austin Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

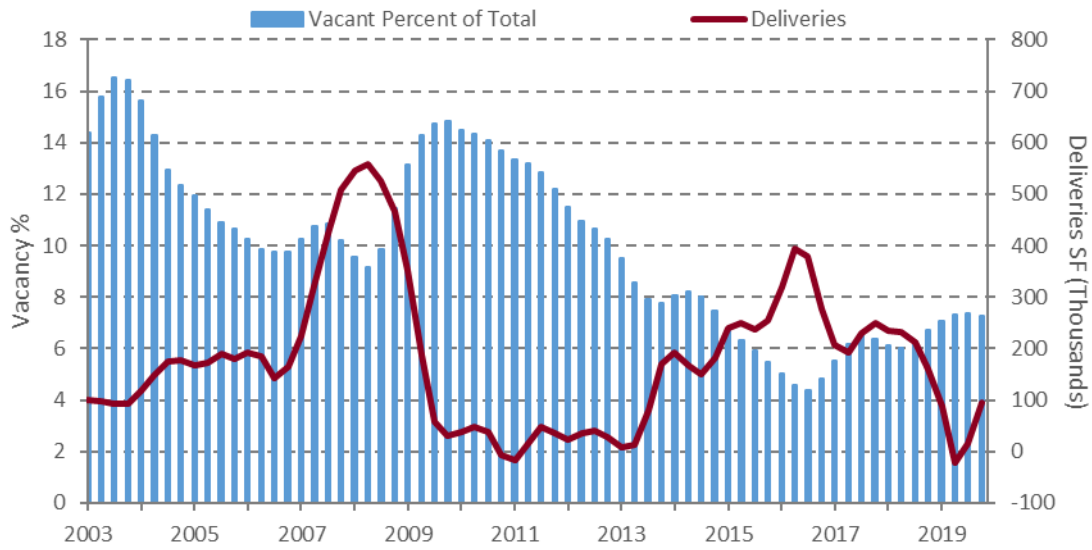
Figure 26. Austin Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

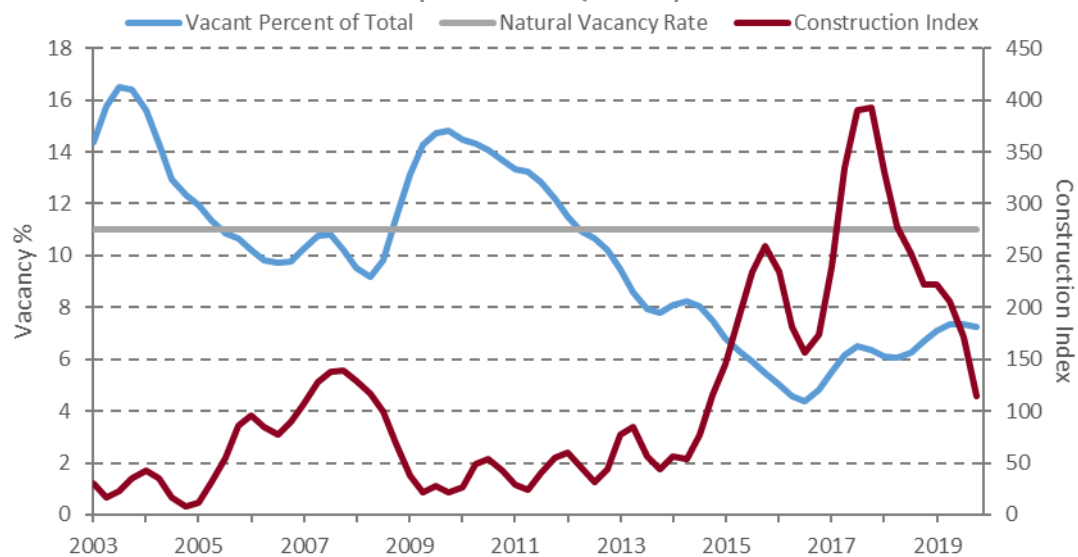
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 27. Austin Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

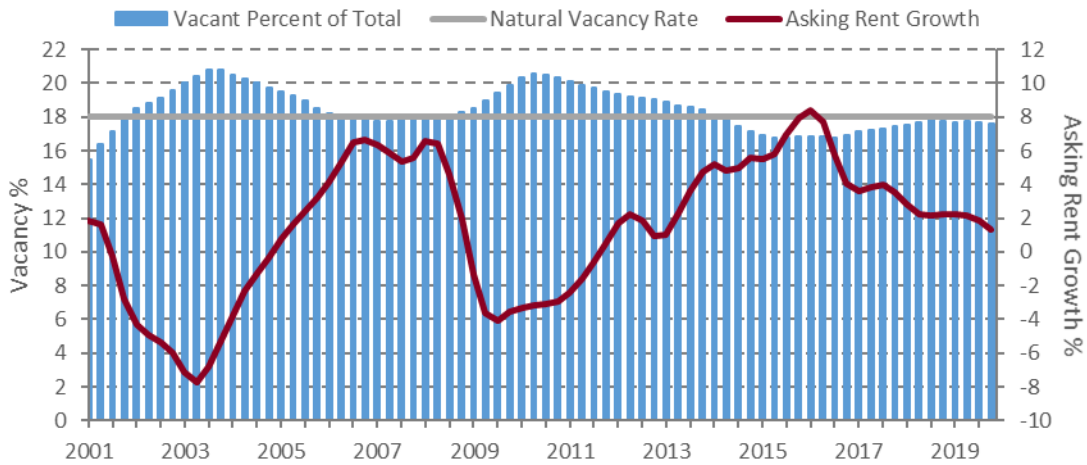
Figure 28. Austin Warehouse Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)



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

DFW

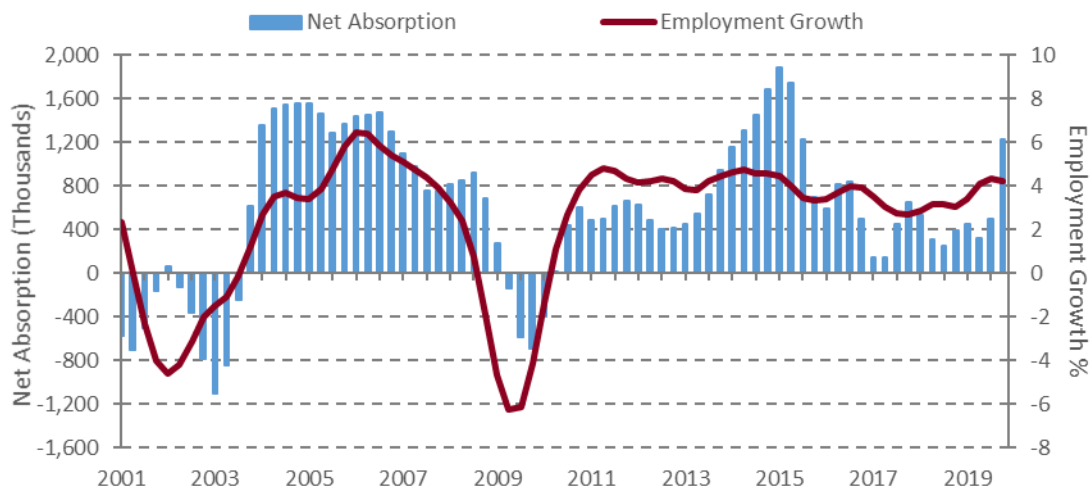
Figure 29. DFW Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

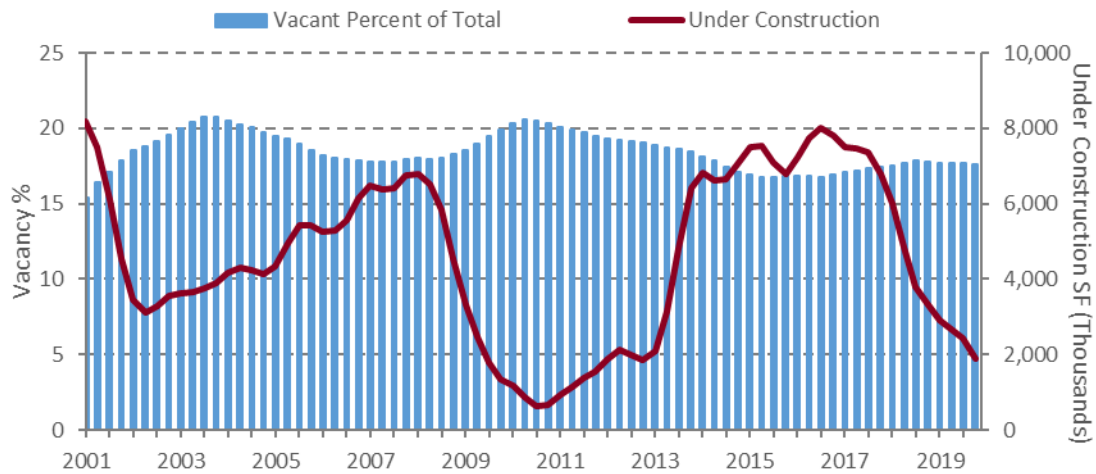
Figure 30. DFW Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

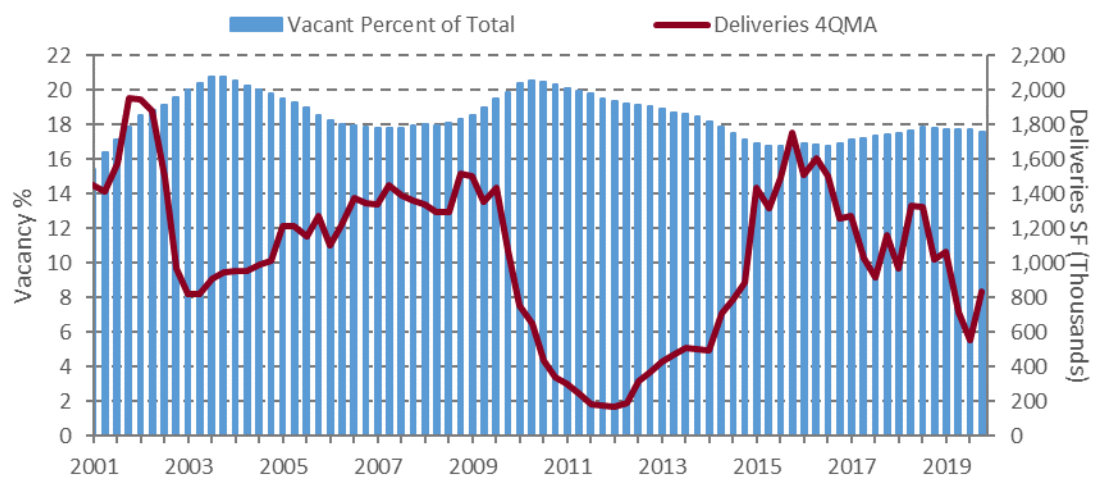
Figure 31. DFW Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

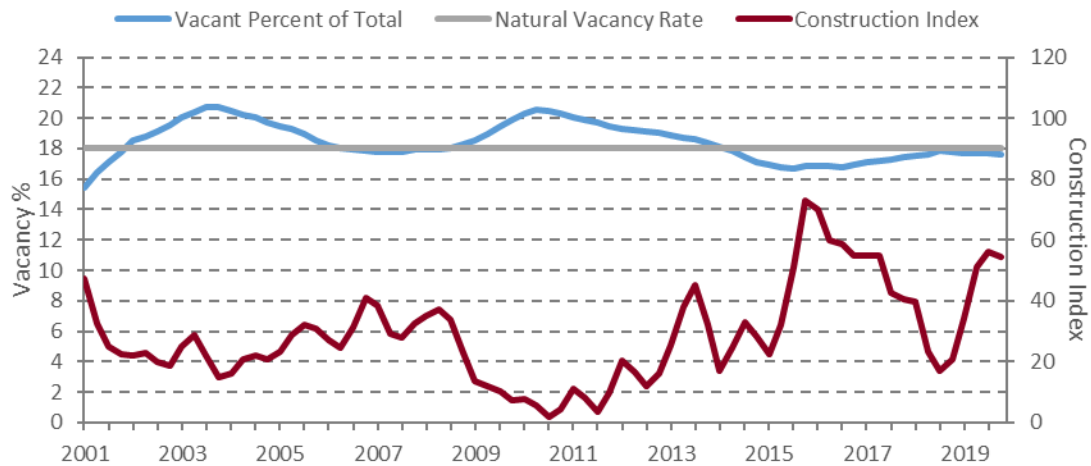
Figure 32. DFW Office Overall Vacancy and Deliveries (SA and TC)*



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

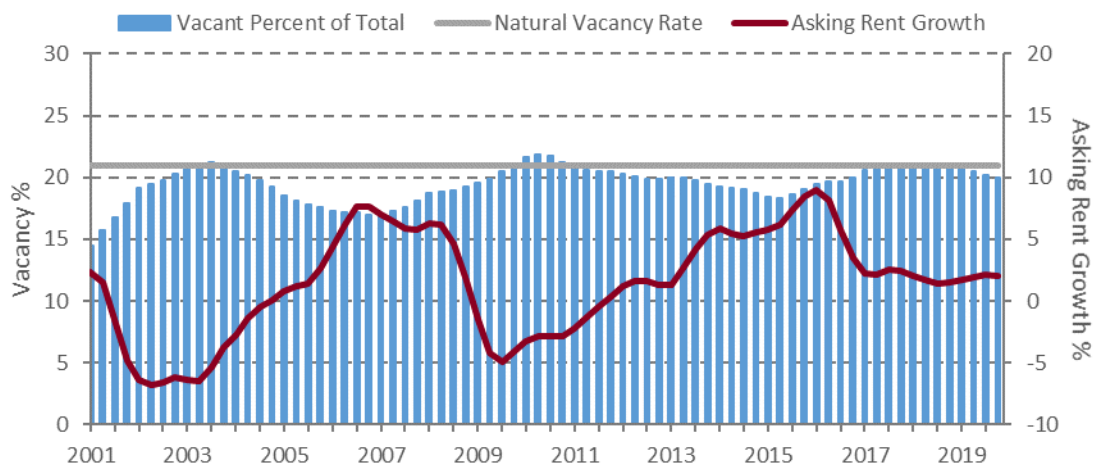
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 33. DFW Office Overall Vacancy and Construction Index (SA and TC)*
(Index 1982 Q1 = 100)



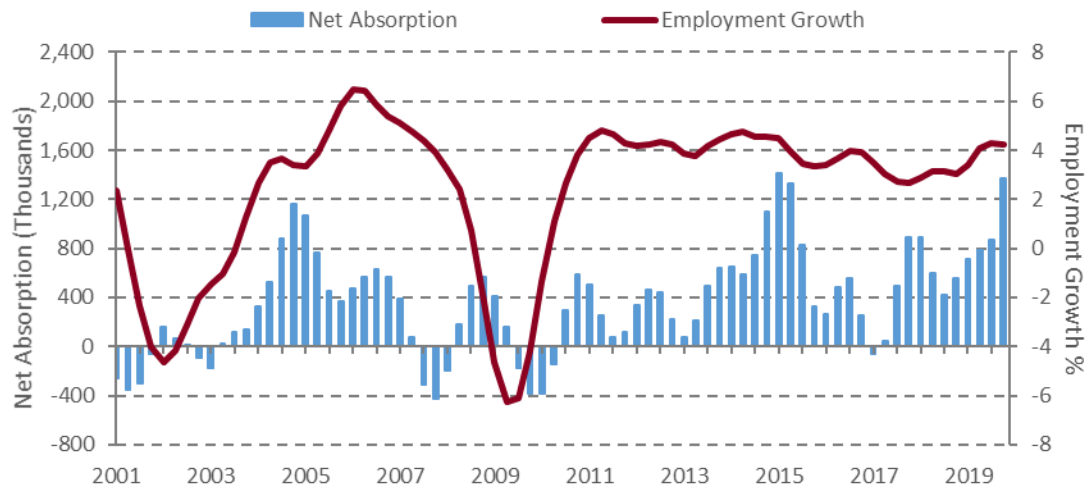
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 34. DFW Office Class A Vacancy and Asking Rent Growth (SA and TC)*



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

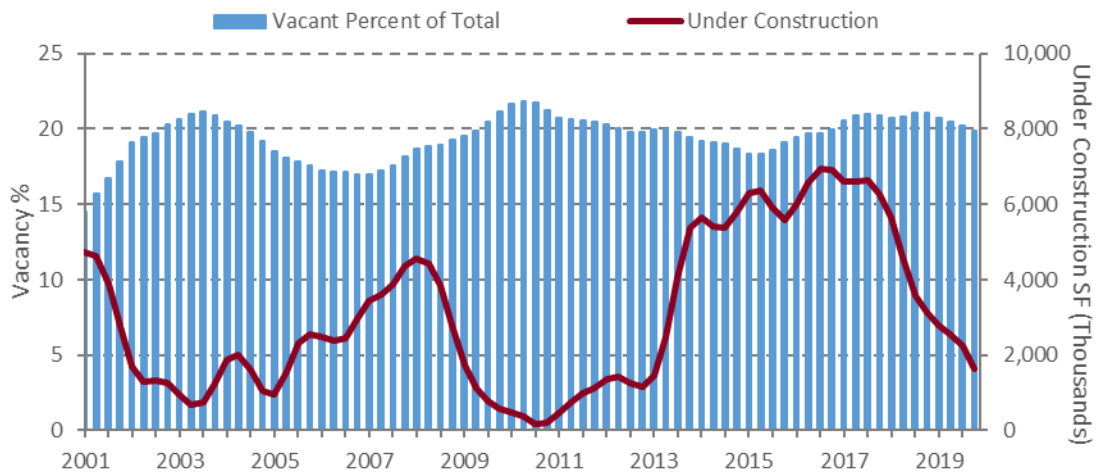
Figure 35. DFW Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

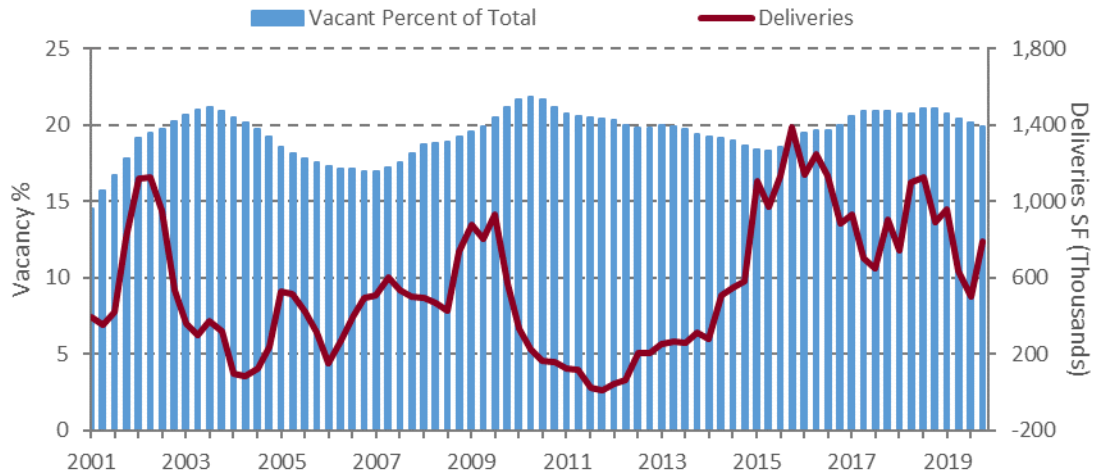
Figure 36. DFW Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

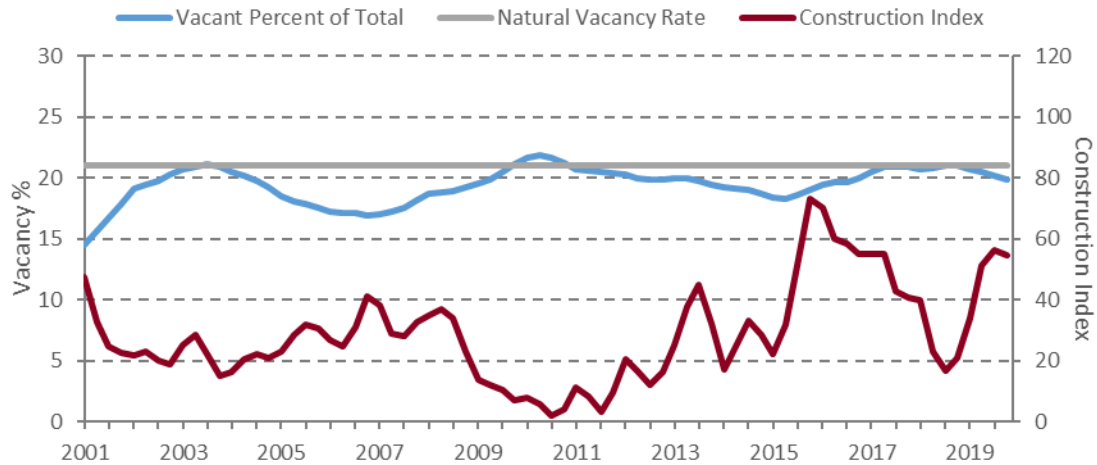
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 37. DFW Office Class A Vacancy and Deliveries (SA and TC)*



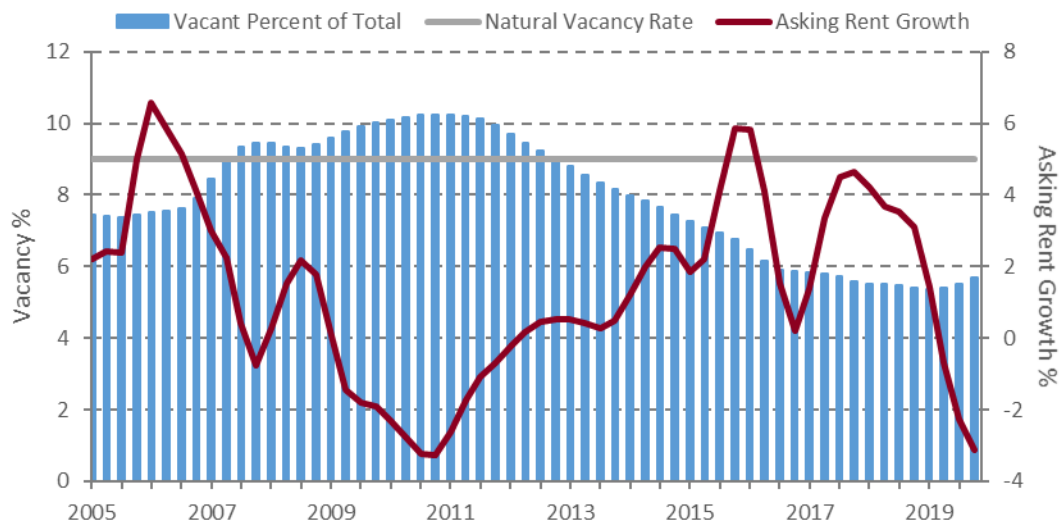
*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 38. 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 Real Estate Center at Texas A&M University

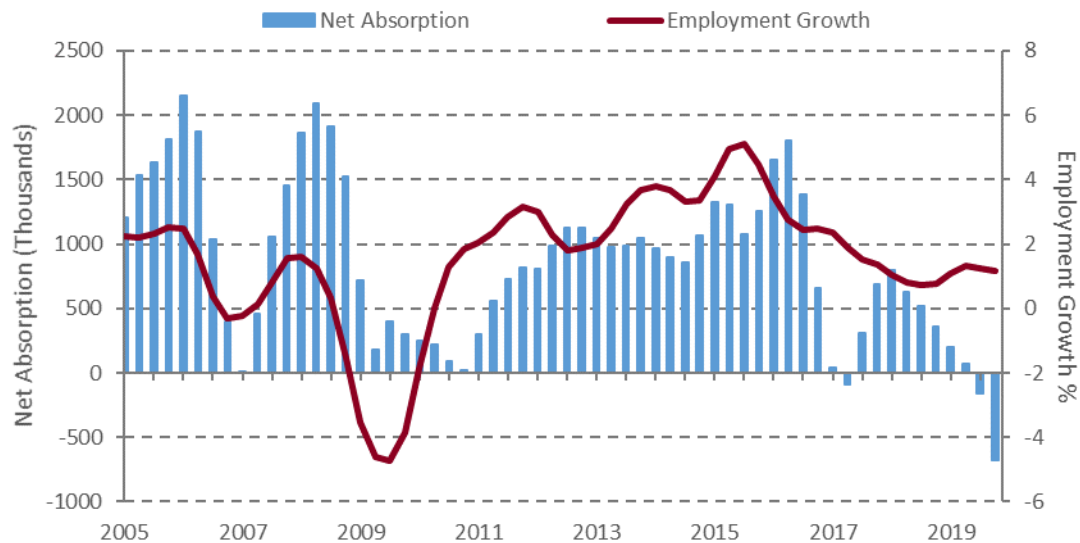
Figure 39. DFW Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

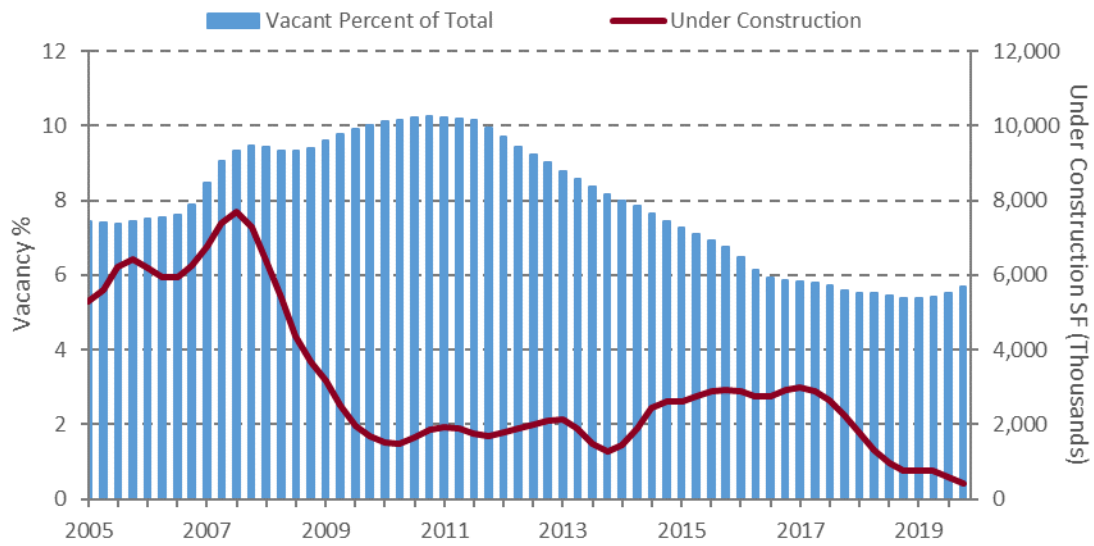
Figure 40. DFW Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

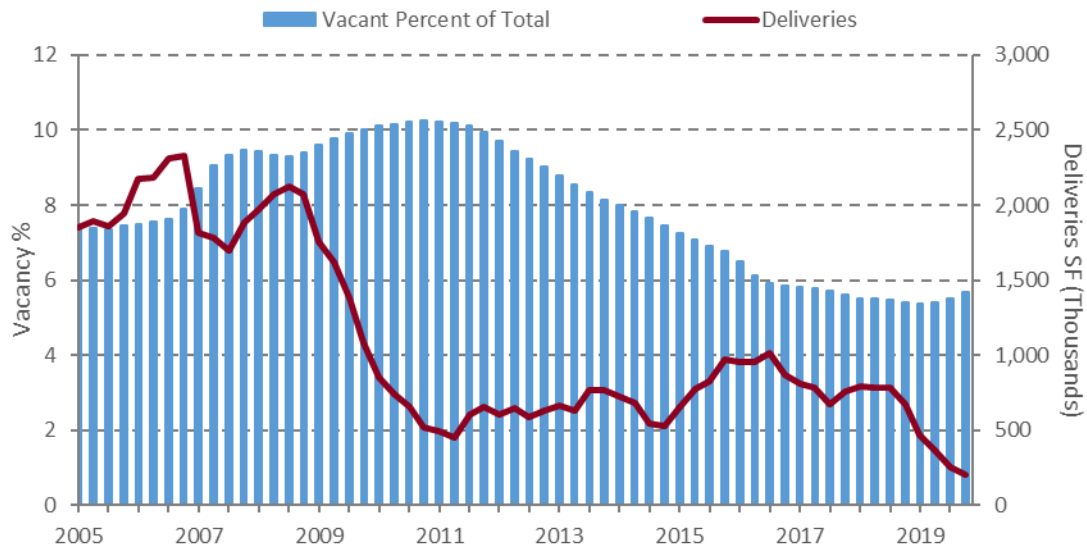
Figure 41. DFW Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

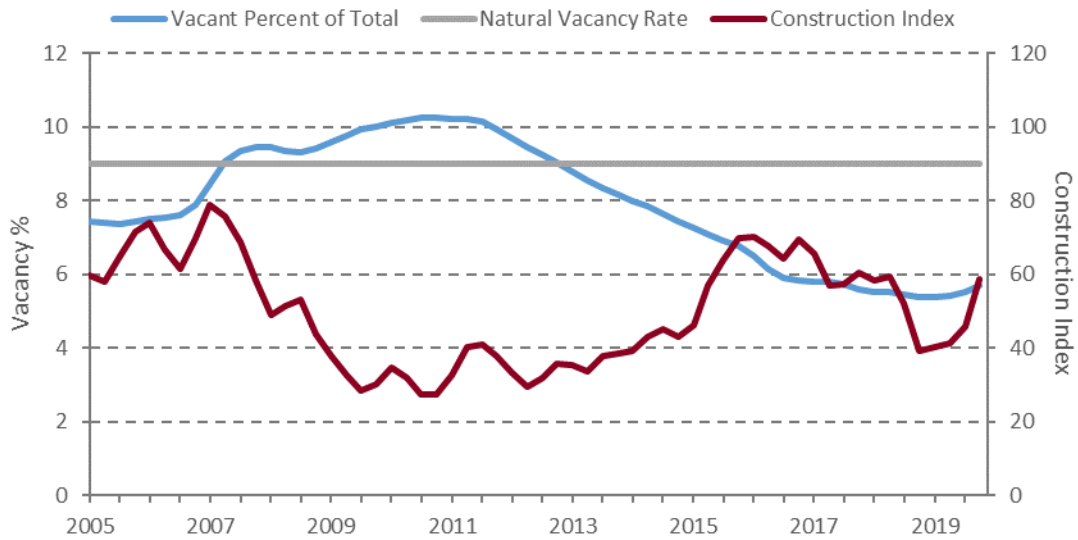
Figure 42. DFW Retail Vacancy and Deliveries (SA and TC)*



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

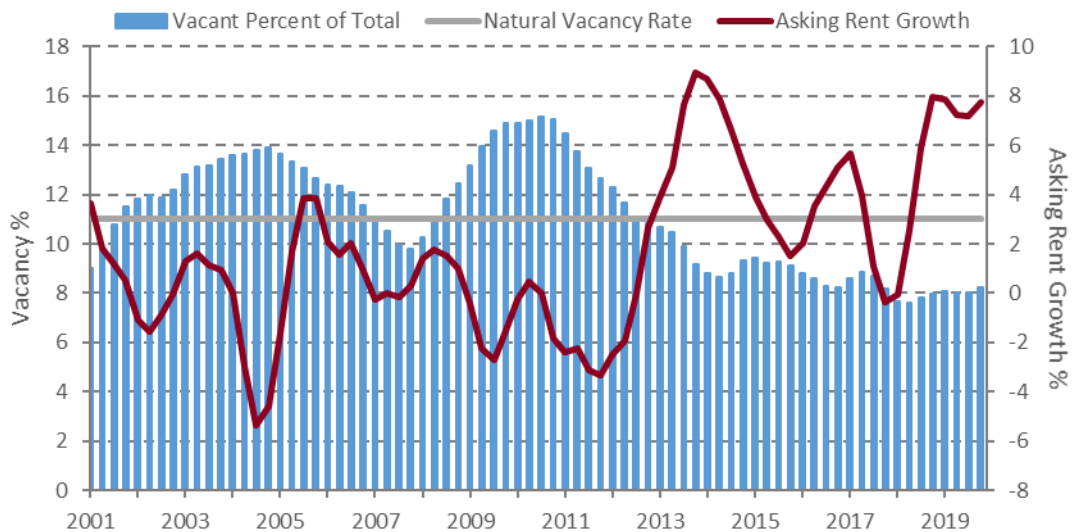
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 43. DFW Retail Vacancy and Construction Index (SA and TC)*
(Index 2000 Q1 = 100)



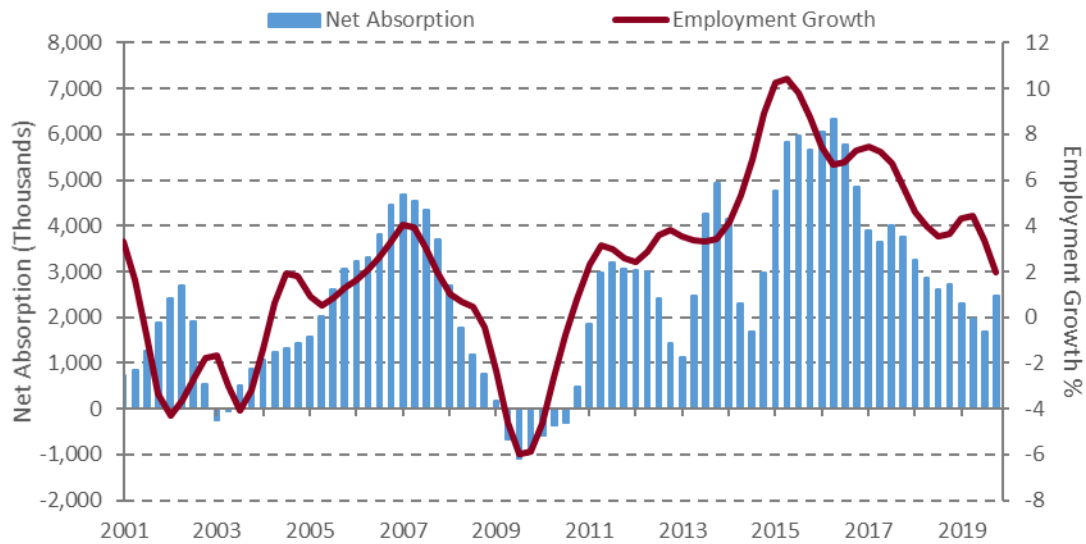
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 44. DFW Warehouse Vacancy and Asking Rent Growth (SA and TC)*



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

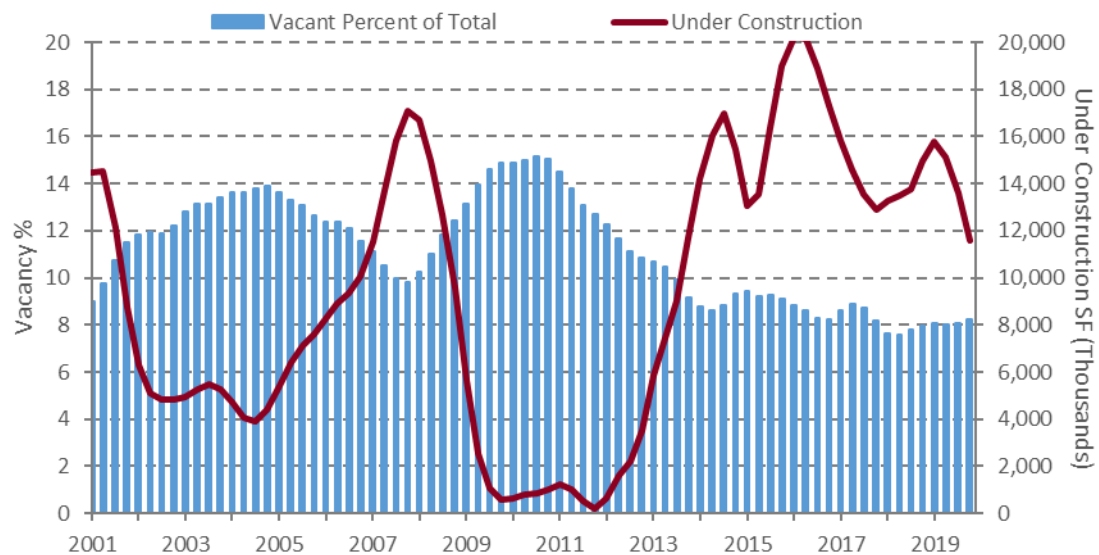
Figure 45. DFW Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

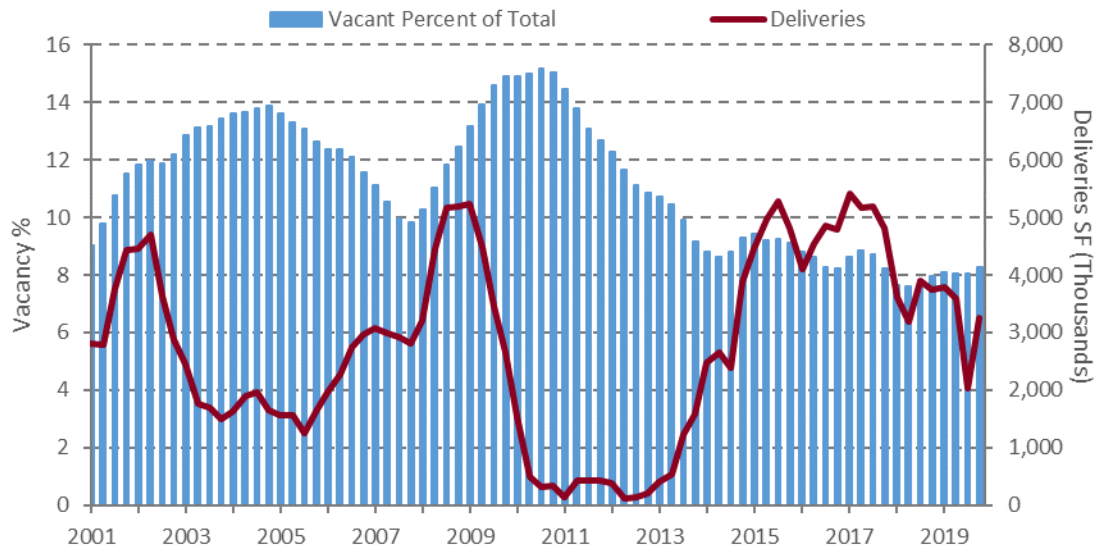
Figure 46. DFW Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

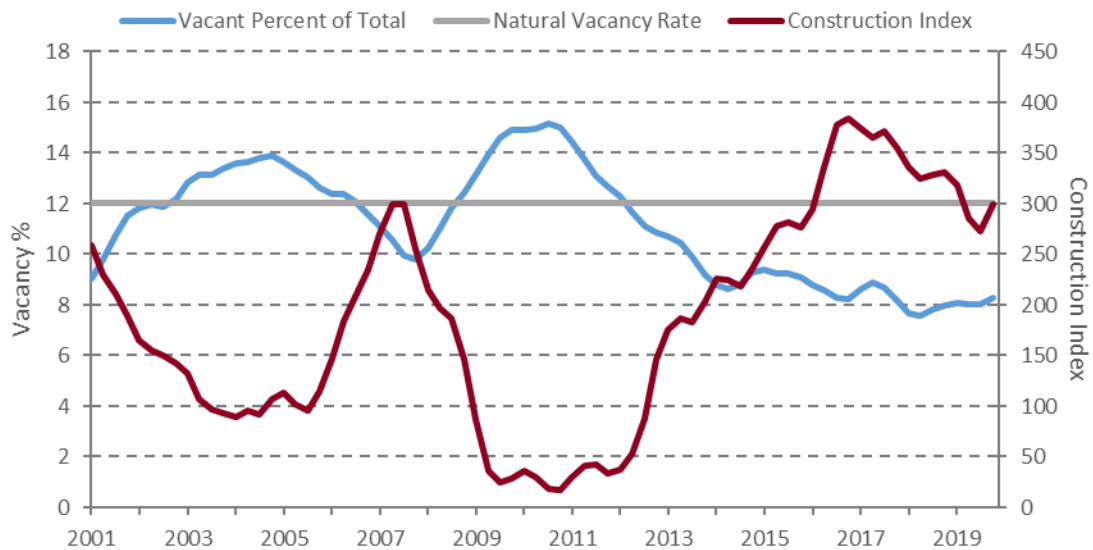
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 47. DFW Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

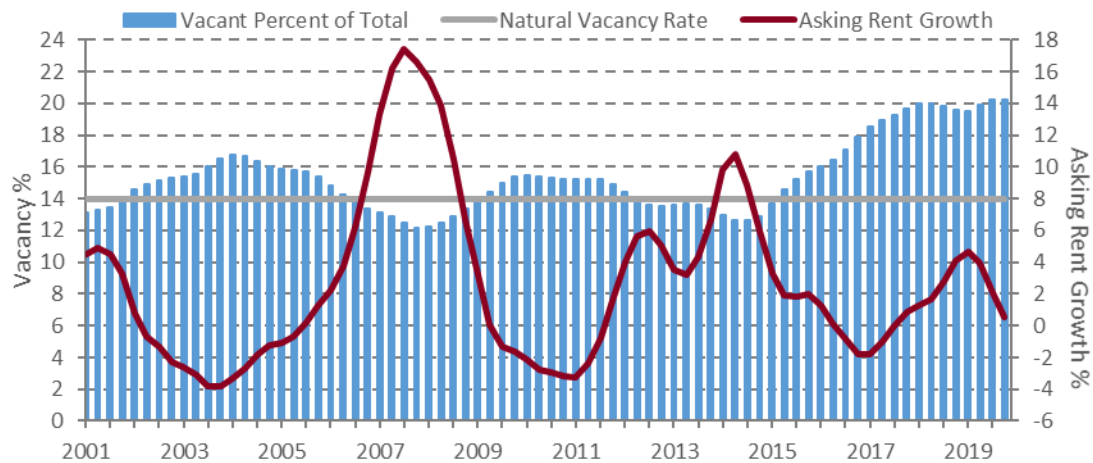
Figure 48. DFW Warehouse Vacancy and Construction Index (SA and TC)*
(Index 1995 Q1 = 100)



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

Houston

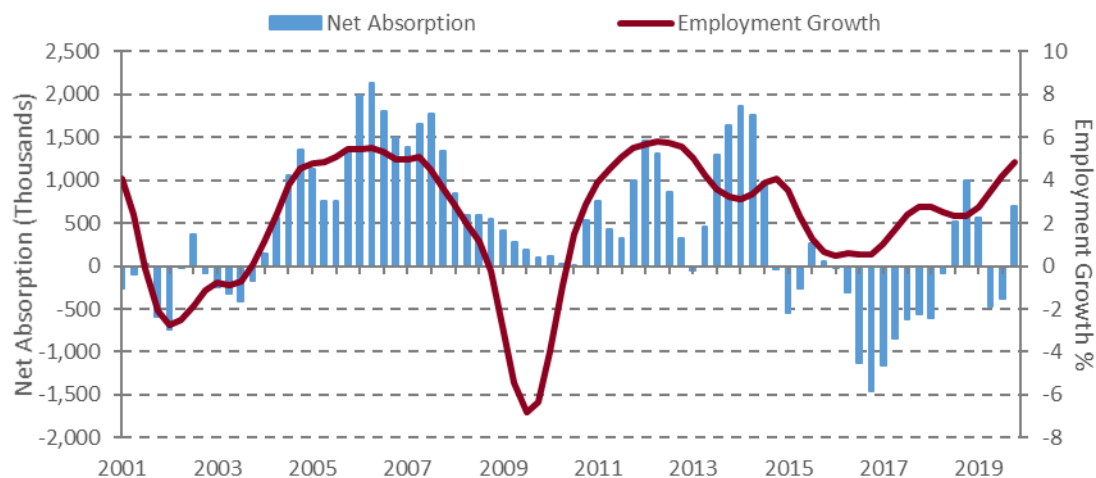
Figure 49. Houston Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

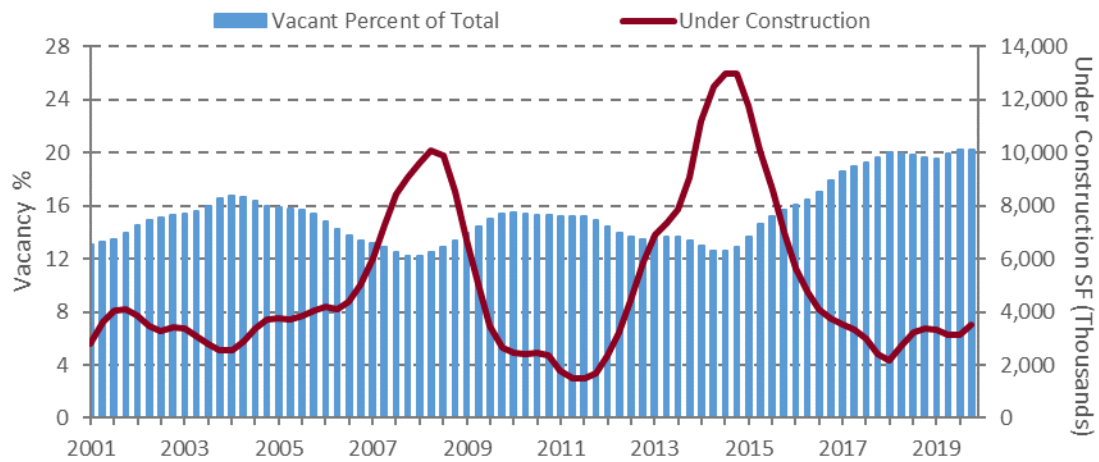
Figure 50. Houston Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

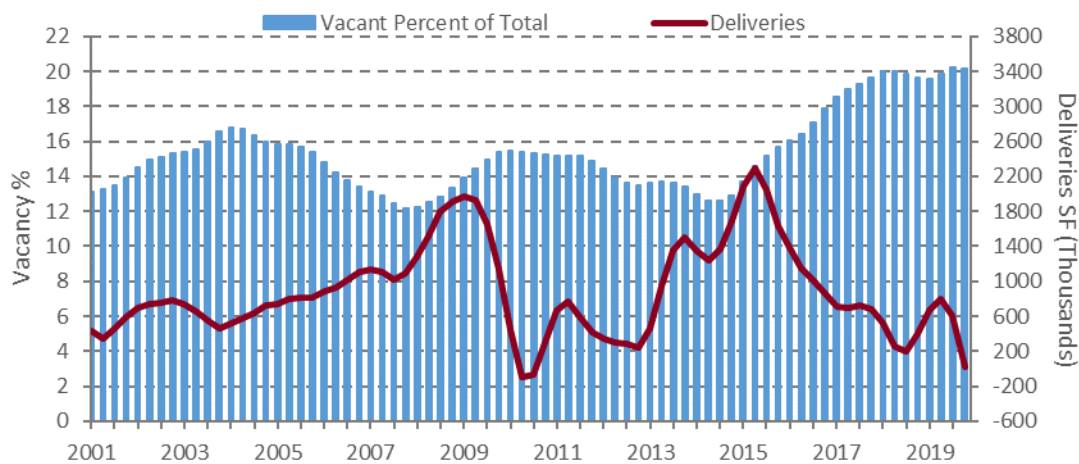
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 51. Houston Office Overall Vacancy and Under Construction (SA and TC)*



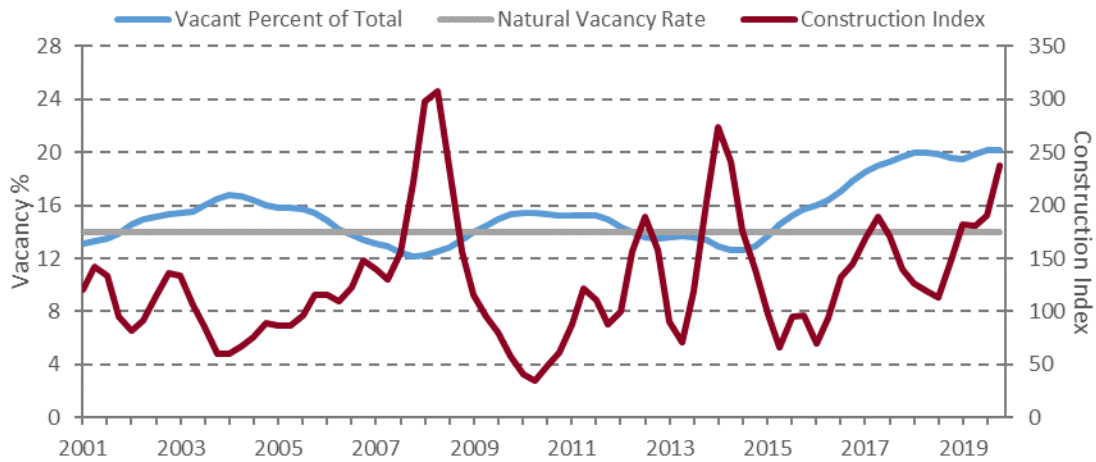
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 52. Houston Office Overall Vacancy and Deliveries (SA and TC)*



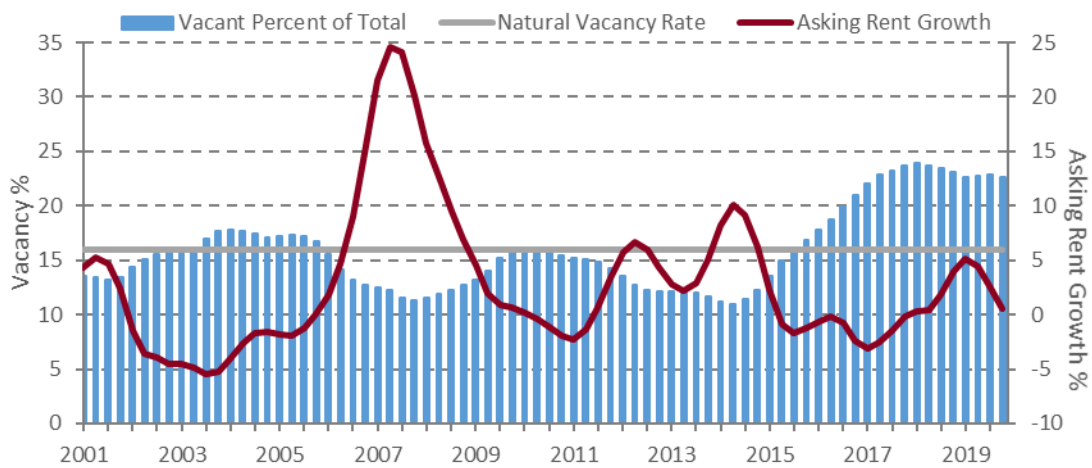
*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 53. Houston Office Overall Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)



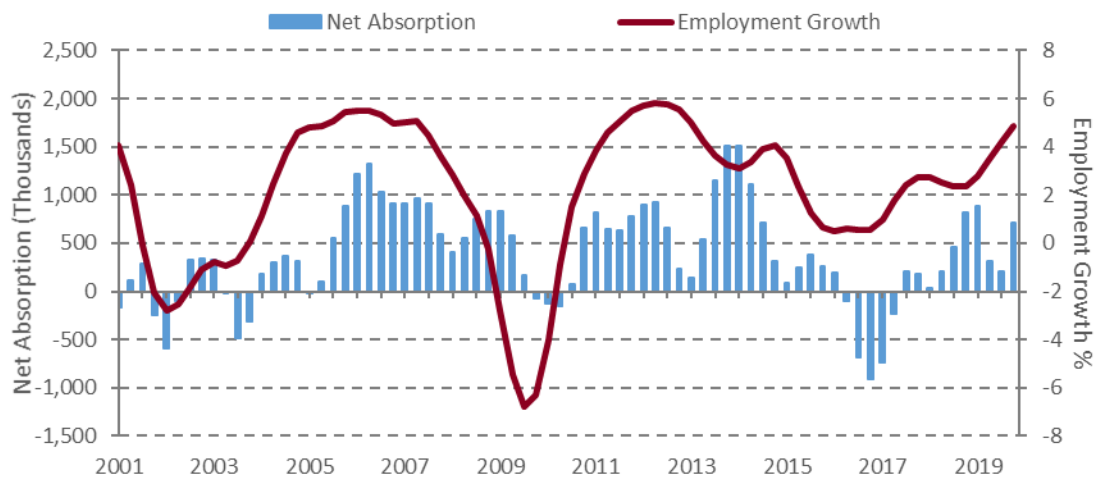
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 54. Houston Office Class A Vacancy and Asking Rent Growth (SA and TC)*



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

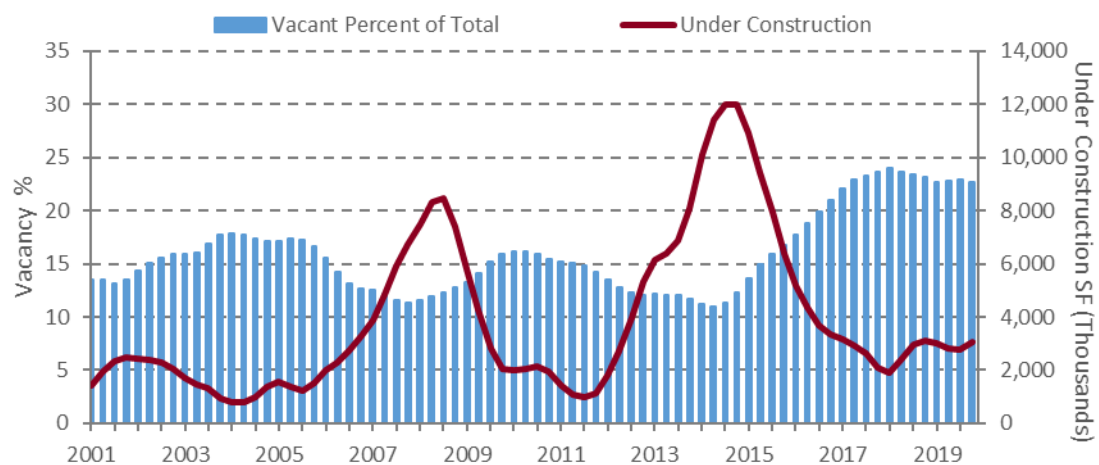
Figure 55. Houston Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

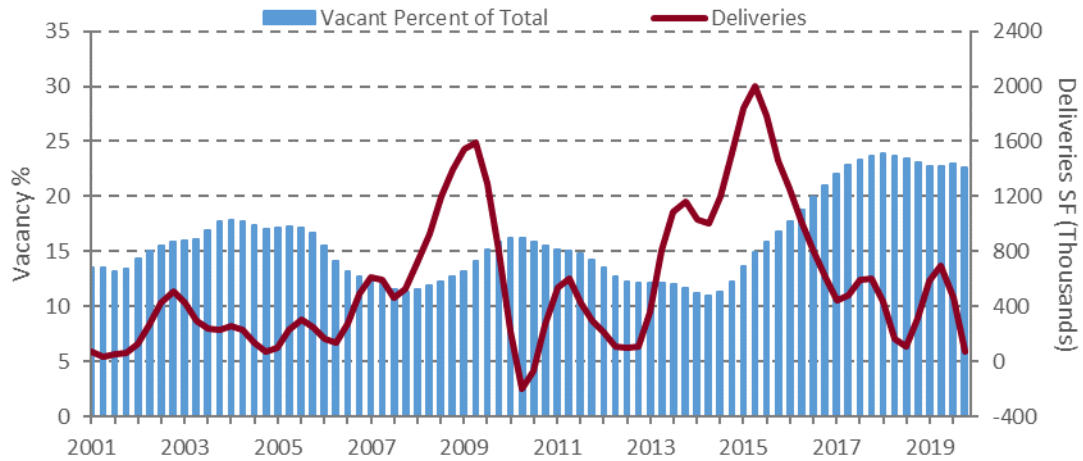
Figure 56. Houston Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

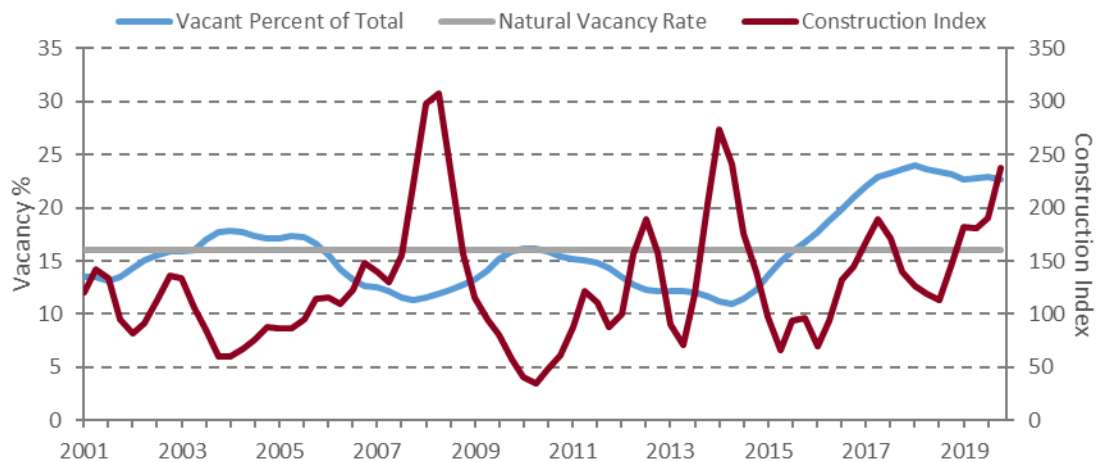
Figure 57. Houston Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

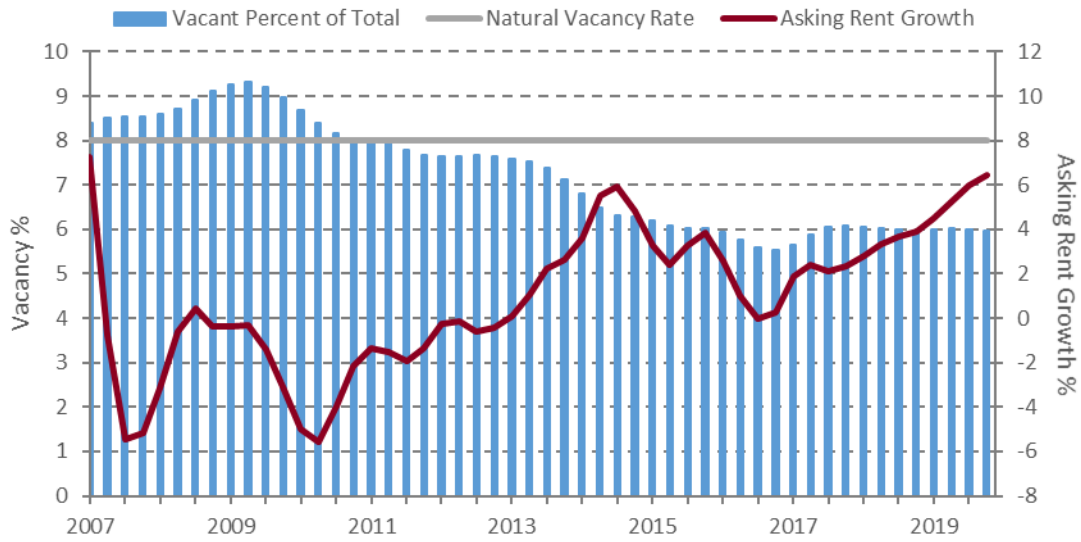
Figure 58. Houston Office Class A Vacancy and Construction Index (SA and TC)*

(Index 1999 Q1 = 100)



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

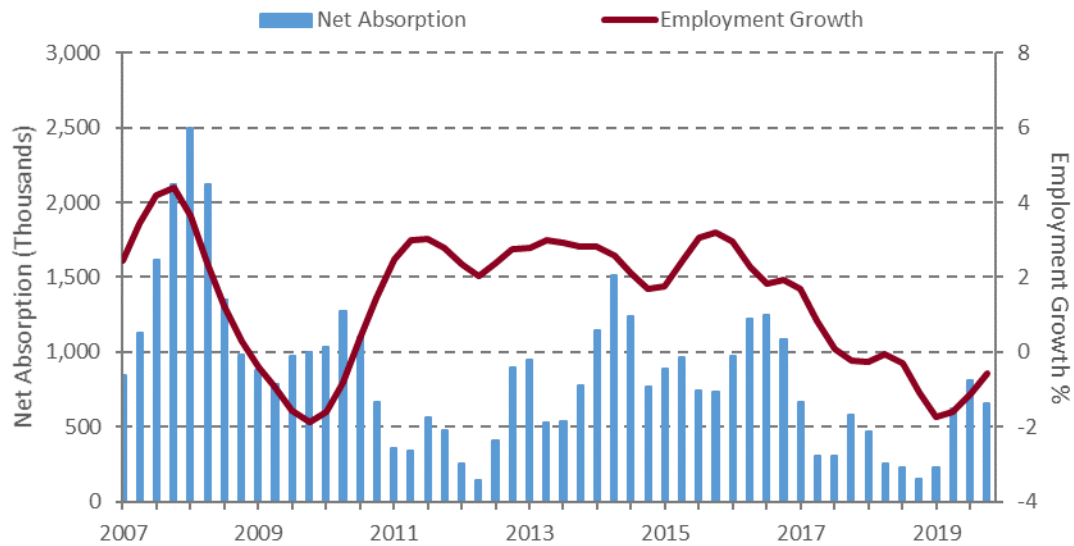
Figure 59. Houston Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

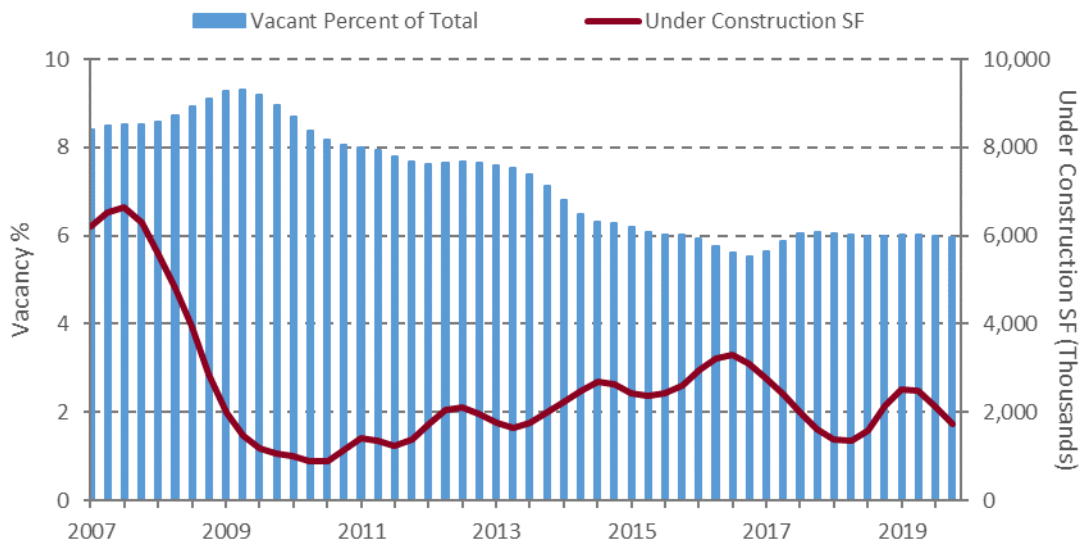
Figure 60. Houston Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

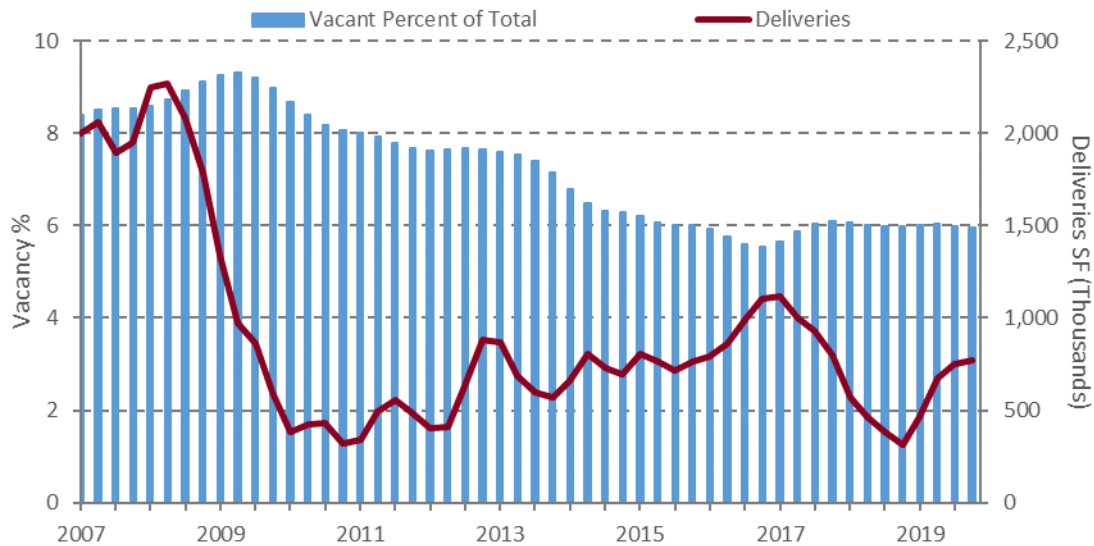
Figure 61. Houston Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

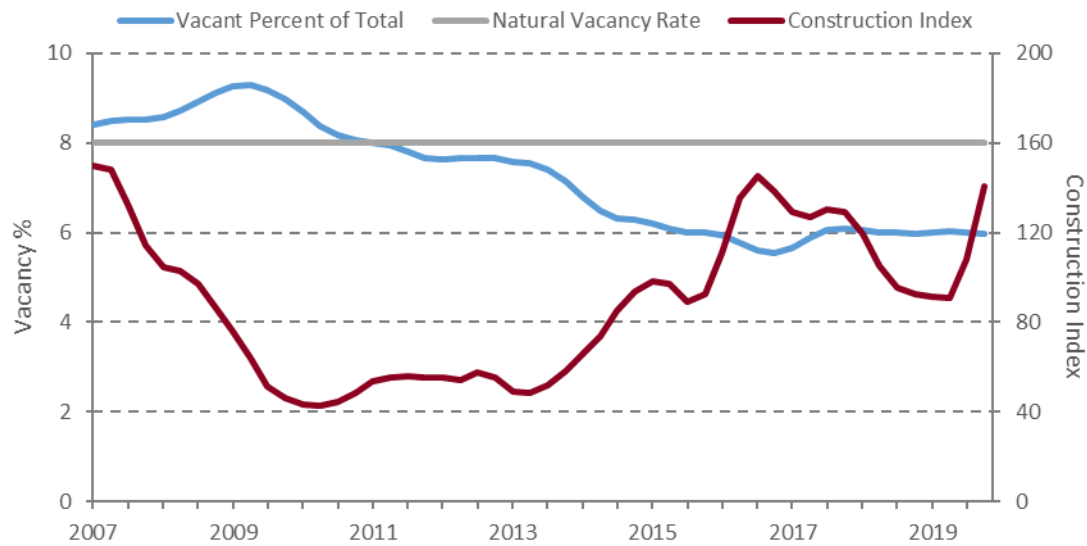
Figure 62. Houston Retail Vacancy and Deliveries (SA and TC)*



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

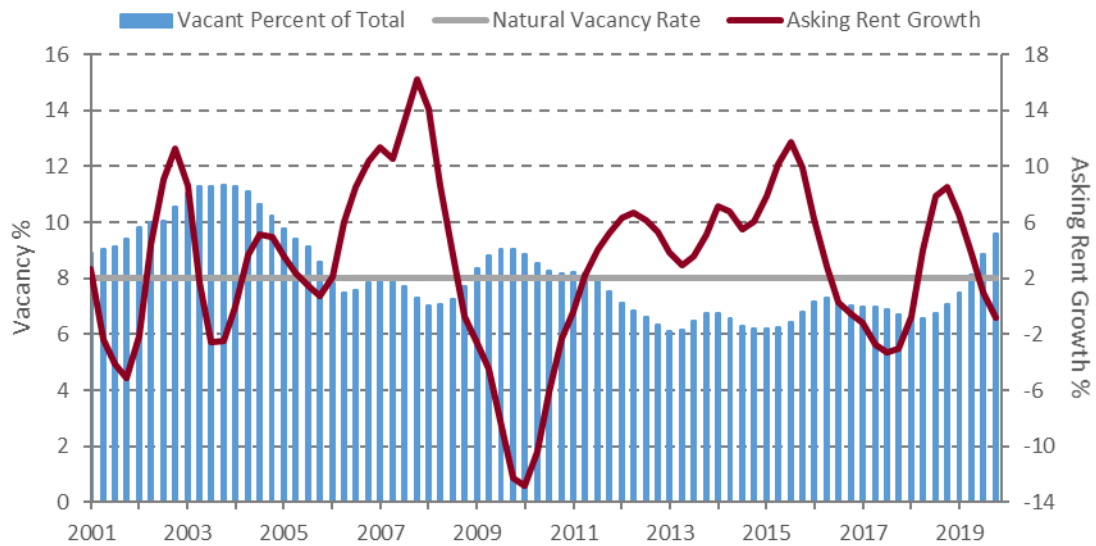
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 63. Houston Retail Vacancy and Construction Index (SA and TC)*
(Index 2006 Q1 = 100)



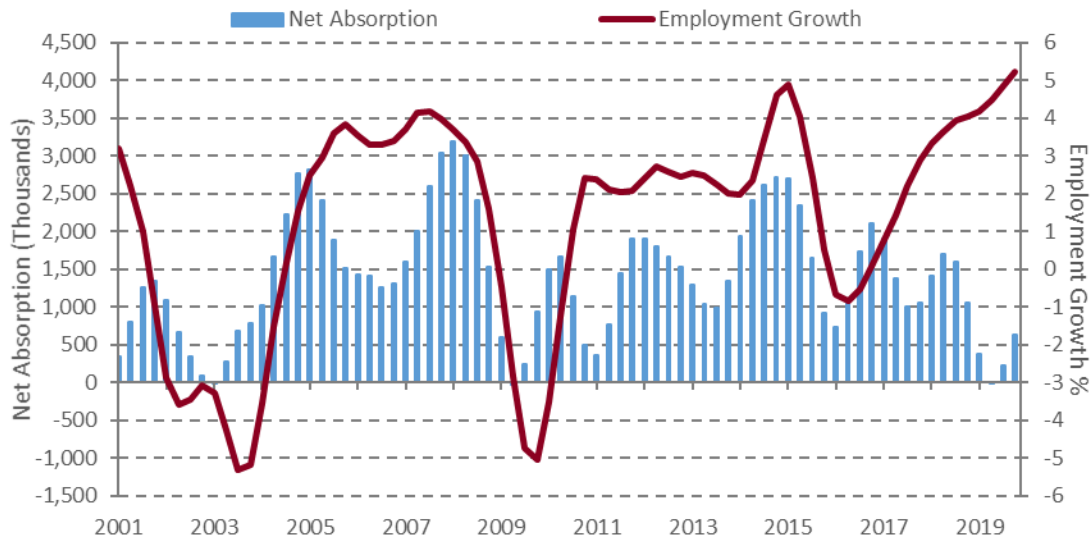
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 64. Houston Warehouse Vacancy and Asking Rent Growth (SA and TC)*



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

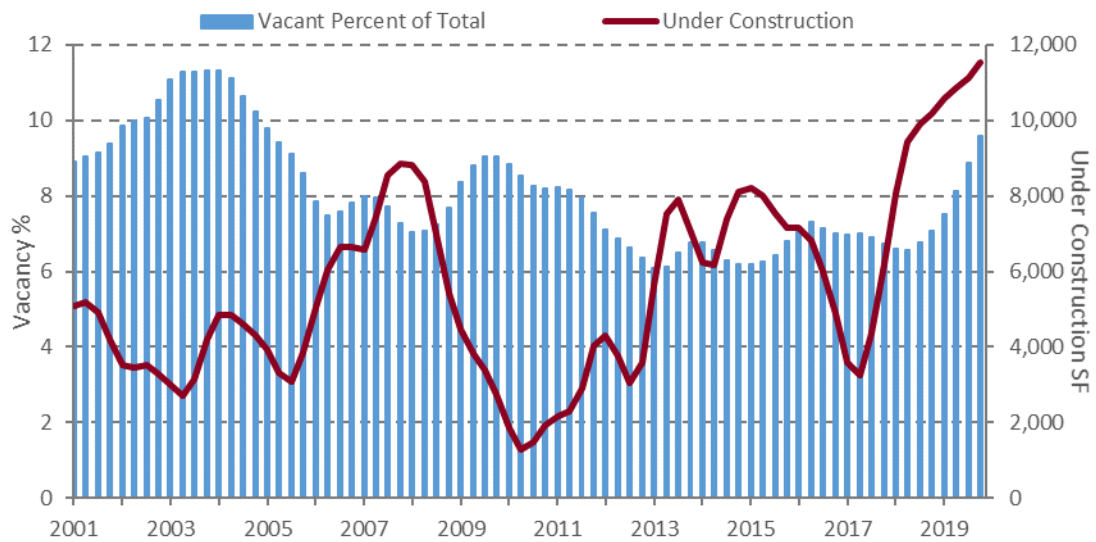
Figure 65. Houston Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

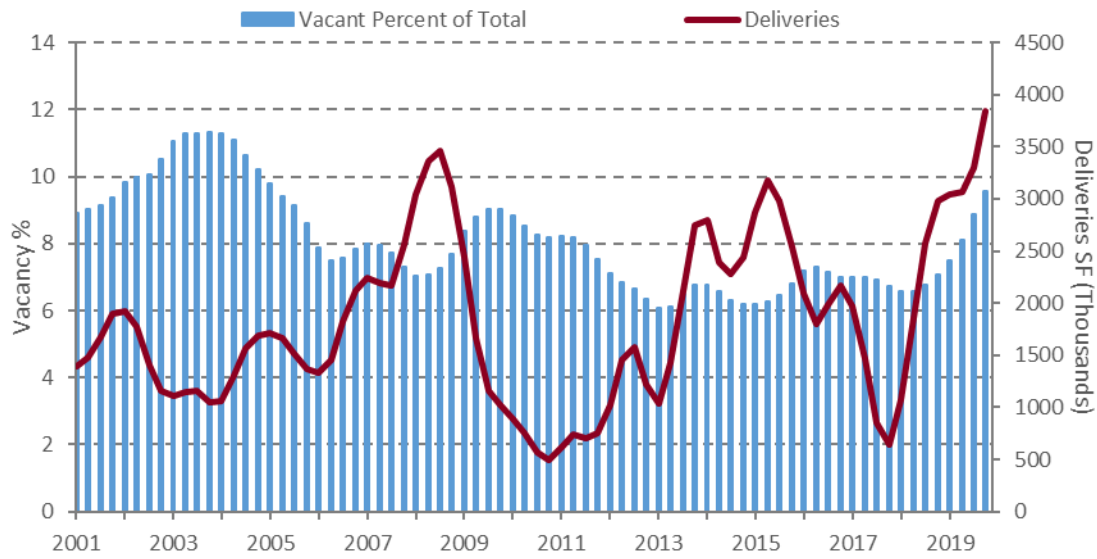
Figure 66. Houston Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

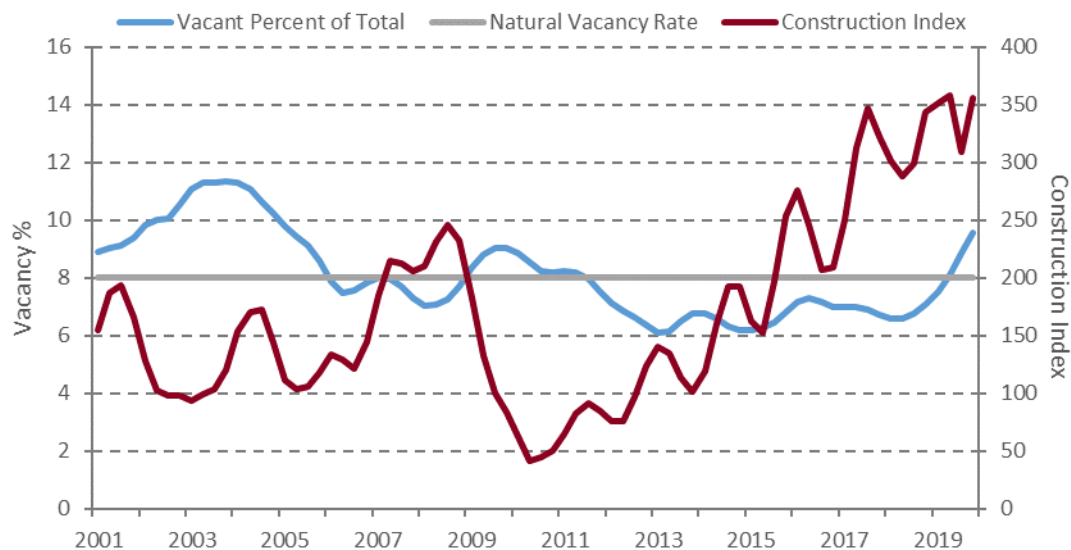
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 67. Houston Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

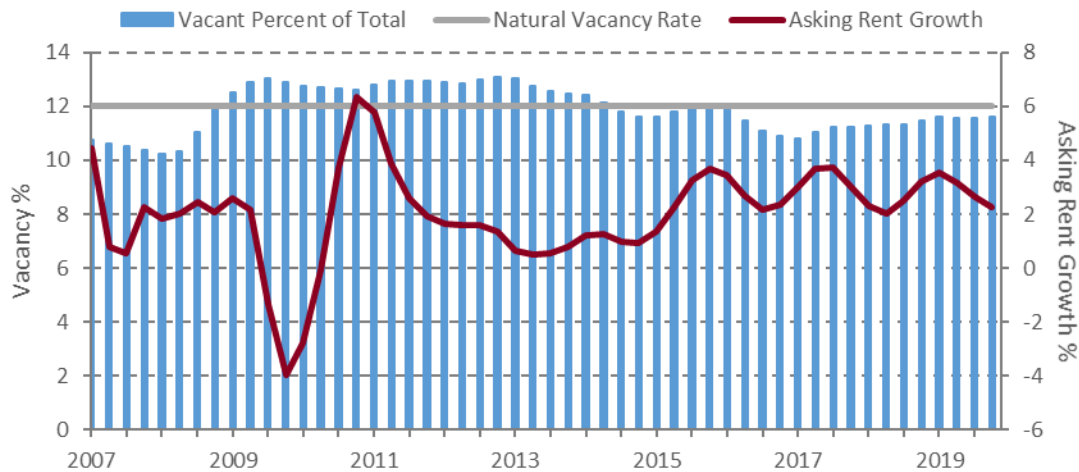
Figure 68. Houston Warehouse Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)



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

San Antonio

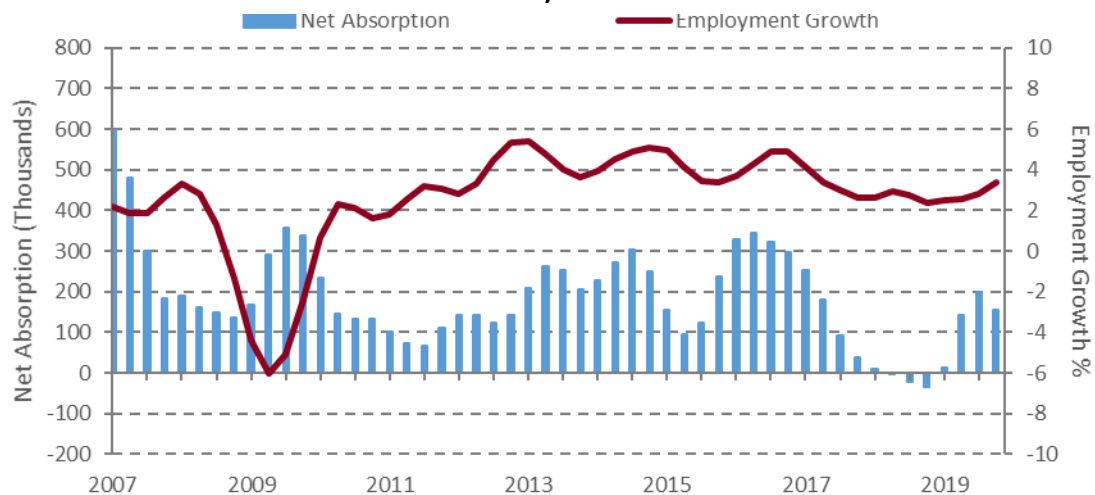
Figure 69. San Antonio Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

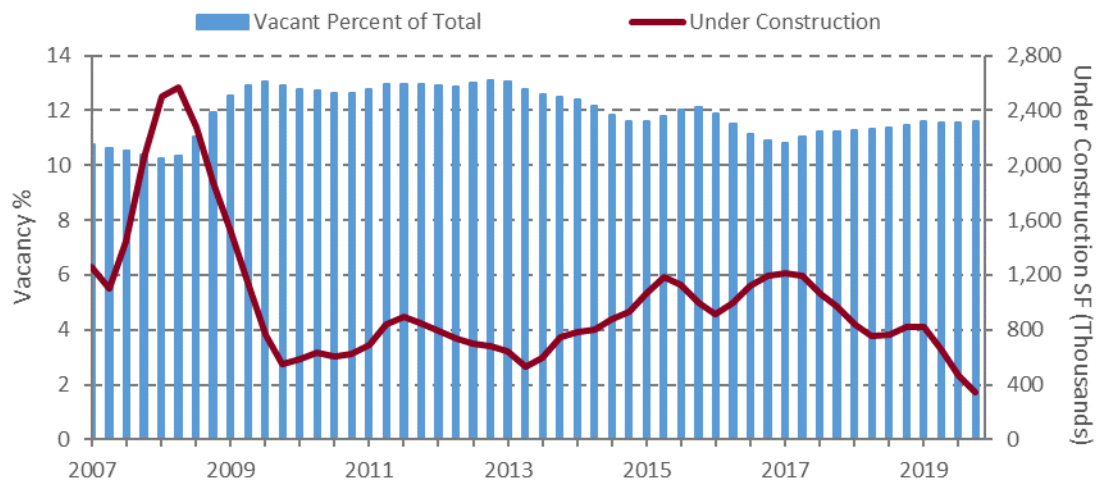
Figure 70. San Antonio Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

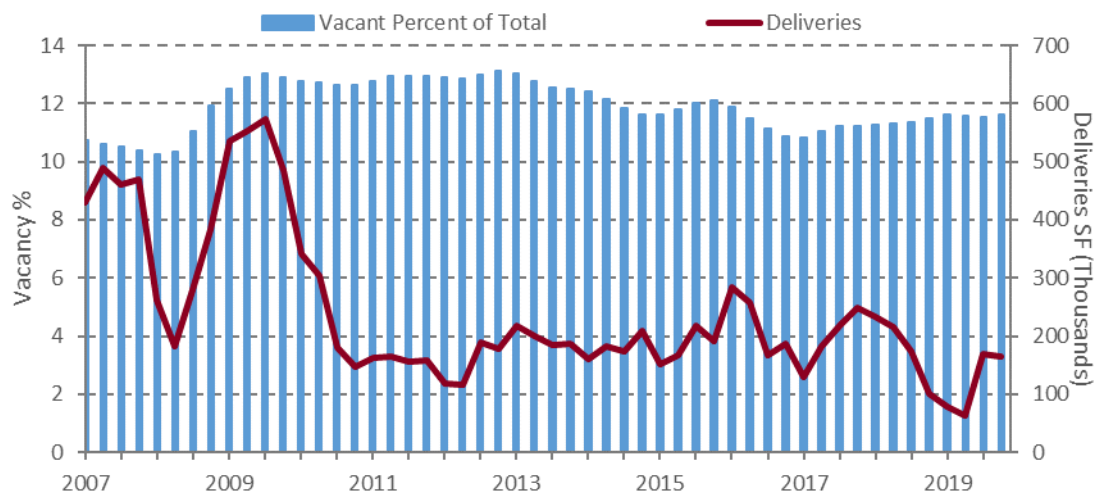
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 71. San Antonio Office Overall Vacancy and Under Construction (SA and TC)*



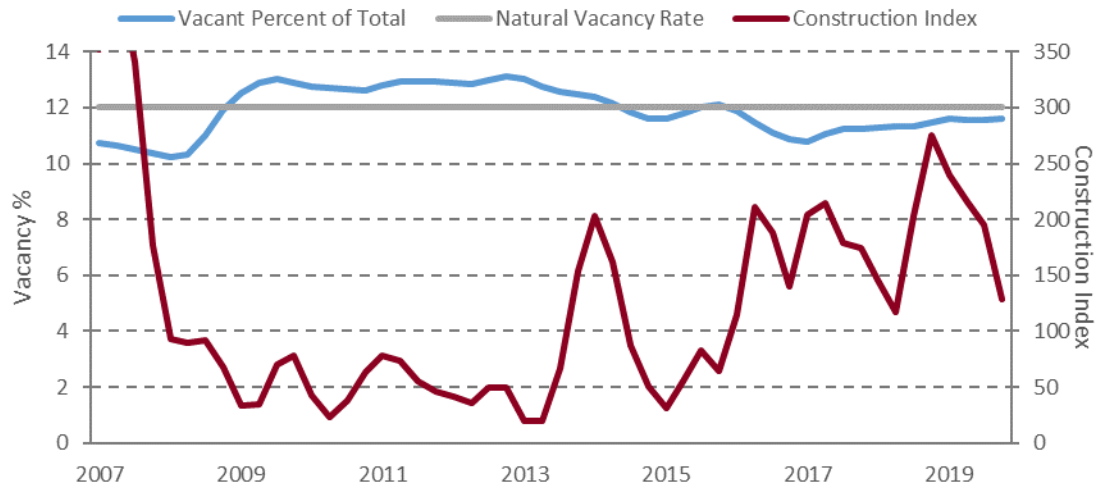
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 72. San Antonio Office Overall Vacancy and Deliveries (SA and TC)*



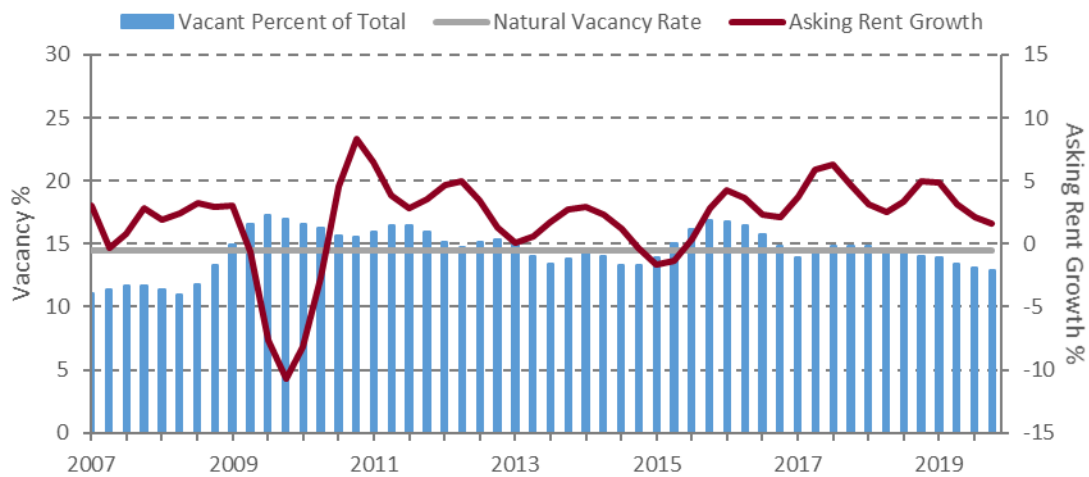
*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 73. San Antonio Office Overall Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)



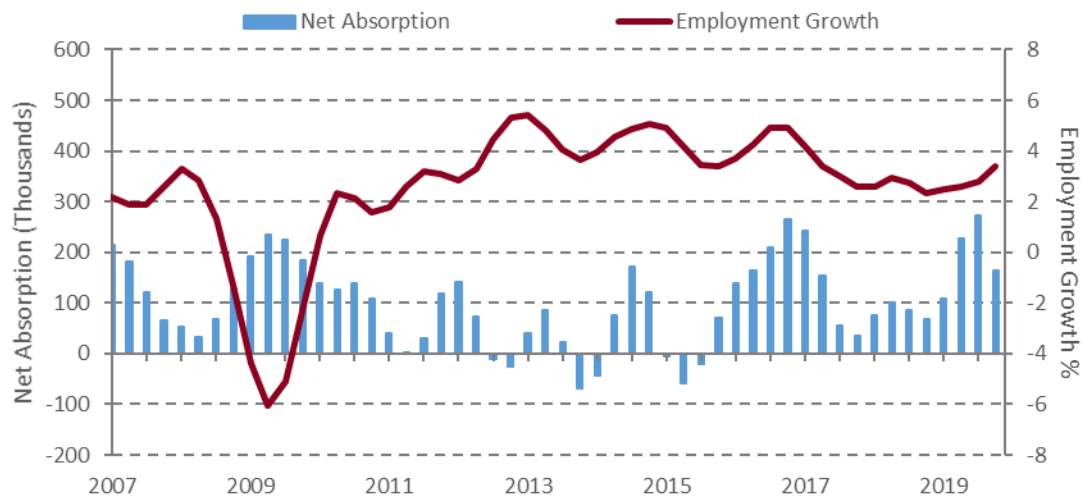
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 74. San Antonio Office Class A Vacancy and Asking Rent Growth (SA and TC)*



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

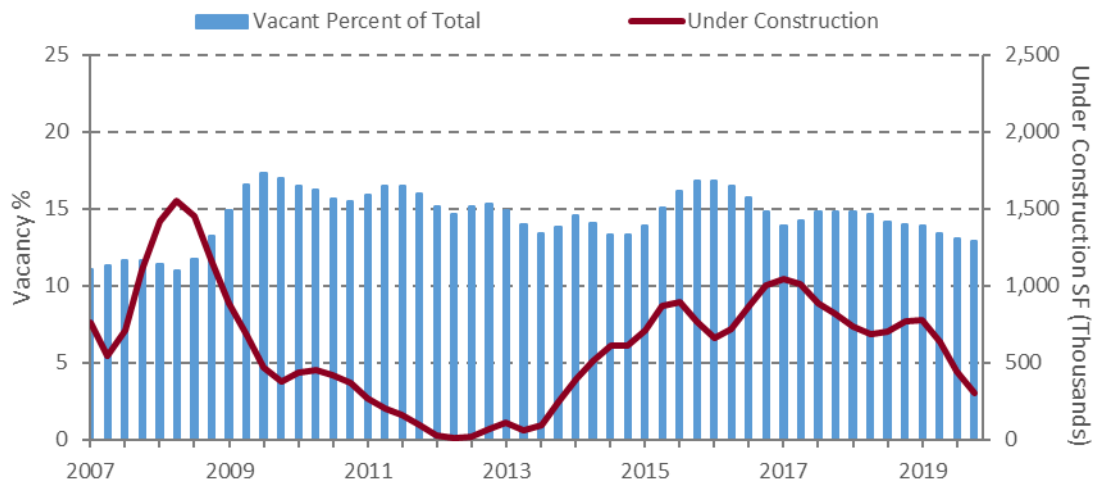
Figure 75. San Antonio Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

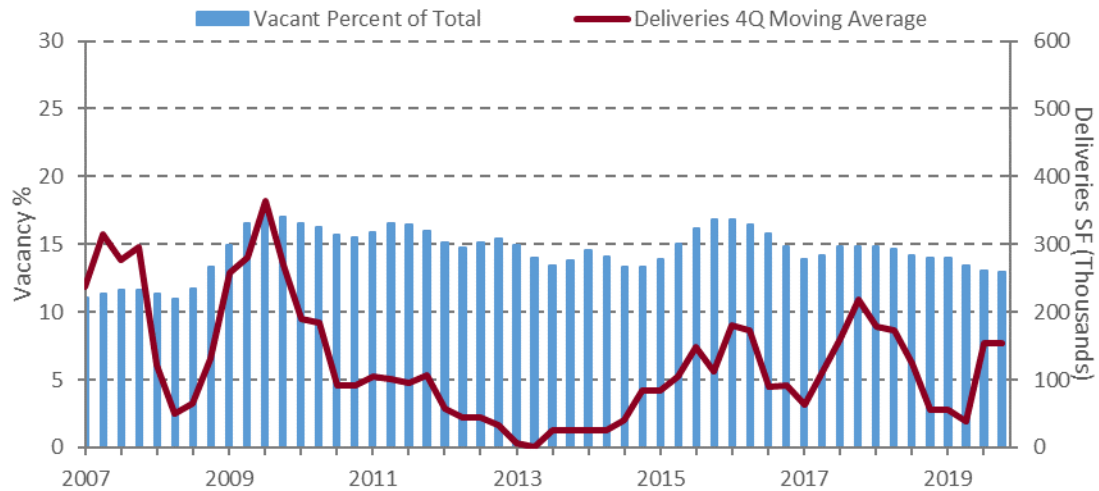
Figure 76. San Antonio Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

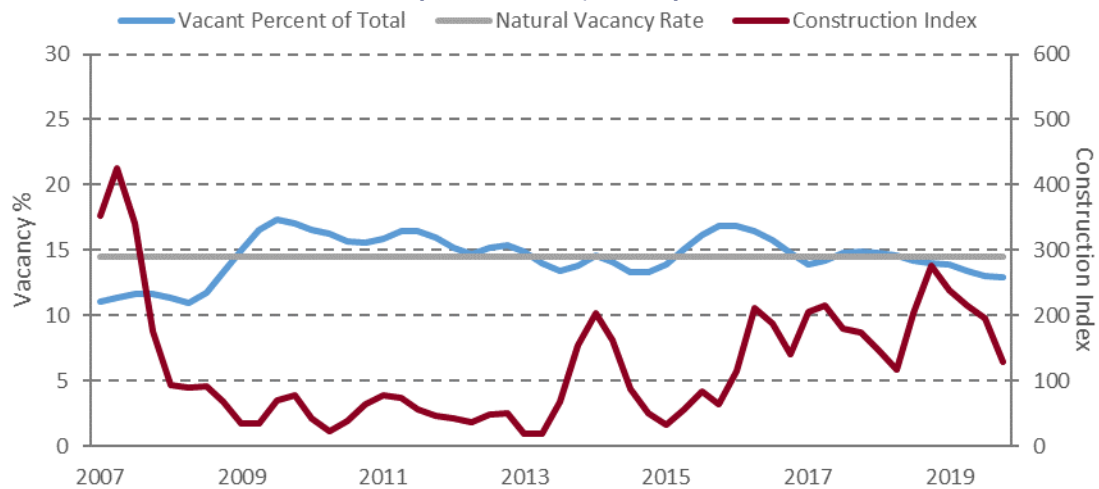
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 77. San Antonio Office Class A Vacancy and Deliveries (SA and TC)*



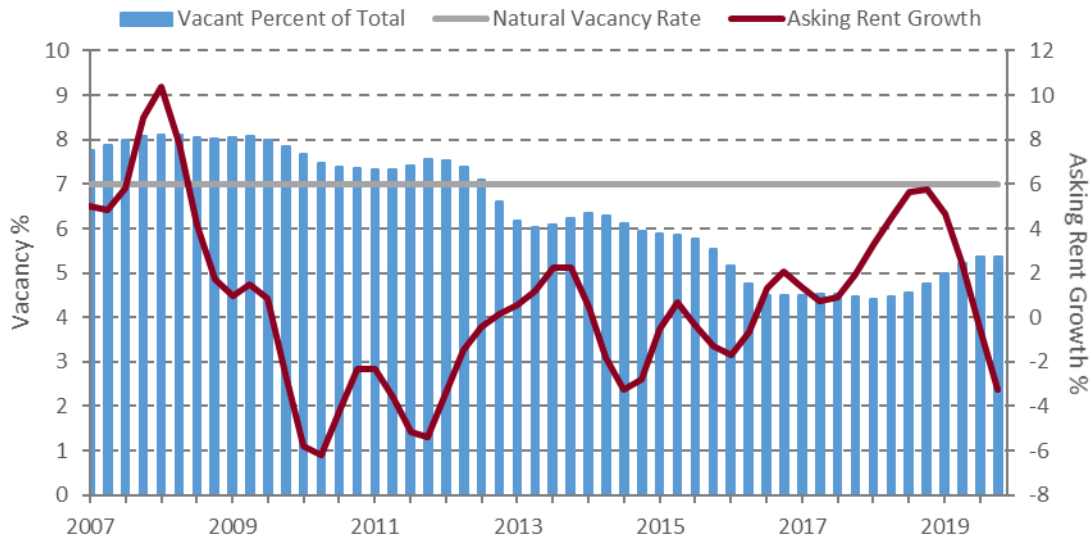
*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 78. 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 Real Estate Center at Texas A&M University

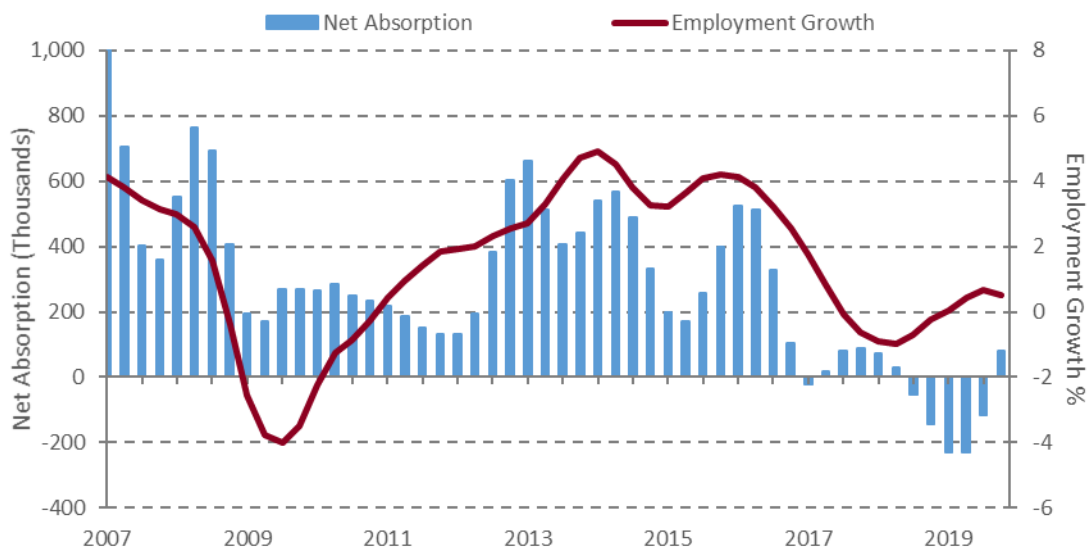
Figure 79. San Antonio Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

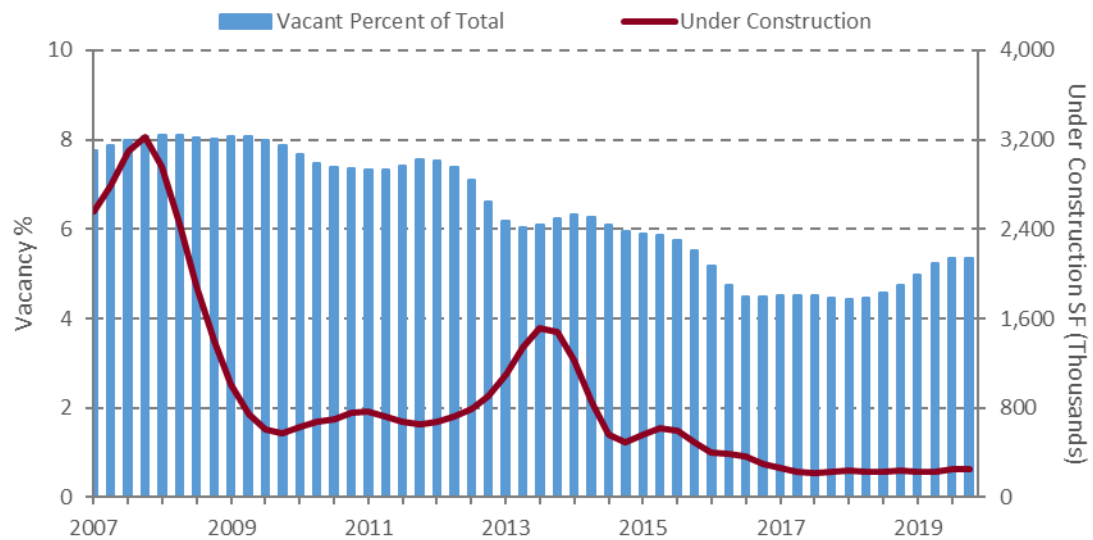
Figure 80. San Antonio Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

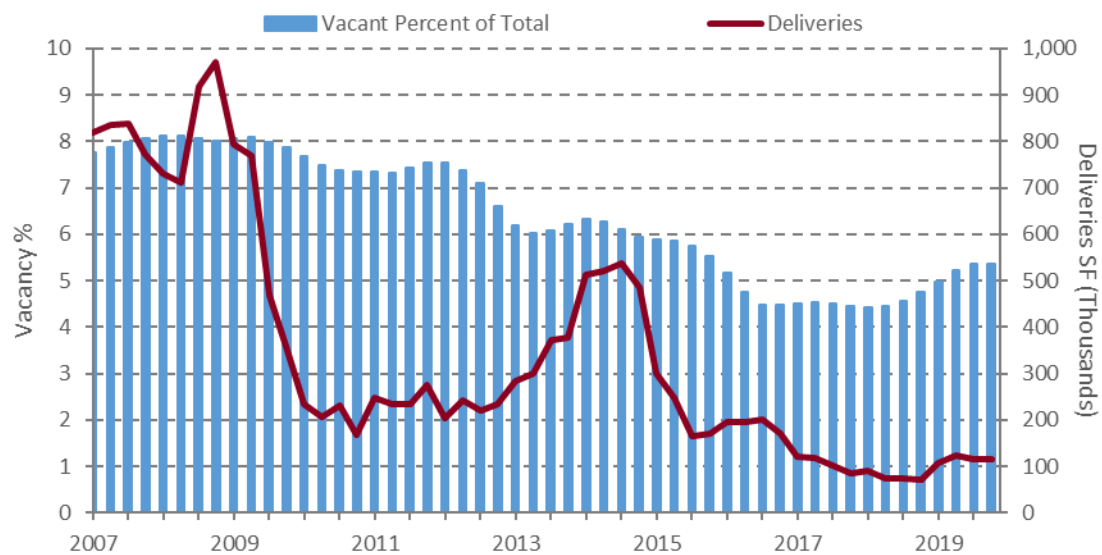
Figure 81. San Antonio Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

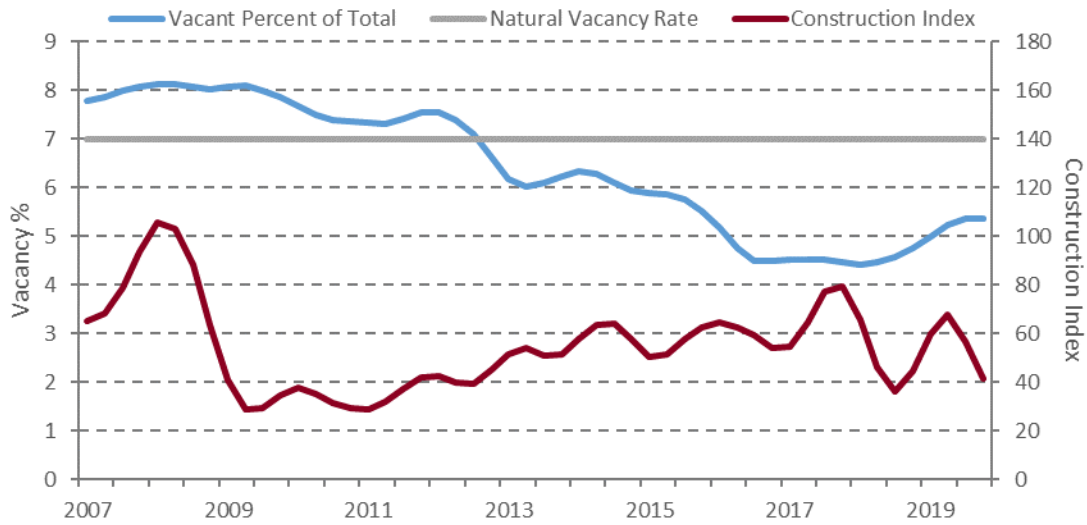
Figure 82. San Antonio Retail Vacancy and Deliveries (SA and TC)*



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

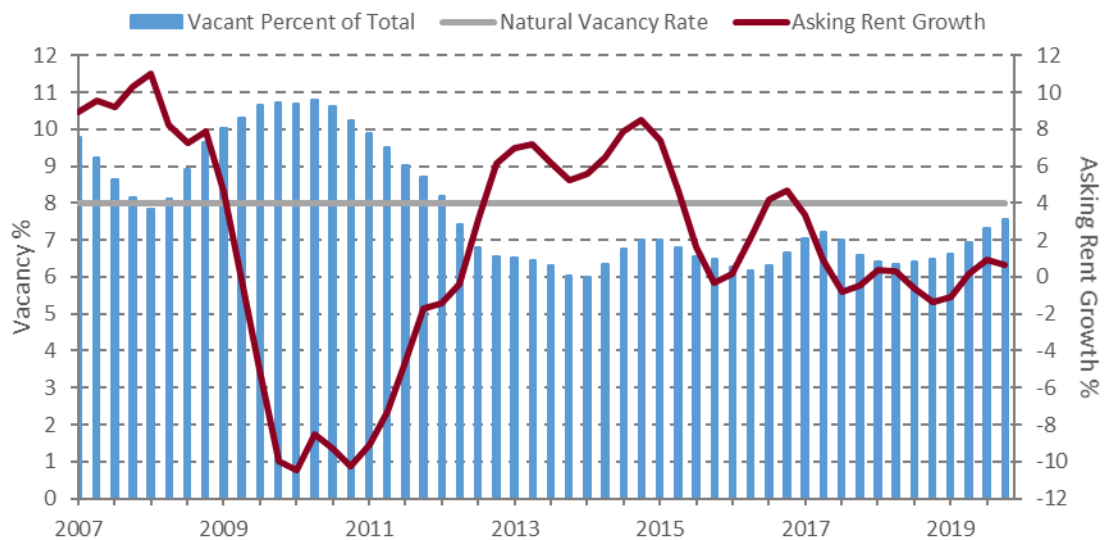
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 83. San Antonio Retail Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)



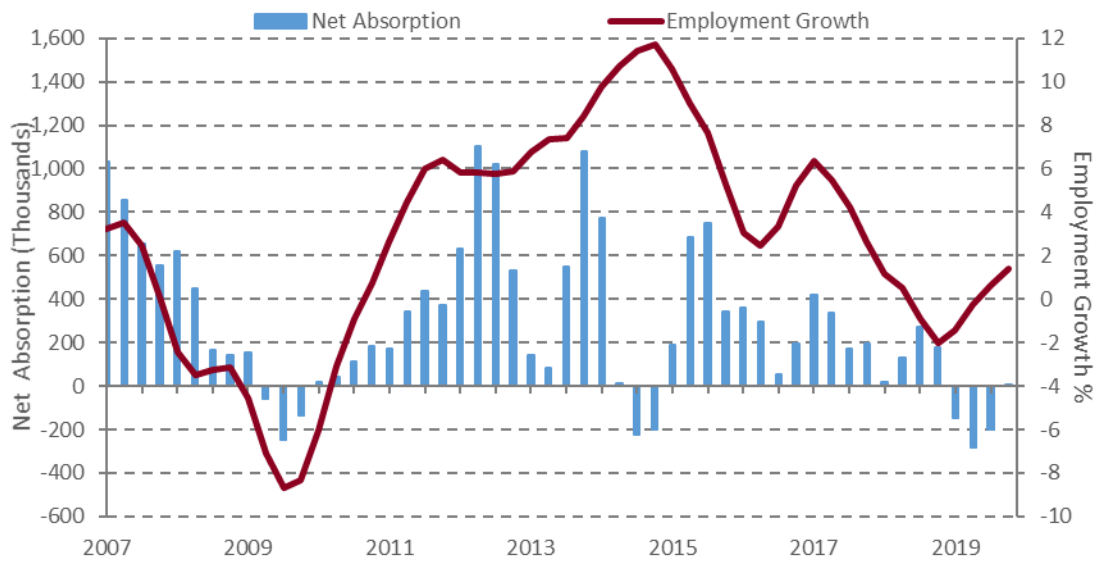
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 84. San Antonio Warehouse Vacancy and Asking Rent Growth (SA and TC)*



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

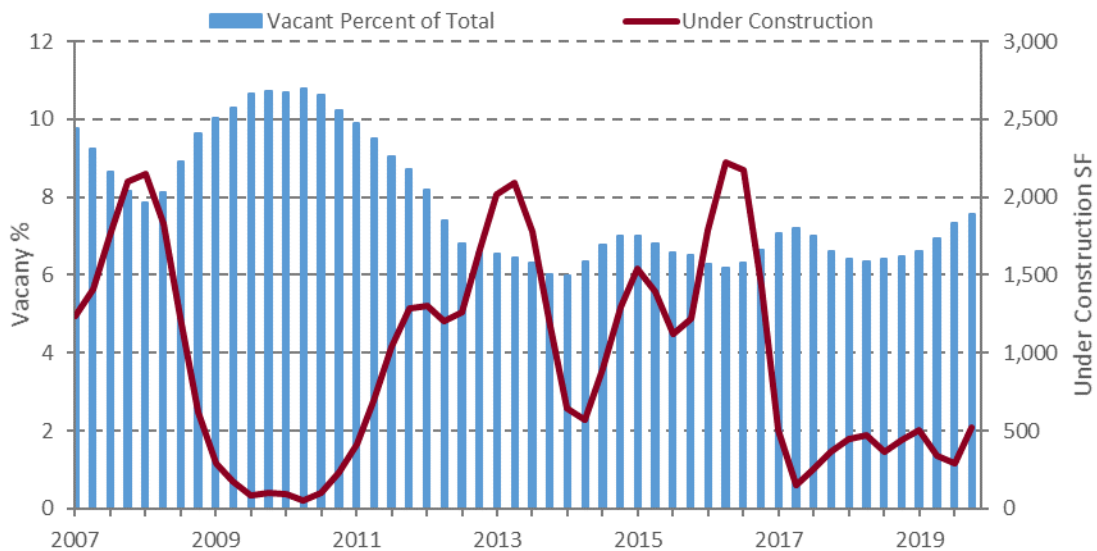
Figure 85. San Antonio Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

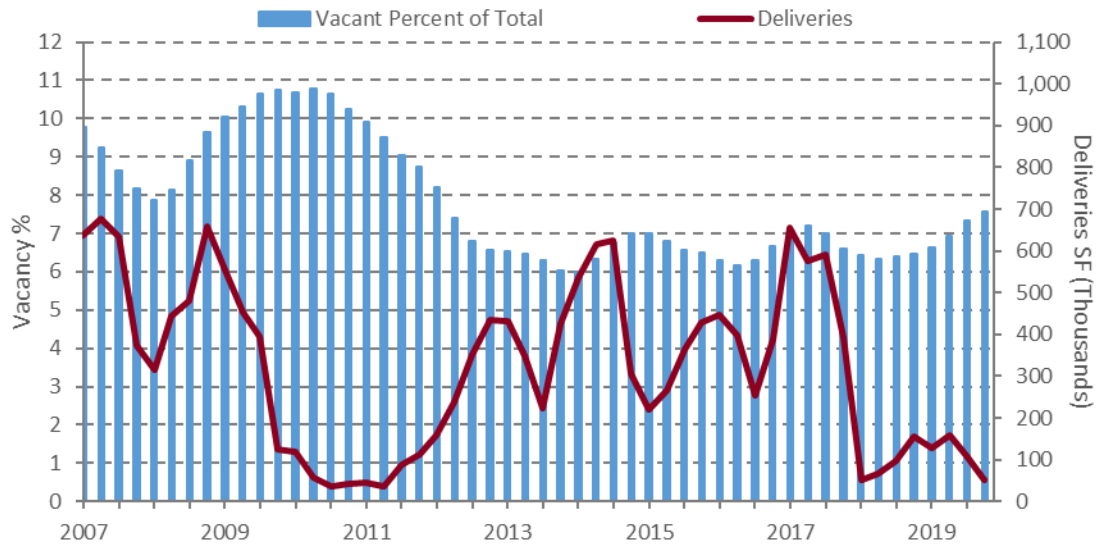
Figure 86. San Antonio Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

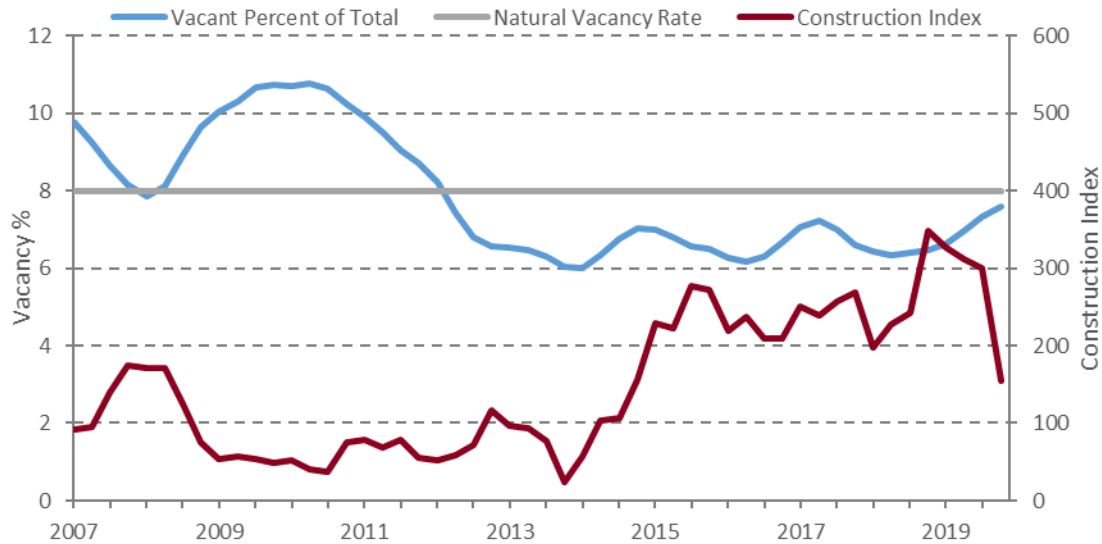
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 87. San Antonio Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Four quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 88. 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 Real Estate 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 comprised 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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