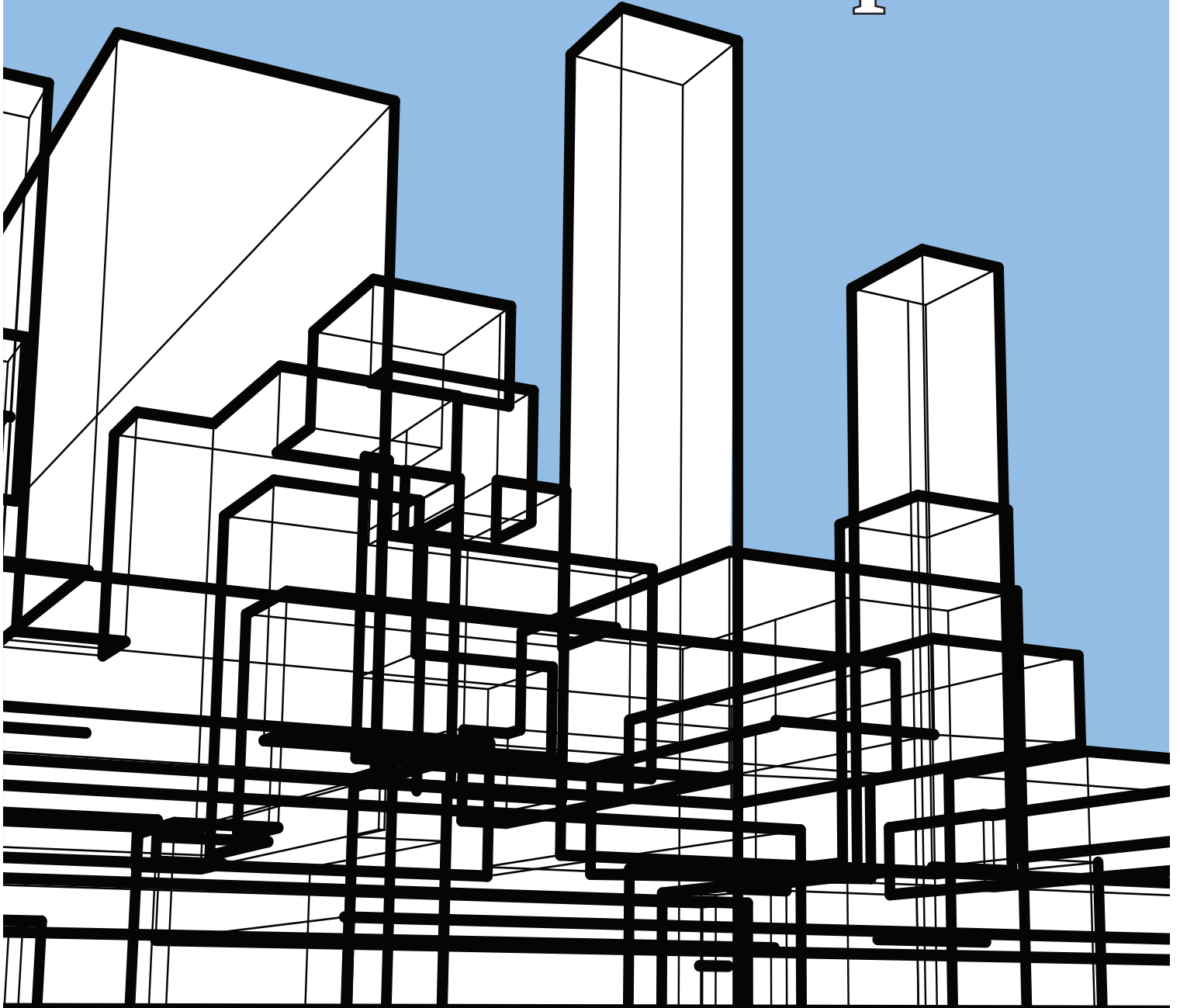




TEXAS A&M UNIVERSITY
Real Estate Center

Texas Quarterly Commercial Report



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Technical Report
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SECOND QUARTER 2020

Texas Quarterly Commercial Report: 2nd Quarter 2020

DALLAS FORT WORTH

	OCCUPANCY RATES	ASKING RENTS
OFFICE	81.3% ▼	2.8% ▼
OFFICE CLASS A	78.4% ▼	2.2% ▼
RETAIL	93.5% ▼	-2.1% ▼
WAREHOUSE	92.4% ▲	12.8% ▲

AUSTIN

	OCCUPANCY RATES	ASKING RENTS
OFFICE	88.5% ▼	3.1% ▬
OFFICE CLASS A	86.2% ▼	2.1% ▲
RETAIL	95.5% ▬	-0.1% ▬
WAREHOUSE	92.2% ▬	7.2% ▲

SAN ANTONIO

	OCCUPANCY RATES	ASKING RENTS
OFFICE	87.9% ▼	5.2% ▬
OFFICE CLASS A	85.6% ▬	7.0% ▲
RETAIL	94.5% ▬	7.0% ▲
WAREHOUSE	92.9% ▲	6.2% ▲

HOUSTON

	OCCUPANCY RATES	ASKING RENTS
OFFICE	79.3% ▼	-0.3% ▲
OFFICE CLASS A	77.1% ▼	-1.3% ▲
RETAIL	93.4% ▼	4.3% ▲
WAREHOUSE	88.8% ▼	3.5% ▲



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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—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. James Gaines, Dr. Luis Torres, Dr. Harold Hunt, Samuel Woolsey, Clare Losey, and Caleb Smoot



Overview of the Texas Economy

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

The Texas Nonresidential Construction Coincident Index, which measures current construction activity, rebounded in June due to an increase in nonresidential employment and real construction values. Construction activity is expected to improve in the coming months after reaching a trough in May, as indicated by the Texas Nonresidential Construction Leading Indicator. However, the nonresidential construction leading indexes by MSA for the commercial sector indicate a slowdown in construction activity going forward. This is due to declines in construction value starts and employment by each sector during 2Q2020.

In contrast, San Antonio's leading index for warehouse construction indicates increasing construction activity in the coming months due to increases in construction value starts and warehouse employment. It is the only MSA and sector to register an increase during 2Q2020. See Figures 1-5 for the Nonresidential Coincident Index and Leading Indicator for Texas and the four major metros.

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

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

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

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

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

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

Even with the recovery slowing in June, the unemployment rate fell to 8.6 percent after reaching a high of 13.5 percent in April. Joblessness in each major metro fell by more than 4 percentage points. Austin's metric was the lowest at 7.3 percent, while unemployment sank to 8.2 and 8.4 percent in Dallas and Fort Worth, respectively. San Antonio's jobless rate was 8.3 percent. Only Houston exceeded the state average with 9.6 percent unemployment. The fall in unemployment is important for commercial real estate given the relationship between unemployment rates and vacancy rates. The longer unemployment lasts, the stronger the negative impact on vacancies and rents. As expected, the increase in the unemployment rate during 2Q2020 pushed up vacancy rates in the major metros (see Figures 6-9).

Continued uncertainty stemming from the ongoing spread of the coronavirus kept interest rates at historically low levels as expectations for future inflation and growth are currently dim. Even before the pandemic, the spread between commercial capitalization rates and the ten-year yield increased at the end of 2019, indicating increased risk and profitability in commercial real estate. The increase in the spread is projected to continue in 2020 as commercial real estate risk continues to be impacted by the pandemic.

Office cap rates (Figure 10) increased in 2Q2020 in Texas' major MSAs, with the exception of Austin. San Antonio and Houston remained the highest, with both cap rates increasing during the first six months of 2020. DFW increased during the second quarter. During the first half of 2020, Austin was the least risky market for office real estate based on the spread with the ten-year Treasury bill.

Retail cap rates (Figure 11) started to decrease in 2019 in the major MSAs, except for Houston. Austin and DFW had the largest decreases during the first half of 2020, followed by San Antonio. The spread in the ten-year Treasury bill increased during the first six months of 2020. Austin and San Antonio are the least risky and lowest return markets for retail real estate.

Industrial cap rates (Figure 12) for San Antonio and Austin continued to be the highest during first half 2020. All major MSAs registered an increase in 2Q2020. 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.



Sources: CoStar and the 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.

Overall Office (Figures 13 - 17)

Since hitting a record low in 2018, vacancy rates have gradually increased, although staying well below the natural vacancy rate of 13.0 percent. Second quarter 2020 was no exception. The vacancy rate increased slightly to 11.5 percent. Asking rents grew marginally, as they did in the first quarter. Minimal changes in vacancy rates and rent growth indicate demand and supply have stayed consistent throughout the quarter, and the effects of COVID-19 may be realized more gradually than originally thought. Net absorption continued to recover from a negative low in 4Q2019, although FIRE & PBS employment growth dipped below 4 percent for the first time since the Great Recession.

Deliveries declined rapidly through the end of 2019 and 1Q2020, with a continued slowdown in the second quarter. Additionally, value of construction starts and square feet under construction declined in both the first and second quarters. The COVID-19 crisis has clearly caused apprehension in Austin office construction; however, this apprehension could help keep vacancy rates at bay during the crisis.



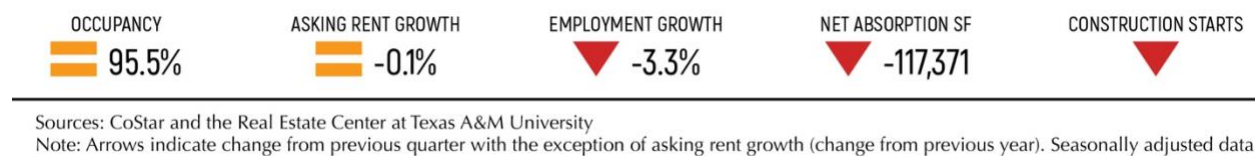
Sources: CoStar and the Real Estate Center at Texas A&M University

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

Class A Office (Figures 18 - 22)

Actual vacancy rose to 13.8 percent, following a year-long trend. Although vacancy is higher than it has been since 2012, it is still less than the natural vacancy rate of 15.0 percent. In addition, both asking rent growth and net absorption rebounded from the first quarter, with asking rent growth increasing to 2.1 percent and net absorption approaching a positive value after a year of negative values. These increases signal that, in spite of the pandemic, demand remained strong for Class A space.

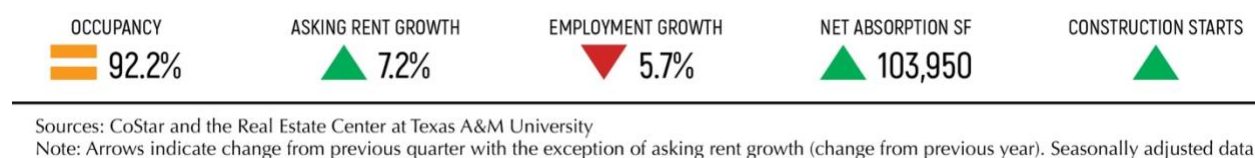
Deliveries and square feet under construction both declined, indicating reduced construction activity that could be attributed to the COVID-19 crisis and rising vacancy rates. Due to the pandemic, many city governments have fallen behind on inspections of construction sites, slowing the timeline for buildings currently under construction.



Retail (Figures 23 - 27)

For the past five years, actual vacancy in retail has stayed relatively constant between 4.0 and 5.0 percent. Despite the pandemic, 2Q2020 followed suit, with a minimal increase in actual vacancy to 4.5 percent, well below the natural vacancy rate of 6.0 percent. Asking rents have contracted slightly in the past two quarters, which has likely contributed to keeping vacancies in check. Not surprisingly, employment growth in the retail sector took a nosedive, to -3.2 percent, a low not seen since the Great Recession. This, coupled with a decline in net absorption, indicates a possible reduction in demand in the near future.

Value of construction starts decreased dramatically, and deliveries and square feet under construction dipped as well. Rent collection is a major concern related to the pandemic. This is particularly relevant to retailers, who have seen their sales decrease immensely. The retail sector will likely be greatly affected as the crisis continues.



Warehouse (Figures 28 - 32)

Actual vacancy continued its gradual rise from a historic low in 2016 to 7.8 percent this quarter, though it remained well below the natural vacancy rate of 11 percent. The asking rent growth rate increased for the second consecutive quarter to a two-year high of 7.2 percent. Demand appears to be strong in the Austin market, with net absorption increasing and turning positive. Similar to other Texas MSAs, Austin's warehouse employment growth rate decreased, and while this quarter's rate of 5.7 percent is higher than other sectors in Austin, it is the lowest rate in the Austin warehouse market since 3Q2018.

The value of construction starts increased massively this quarter to an all-time high. In the first quarter, Amazon announced plans to build a 3.8-million-square-foot fulfillment center in Pflugerville, just outside of Austin. This may be the cause of the spike in construction values.

Additionally, with the pandemic showing the importance of e-commerce, it is not surprising that values of construction starts are rising. Square footage under construction decreased slightly, while deliveries grew minimally, staying within the expected range of the past two years.



Sources: CoStar and the 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.

Overall Office (Figures 33 - 37)

Historically, vacancy rates have stayed relatively level, hovering around the natural vacancy rate of 18.0 percent. Second quarter 2020 followed this trend, with the vacancy rate climbing slightly to 18.7 percent. Asking rent growth remained constant, lingering around 2.8 percent. FIRE & PBS employment growth is not as promising, however, plummeting from 4.2 percent in the first quarter to -1.6 percent in the second. Net absorption rebounded slightly but remained negative.

Square feet under construction and deliveries have steadily declined for the past two years, though deliveries have declined more erratically than square footage under construction. The values of construction starts dropped off over the past three quarters, practically eliminating any gains that occurred in the previous year. Developers and investors likely are apprehensive to pursue standard properties, focusing on both build-to-suit space and industrial developments. COVID-19's impact on the Dallas-Fort Worth office market is still unclear, but the decline in employment growth could indicate difficult times ahead.



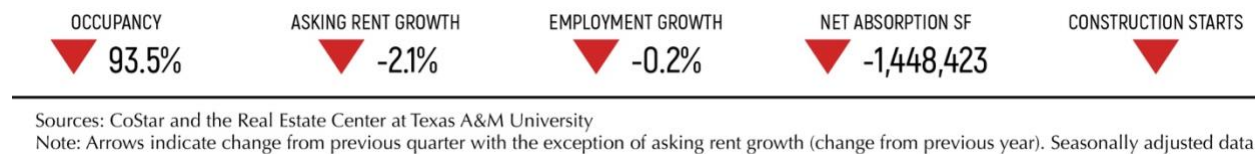
Sources: CoStar and the Real Estate Center at Texas A&M University

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

Class A Office (Figures 38 - 42)

Class A office vacancy rates in Dallas-Fort Worth have been relatively stable since the Great Recession, generally hovering around the natural vacancy rate of 20.0 percent. In accordance with that trend, 2Q2020 showed a minimal rise in actual vacancy to 21.6 percent. Since 2017, asking rent growth has stayed constant between 2.0 percent and 4.0 percent, though this quarter did see a dip to 2.2 percent. Net absorption rose this quarter but remains negative, which is a good sign of consistent demand.

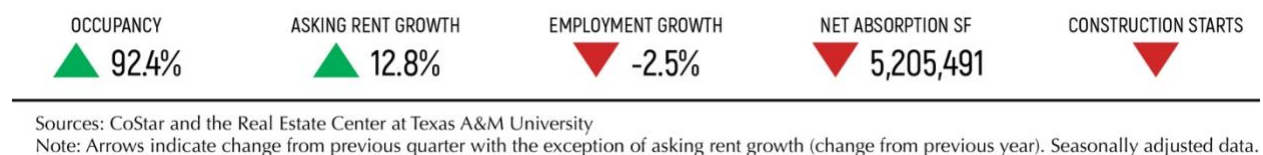
Deliveries and square feet under construction have both gradually declined over the past couple of years, but this quarter saw an uptick in deliveries. With the contraction in FIRE & PBS employment growth and the pandemic, DFW's Class A office market will likely suffer in the coming months. However, to what extent remains unknown.



Retail (Figures 43 - 47)

Actual vacancy continued a gradual climb that began in 4Q2018, reaching 6.5 percent. While actual vacancy is well below the natural vacancy rate of 9.0 percent, it will likely continue to rise in the coming months due to the pandemic. Asking rents continued to decrease this quarter, marking the third consecutive quarter of contraction in the retail sector. Additionally, net absorption reflects an extreme drop in demand this quarter, reaching a historic low negative value that even the Great Recession did not come close to replicating. Employment growth tells a slightly less dire narrative, with growth hovering around 0.0 percent for the previous three quarters. However, the future effects of COVID-19 are still unclear.

Both deliveries and square footage under construction reached all-time lows this quarter, and the value of construction starts, though not extraordinarily low, declined as well. It remains to be seen whether this reduction in new supply coming available will help alleviate the clear fall in demand due to the COVID-19 crisis.



Warehouse (Figures 48 - 52)

Demand for Dallas-Fort Worth warehouse space remains strong, with nearly every demand-related metric breaking their respective records. Actual vacancy dropped to an all-time low of 7.6 percent, far below the natural vacancy rate of 11.0 percent. Additionally, asking rent growth climbed to a historic high of 12.8 percent. Net absorption declined slightly from a 1Q2020 peak, but stayed higher than positive values of the past three years. The warehouse employment growth rate fell steeply this quarter, contracting for the first time since the Great Recession. Given the strong correlation between net absorption and employment growth in the past, the downturn in employment growth could indicate higher vacancy rates in the future.

Though the warehouse market performed relatively well in 2Q2020, uncertainty related to the pandemic was still present. The value of construction starts in the Dallas sector dipped from an all-time high in the first quarter. At the same time, deliveries decreased minimally, and square footage under construction dropped significantly, following a year-long trend.



Sources: CoStar and the 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.

Overall Office (Figures 53 - 57)

In 2Q2020, actual vacancy continued its slow climb that began in 2015, reaching a historical high of 20.7 percent, which is significantly higher than its natural vacancy rate of 14 percent. Meanwhile, asking rent growth continued its decline below 0.0 percent, marking the second consecutive quarter of asking rent contraction in the overall office market. Additionally, FIRE & PBS employment growth dropped, turning negative for the first time since the Great Recession. Net absorption dipped negative considerably as well, aligning with increasing vacancy rates.

Since actual vacancy started its ascent in 2015, both square feet under construction and deliveries declined accordingly. However, vacancy leveled off in 2018, spurring increased construction activity. In the past quarter, square feet under construction grew, while deliveries dropped slightly. Value of construction starts continued a sharp decline that began in the previous quarter, likely caused by apprehension related to the COVID-19 crisis and a hurting energy industry. The pandemic and expected continued layoffs across the oil industry do not bode well for Houston's overall office market, especially considering employment growth has already ground to a halt.



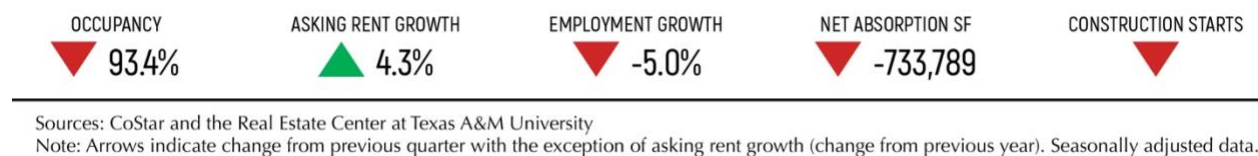
Sources: CoStar and the Real Estate Center at Texas A&M University

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

Class A Office (Figures 58 - 62)

Since reaching a historical high of 23.7 percent at the beginning of 2018, actual vacancy has remained significantly higher than the natural vacancy rate of 16.0 percent. This quarter, Class A office actual vacancy came in at 22.9 percent. Additionally, this quarter marked the second consecutive quarter of contraction of asking rents, which aligns with the large amount of vacant space. Net absorption turned negative in the second quarter, along with FIRE & PBS employment growth.

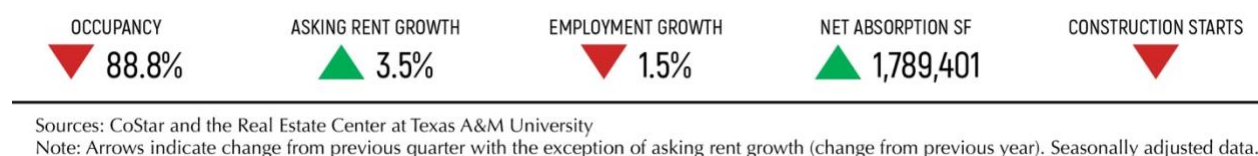
Similar to Houston's overall office market, the Class A deliveries dropped slightly this quarter. However, the number of square feet under construction has stayed fairly constant for the past three quarters. Given these factors, it is clear that neither Houston's overall nor Class A office market are poised to handle the pandemic and the oil downturn. With the current level of uncertainty surrounding office buildings and their tenants, Houston likely will be significantly affected, though to what extent remains unknown.



Retail (Figures 63 - 67)

Actual vacancy climbed minimally in 2Q2020 to 6.6 percent. While this is higher than it has been since 2014, it is still less than the natural vacancy rate of 8.0 percent. Contrary to the Austin and Dallas-Fort Worth retail sectors, asking rent growth climbed nearly a percentage point to 4.3 percent, the highest it's been since 2015. Alternatively, both net absorption and employment fell drastically, reaching all-time lows. Net absorption turned negative, and employment growth continued its almost three-year trend of contraction. These factors imply demand for Houston retail space has been decreasing and could continue to decrease in the face of the pandemic.

It appears developers have recognized this trend, with the value of construction starts, square feet under construction, and deliveries all decreasing in the second quarter. As the ramifications of the pandemic continue to be realized, including tenants' ability to stay in business, it is unknown how severely retail will be affected.



Warehouse (Figures 68 - 72)

Actual vacancy (11.2 percent) continued to rise this quarter to a historical high, following the two-year trend. Contrary to other Texas MSAs, warehouse vacancy in Houston has been well above the natural vacancy rate of 8.0 percent for the past five quarters, likely due to the high number of deliveries during that time. Despite increasing vacancy, asking rent growth rebounded this quarter to 3.5 percent. This, coupled with the fact that net absorption grew this quarter, indicates demand is still fairly strong in the Houston market. Employment growth slowed this quarter in the face of COVID-19, though it remained positive at 1.5 percent.

Deliveries dipped from last quarter after a 2.5-year climb to an all-time high. Square feet under construction continued a decline that began in the first quarter. As e-commerce becomes even more popular with the onset of the pandemic, demand for warehouse space will likely continue to rise. With construction start values plummeting and square feet under construction dropping, vacancy will likely begin leveling out as long as demand for space stays strong.



Sources: CoStar and the 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.

Overall Office (Figures 73 - 77)

Overall office vacancies in San Antonio grew minimally in 2Q2020, barely surpassing the natural vacancy rate of 12.0 percent. Asking rent growth stayed constant at 5.2 percent, the highest of all Texas MSA overall office markets. Compared with the other major Texas MSAs other than Austin, FIRE & PBS employment growth dropped. In San Antonio, it dropped to -3.9 percent, indicating a significant contraction similar to that of the Great Recession. In addition, net absorption reached a historic negative low value.

Square feet under construction has stayed relatively constant over the past ten years, and the 2Q2020 followed suit, increasing slightly. Deliveries dipped but remained well within the normal range of the past ten years. Unlike the other three major Texas MSAs, San Antonio saw a slight uptick in value of construction starts in 2Q. While FIRE & PBS employment contraction and negative net absorption are significant issues in San Antonio, the long-term effects of the pandemic are unclear.



Sources: CoStar and the 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.

Class A Office (Figures 78 - 82)

Class A office actual vacancy continued a slow decrease from a peak in 2018 to arrive at 14.4 percent in 2Q2020. With the natural vacancy rate sitting at 14.5 percent, the Class A office market appears to be holding steady. Asking rent growth jumped fairly significantly to 7.0 percent during the second quarter, a 2.0 percent increase from the previous quarter. Net absorption turned negative for the first time in three years, and square feet under construction rebounded from a first quarter dip. As more space comes available and FIRE & PBS employment possibly continues to contract, demand could begin falling in the immediate future.

Deliveries reached a historic low this quarter, which could be good news for San Antonio's Class A office market. With considerable uncertainty surrounding the pandemic, the lack of new

supply could help counteract the crisis' negative effects. However, the results have yet to be seen.



Sources: CoStar and the 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.

Retail (Figures 83 - 87)

Actual vacancy continued its almost three-year rise to 5.5 percent, although it remained well below the natural vacancy of 7.0 percent. Asking rent growth spiked significantly in the second quarter to 7.0 percent, its highest level since the year prior to the Great Recession. Net absorption turned positive this quarter, which, along with increasing rents, indicates demand remains strong. Retail employment growth, however, slid to a historical low this quarter, contracting 4.9 percent.

Deliveries and square footage under construction have gradually declined over the past five years, likely helping keep area vacancy rates at bay. Value of construction starts have stayed constant for the past three quarters, possibly due to the steady level of demand. While employment data suggest San Antonio's retail sector will suffer in the coming months, demand has remained constant, indicating the effects of the pandemic have yet to be seen.



Sources: CoStar and the 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.

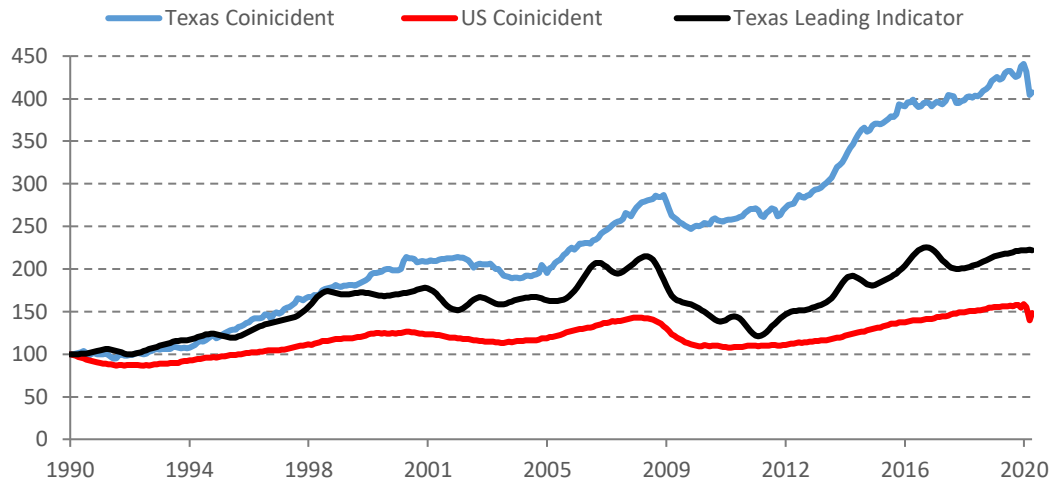
Warehouse (Figures 88 - 92)

Actual vacancy continued to decline for the second consecutive quarter to 7.1 percent. Since the Great Recession, actual vacancy has not surpassed the natural vacancy rate of 8.0 percent. Asking rent growth spiked from 0.0 percent to 6.2 percent this quarter, which, along with an increase in net absorption, indicates steady demand. Employment growth has been climbing since 4Q2018; however, it decreased this quarter, likely as a result of the COVID-19 crisis.

There have been no deliveries in the past three quarters, which could be one reason vacancy has remained low and both rent growth and net absorption have increased. San Antonio's warehouse market has maintained low levels of both square feet under construction and deliveries during the past few years, which could be helping the market weather the pandemic. As construction start values surged to an all-time high this quarter, square feet under construction will likely increase in the coming months, and deliveries will follow suit.

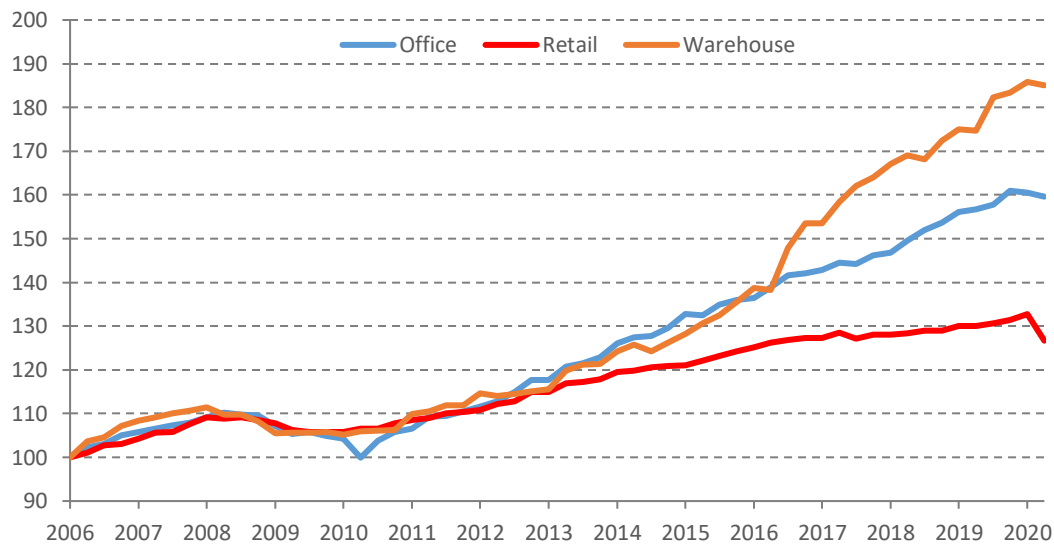


Figure 1. Texas Nonresidential Construction Coincident and Leading Indicators
(Index Oct. 1990 = 100)



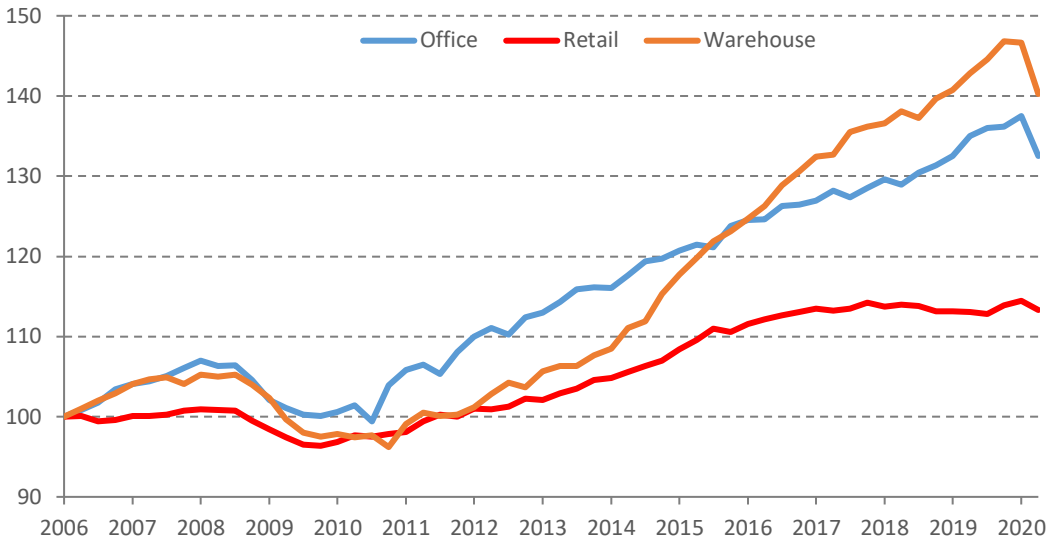
Source: Real Estate Center at Texas A&M University

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



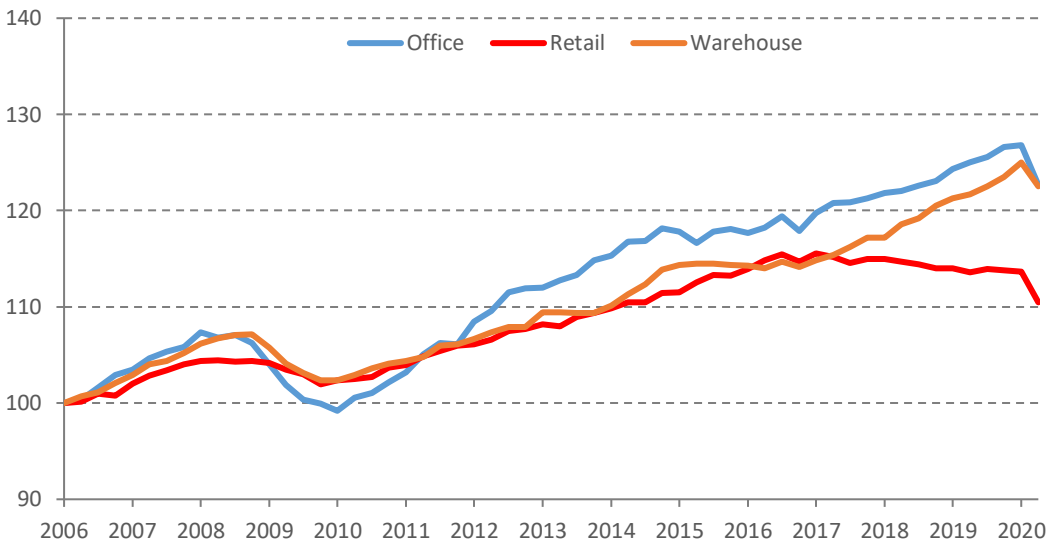
Source: Real Estate Center at Texas A&M University

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



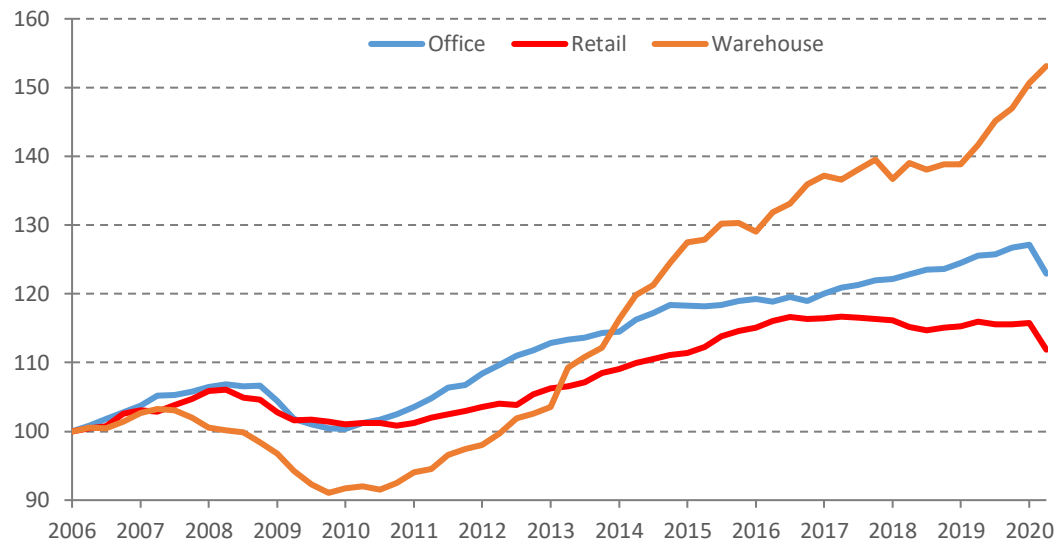
Source: Real Estate Center at Texas A&M University

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



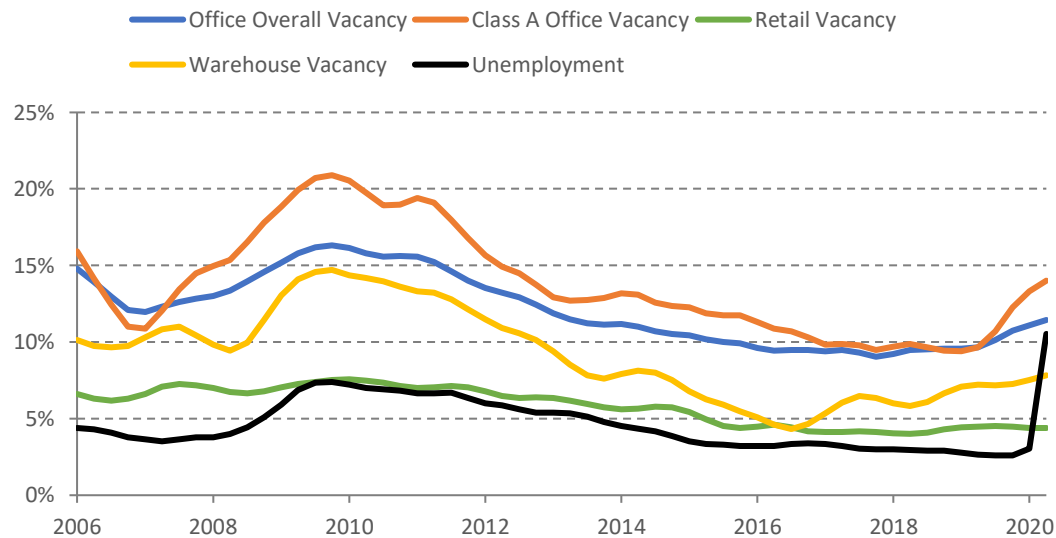
Source: Real Estate Center at Texas A&M University

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



Source: Real Estate Center at Texas A&M University

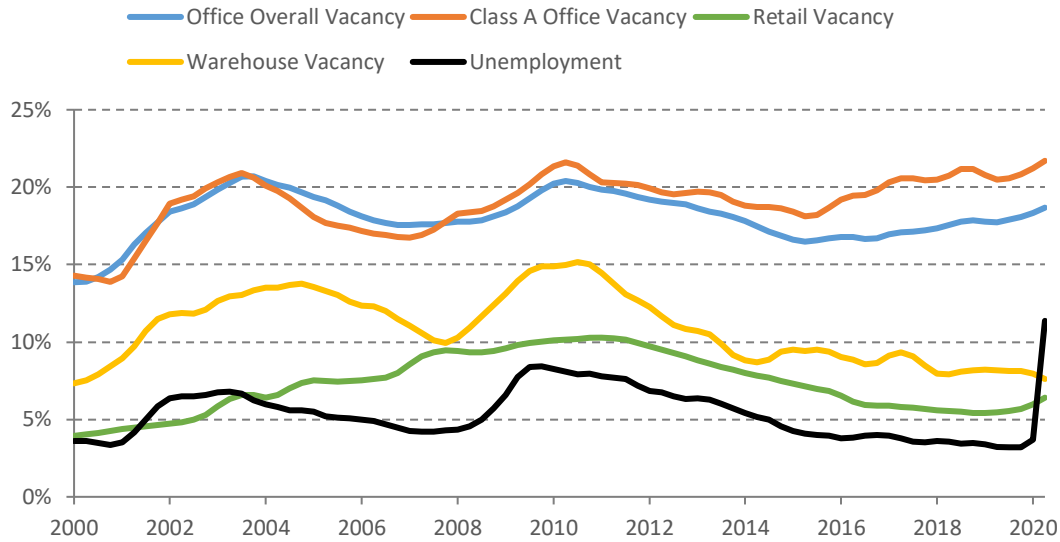
Figure 6. Austin Commercial Vacancy Rates and Unemployment (SA and TC)*



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

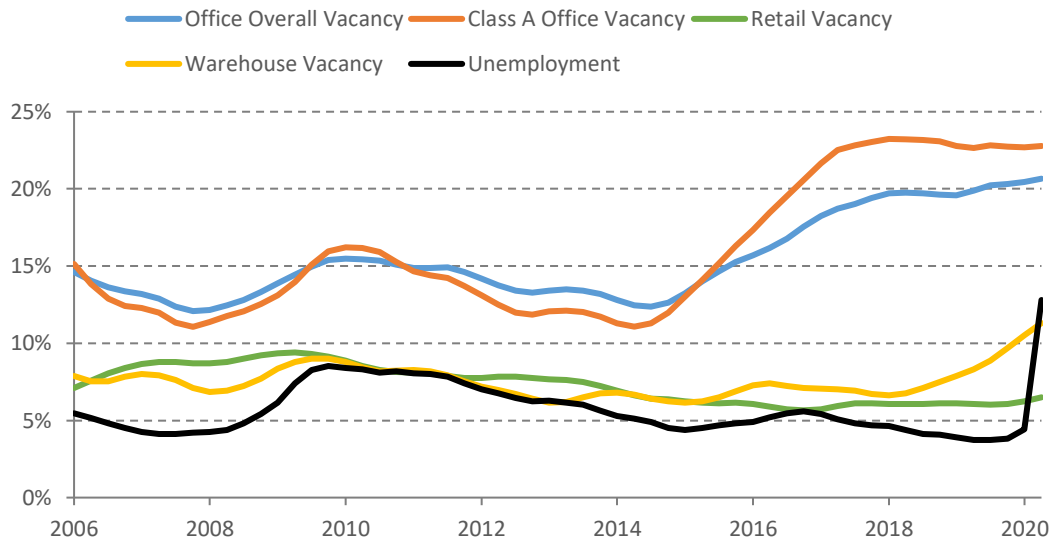
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



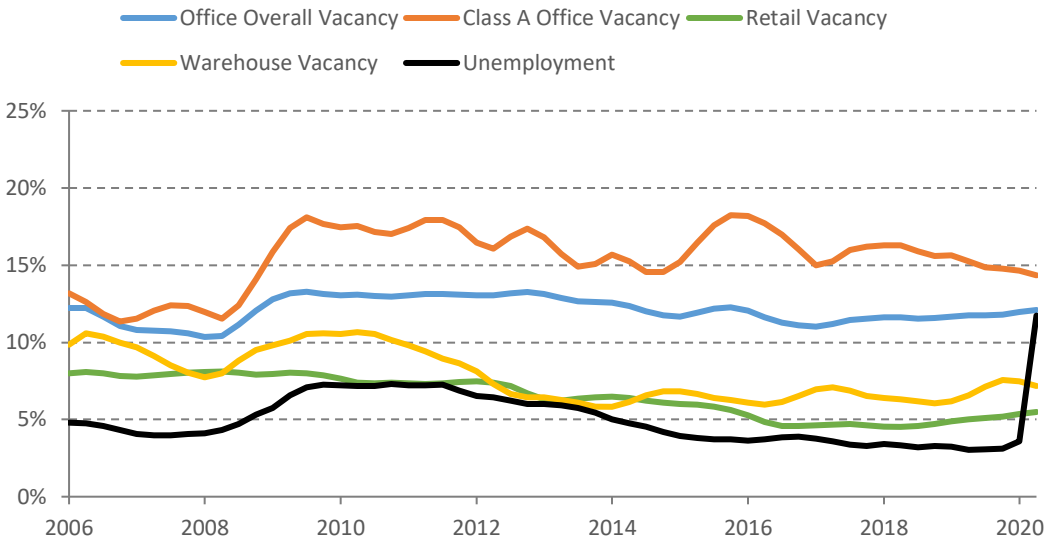
*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



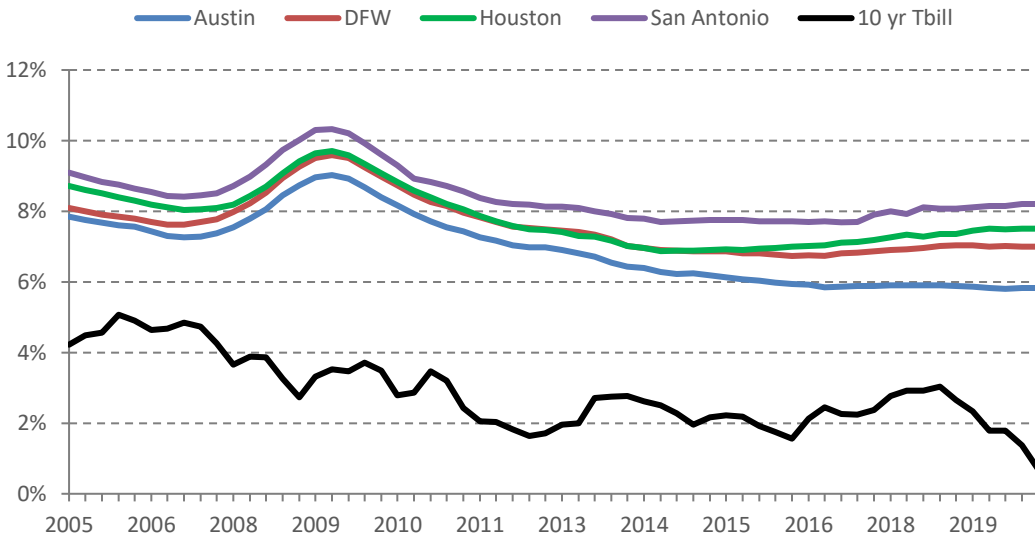
*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 9. San Antonio Commercial Vacancy Rates and Unemployment



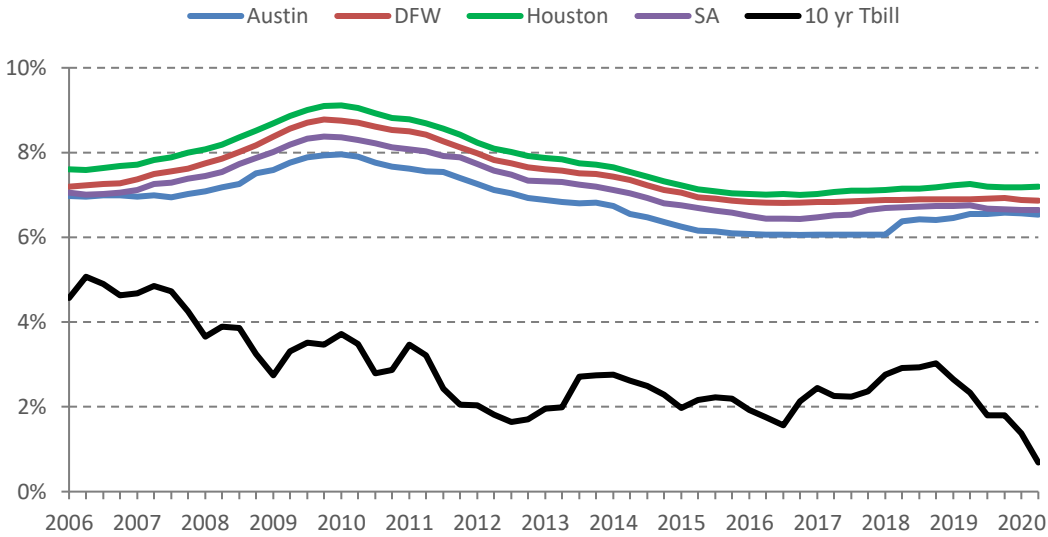
*Note: Vacancy rates seasonally adjusted and trend-cycled, unemployment seasonally adjusted.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

Figure 10. Texas Major MSAs Office Cap Rates



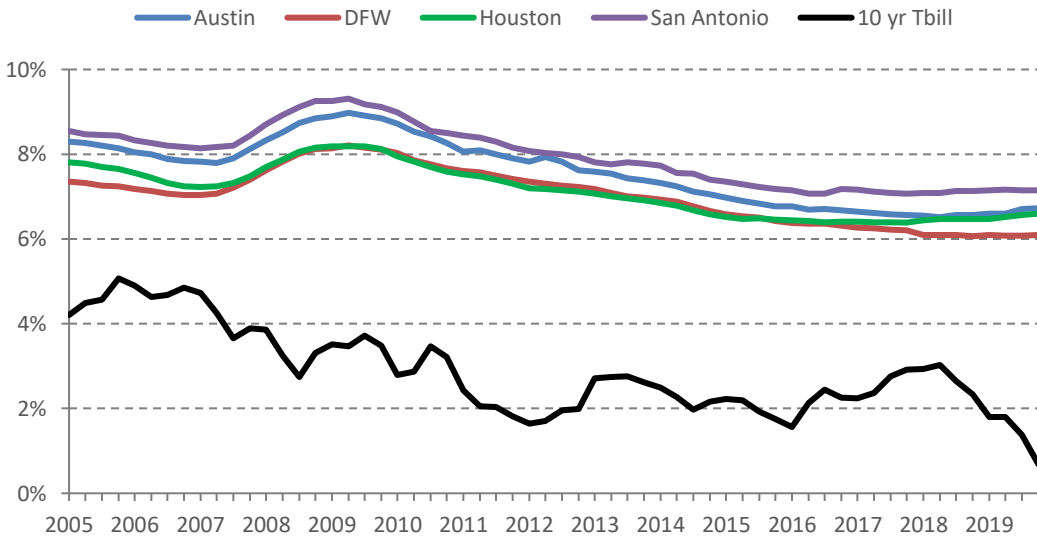
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 11. Texas Major MSAs Retail Cap Rates



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

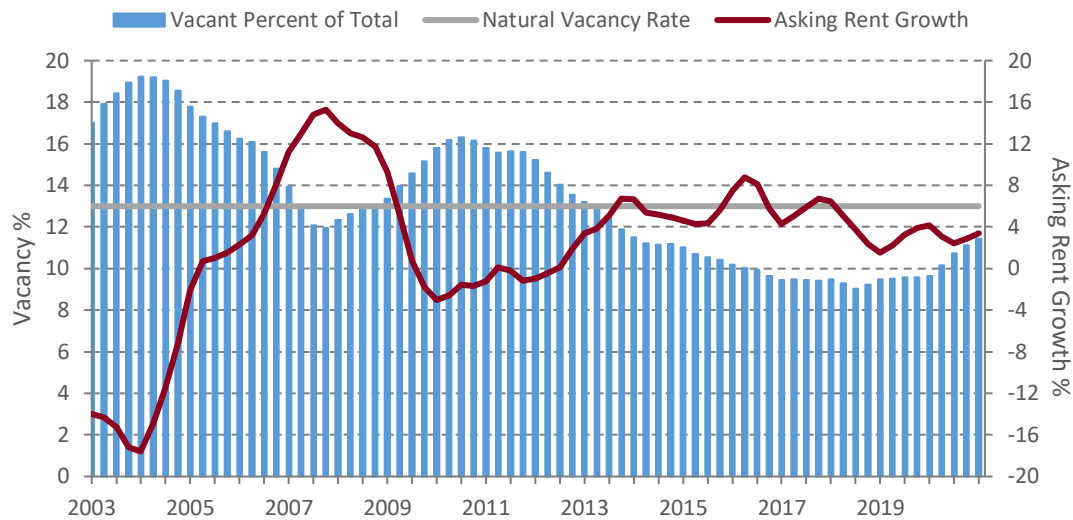
Figure 12. Texas Major MSAs Warehouse Cap Rates



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

Austin

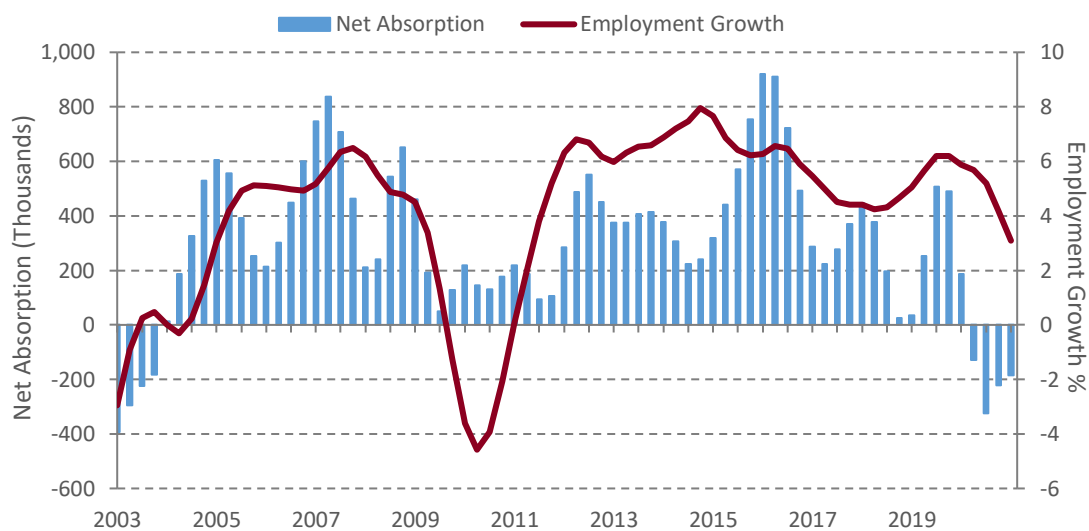
Figure 13. Austin Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

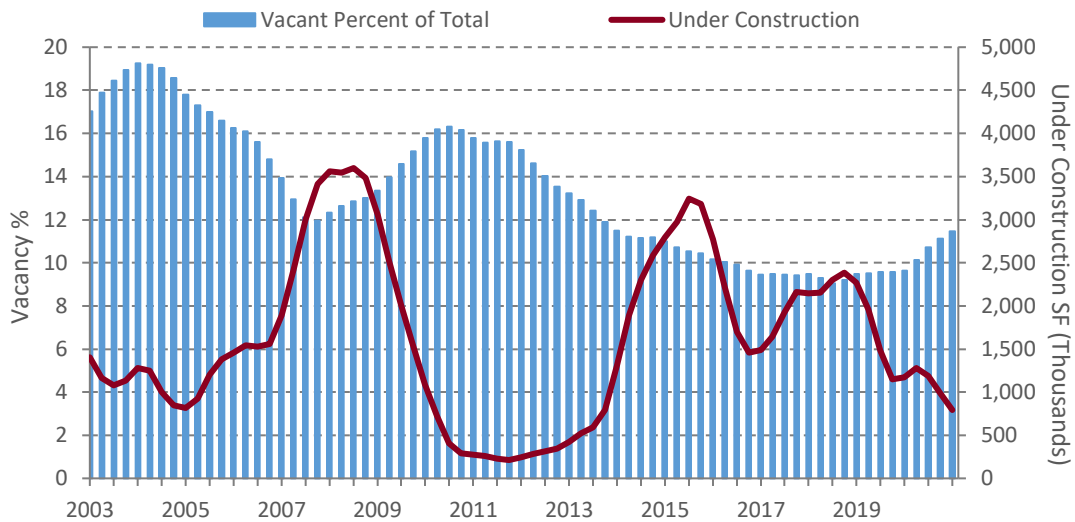
Figure 14. Austin Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

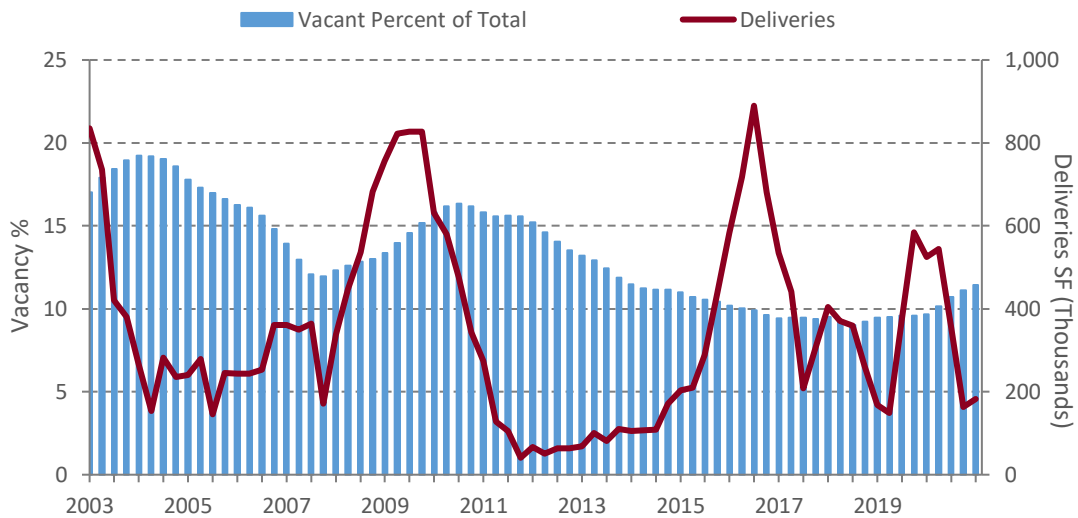
Figure 15. Austin Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

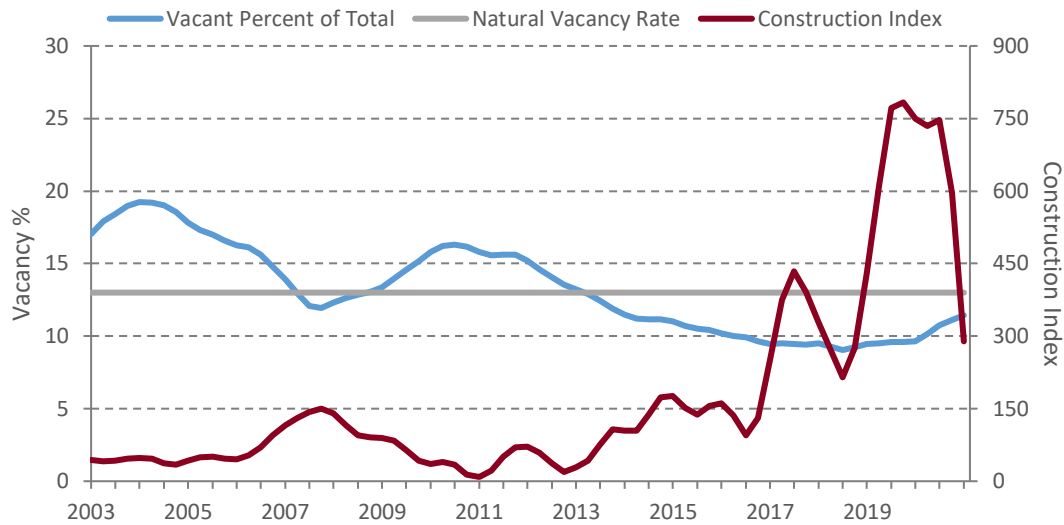
Figure 16. Austin Office Overall Vacancy (SA and TC)* and Deliveries



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

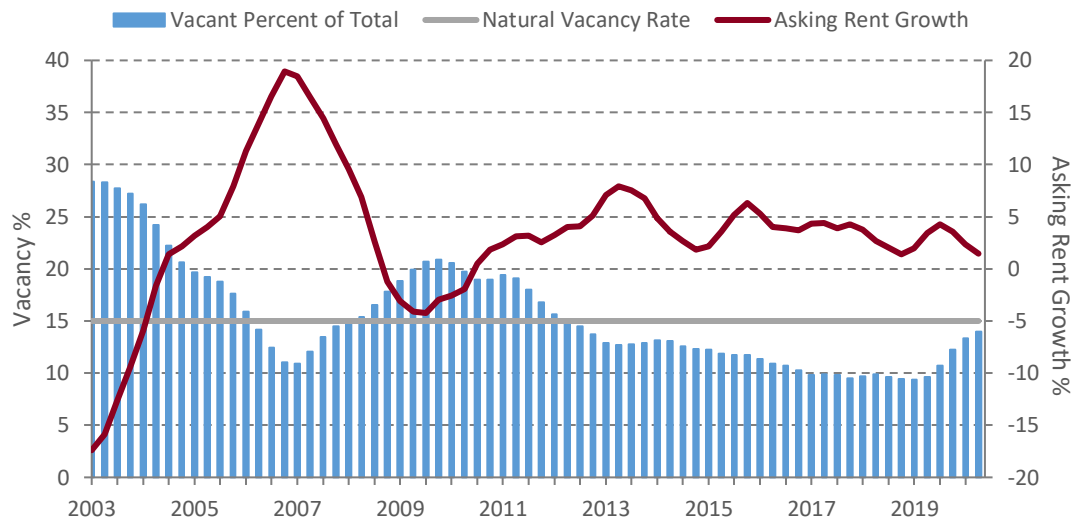
Sources: CoStar and Real Estate Center at Texas A&M University

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



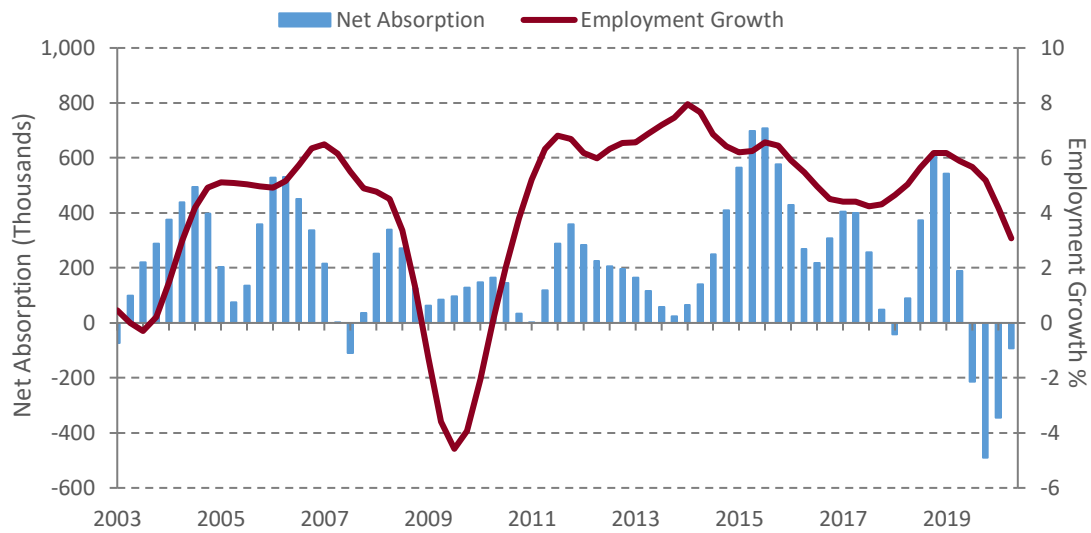
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

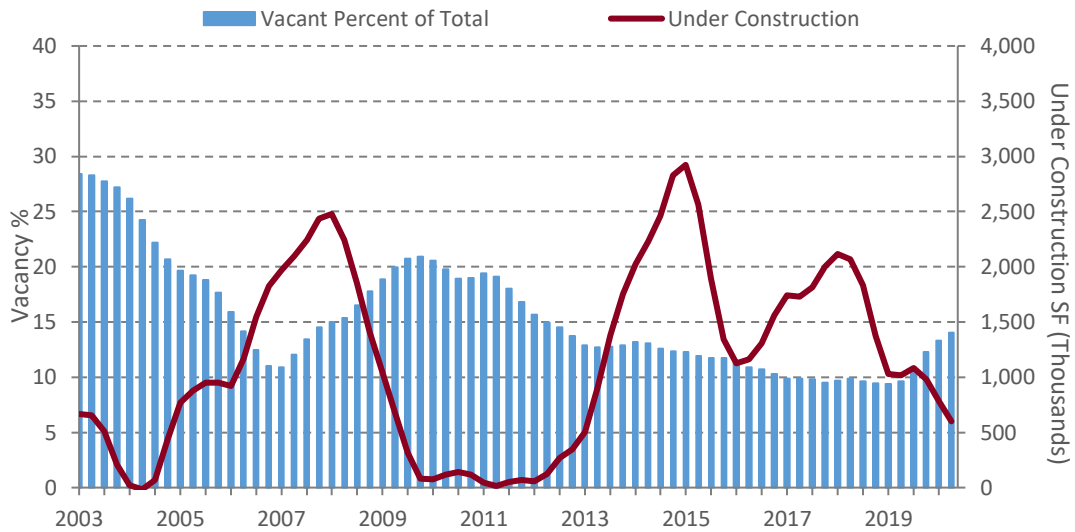
Figure 19. Austin Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

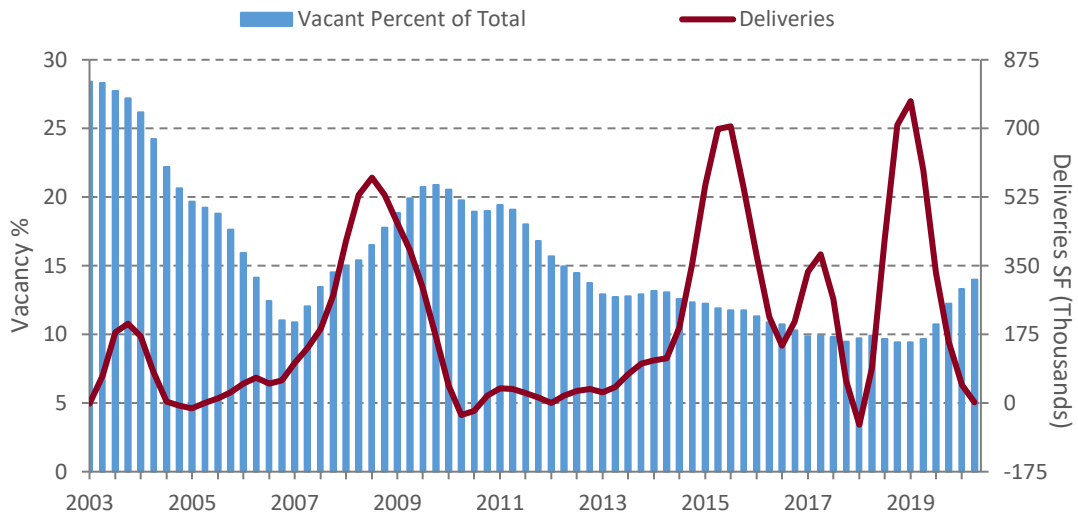
Figure 20. Austin Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

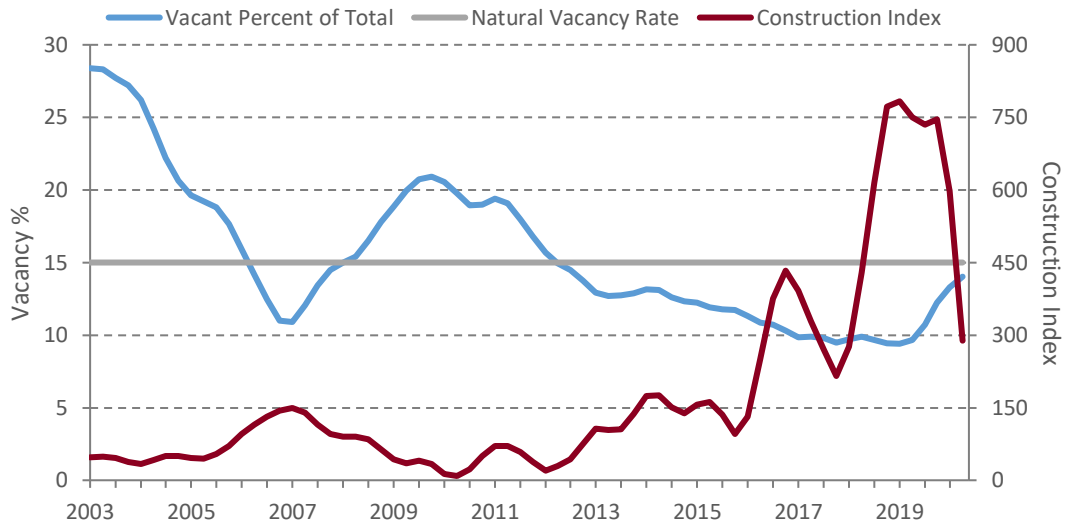
Figure 21. Austin Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

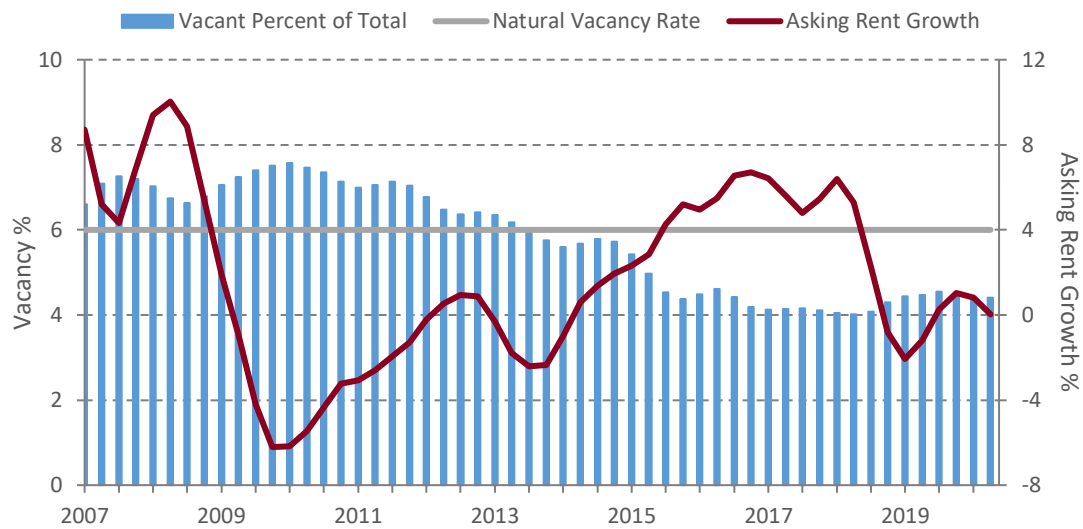
**Figure 22. Austin Office Class A Vacancy and Construction Index (SA and TC)*
(Index 2000 Q4 = 100)**



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

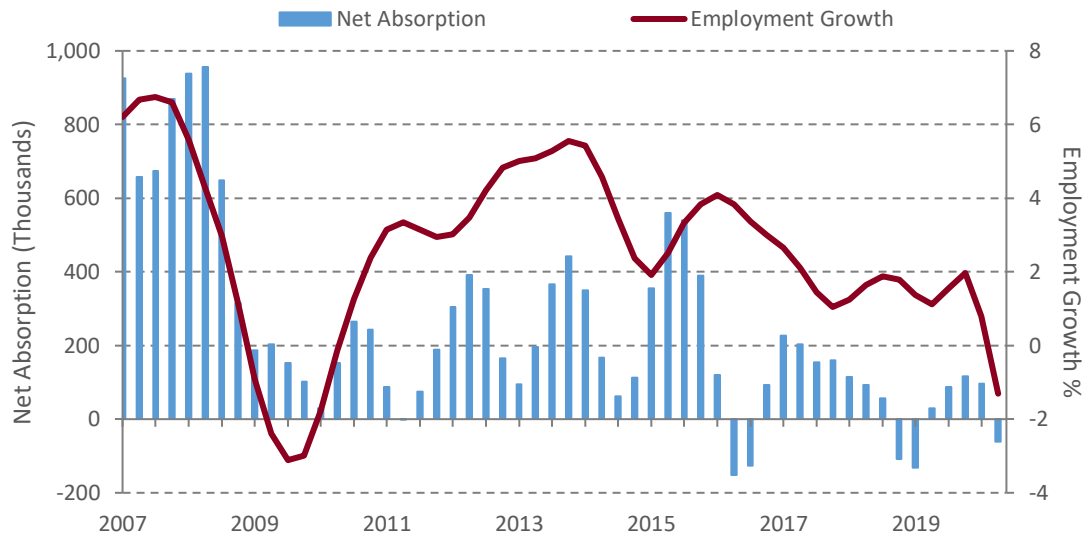
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



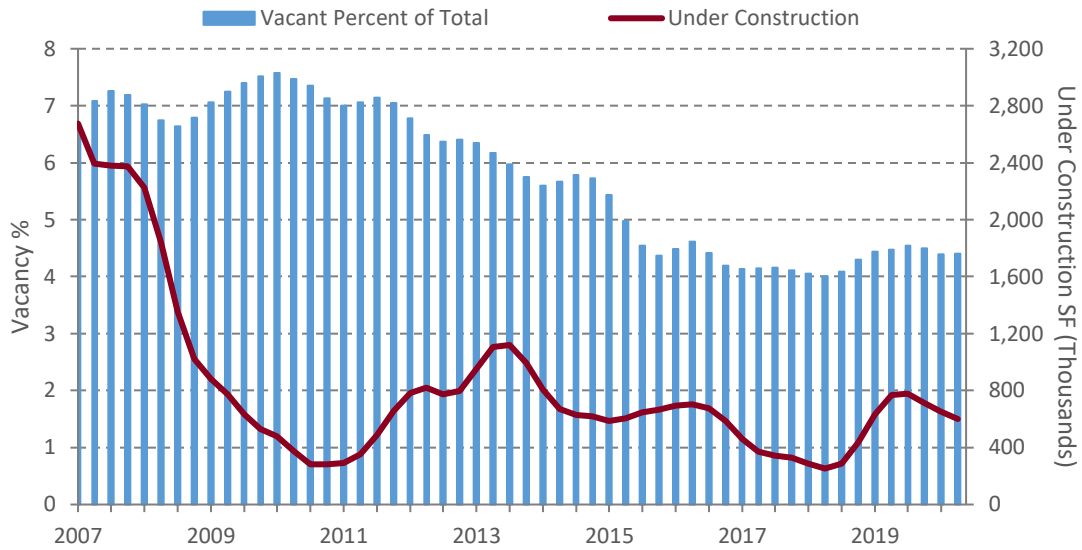
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



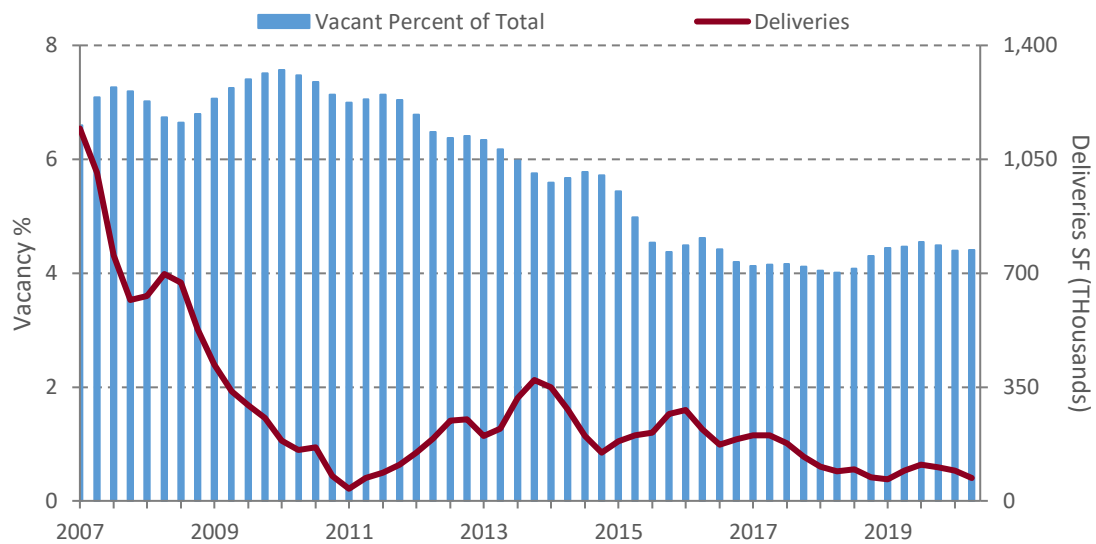
*Note: Seasonally adjusted and trend-cycle component.
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



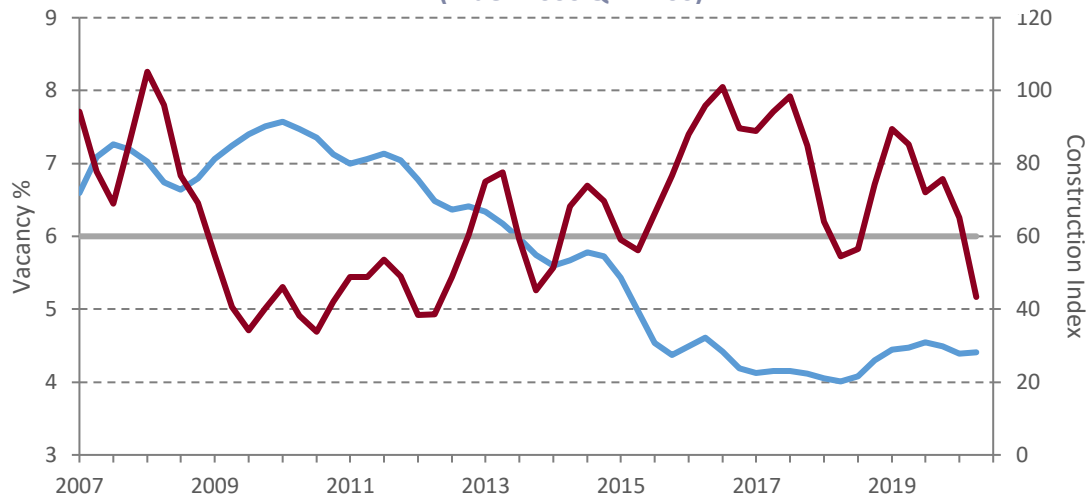
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



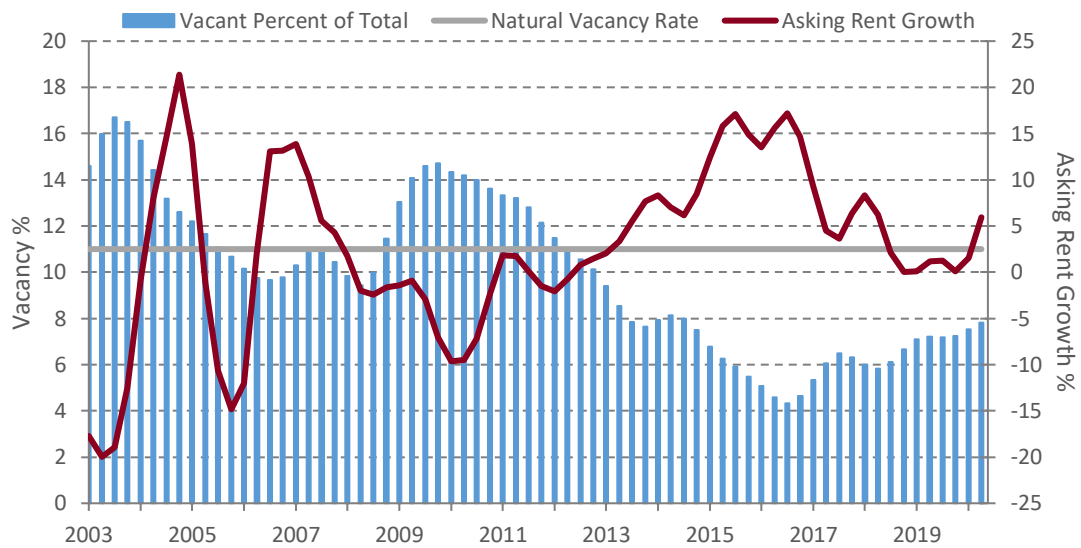
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



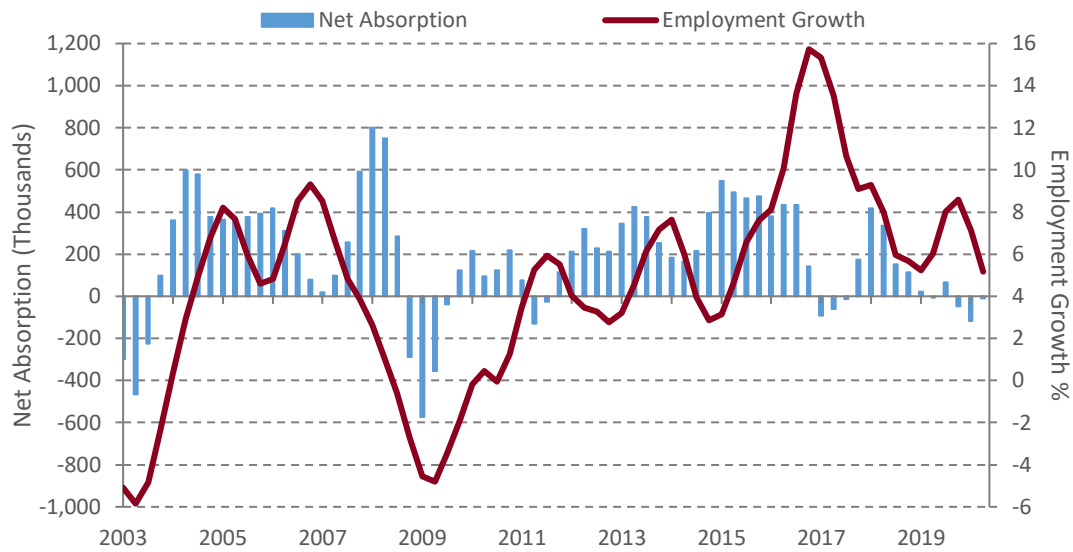
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

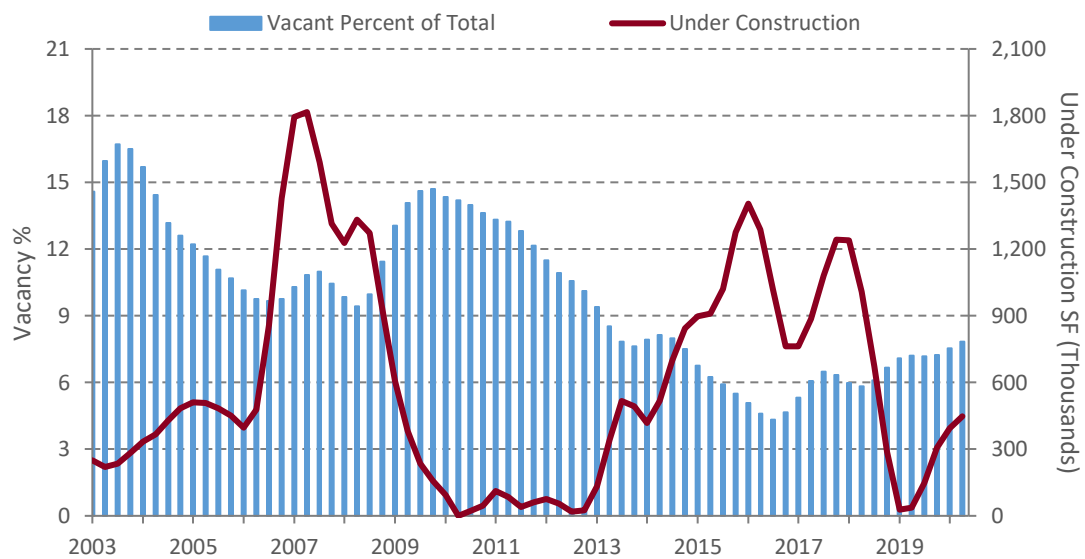
Figure 29. Austin Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

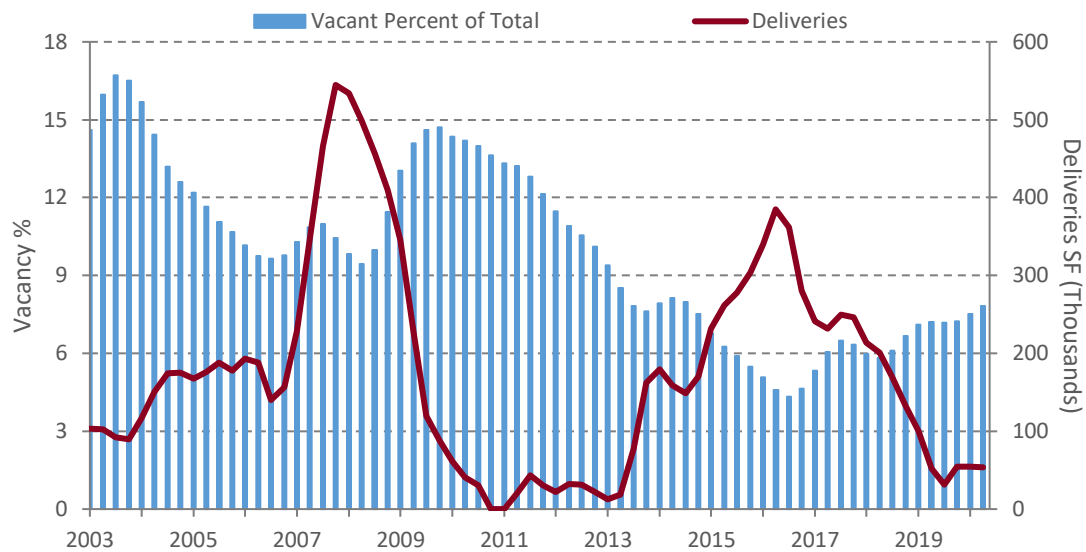
Figure 30. Austin Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

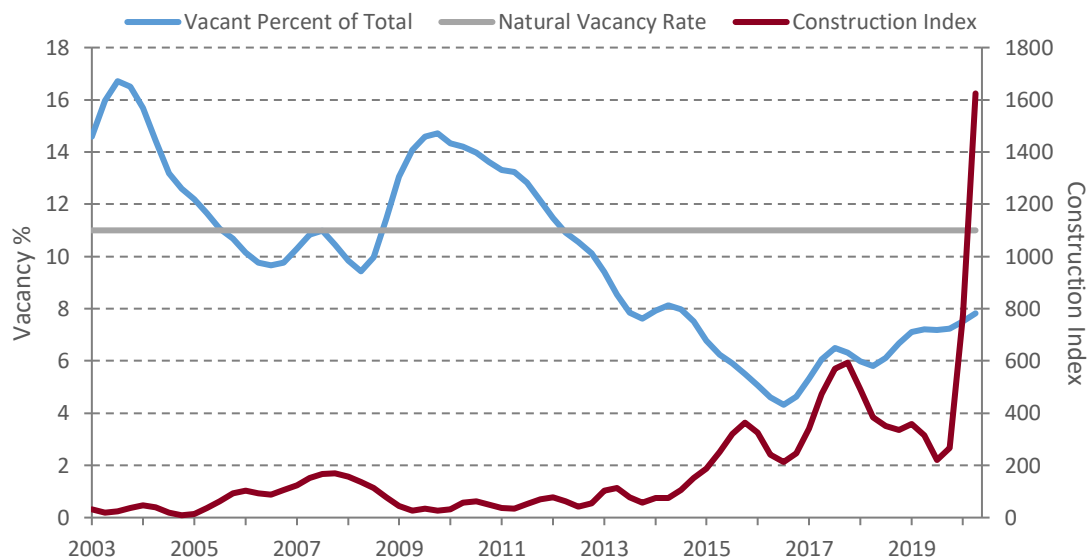
Figure 31. Austin Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

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

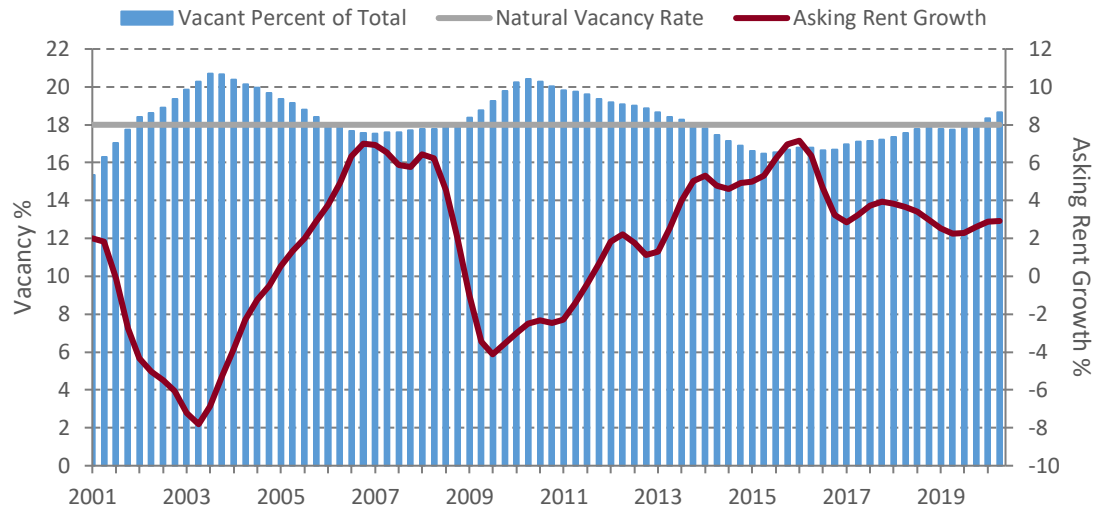


*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

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

DFW

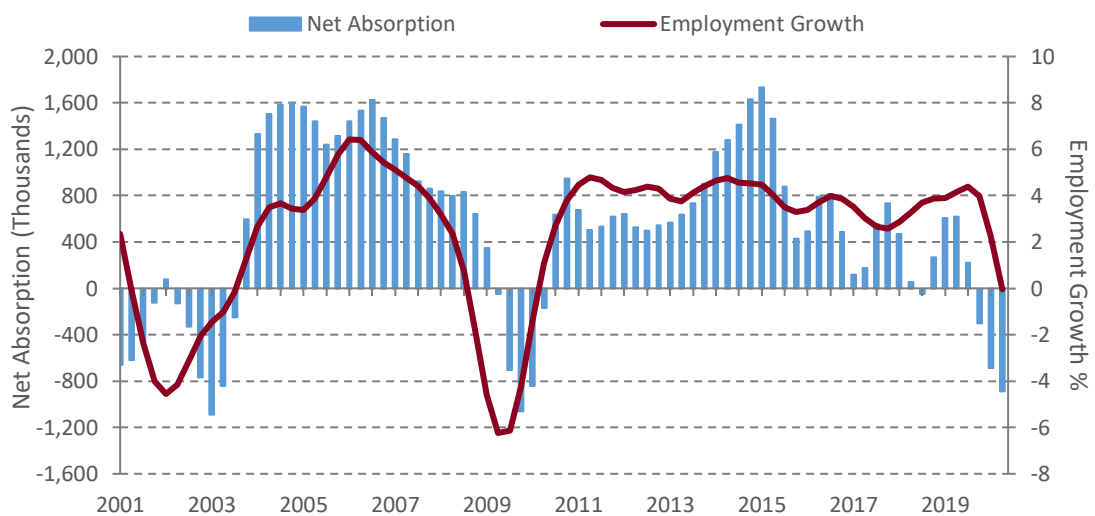
Figure 33. DFW Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

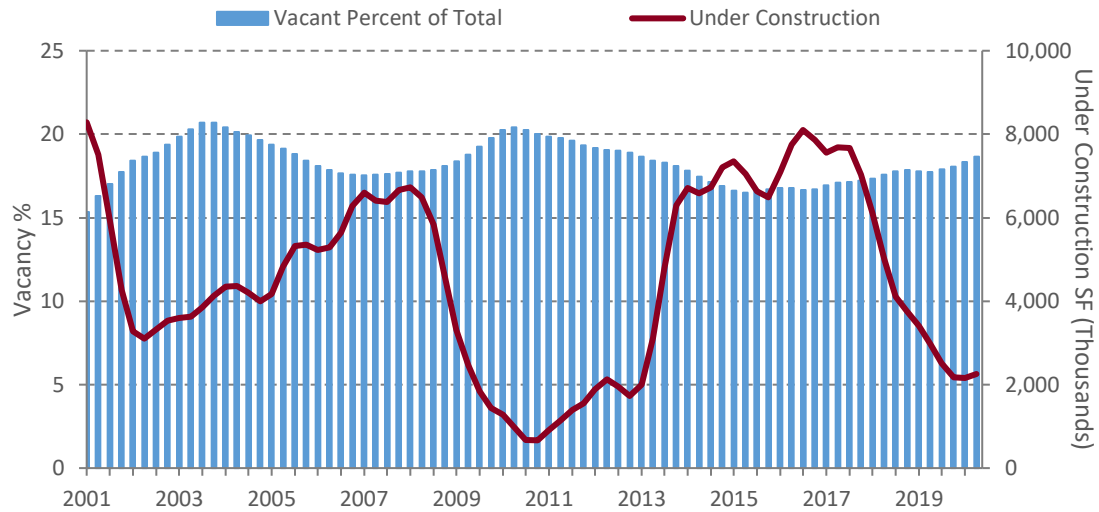
Figure 34. DFW Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

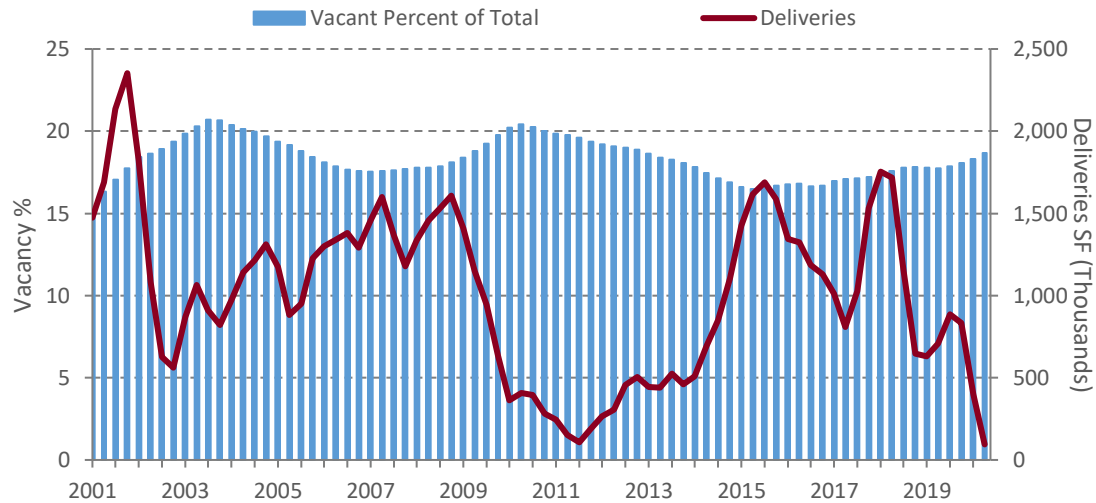
Figure 35. DFW Office Overall Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

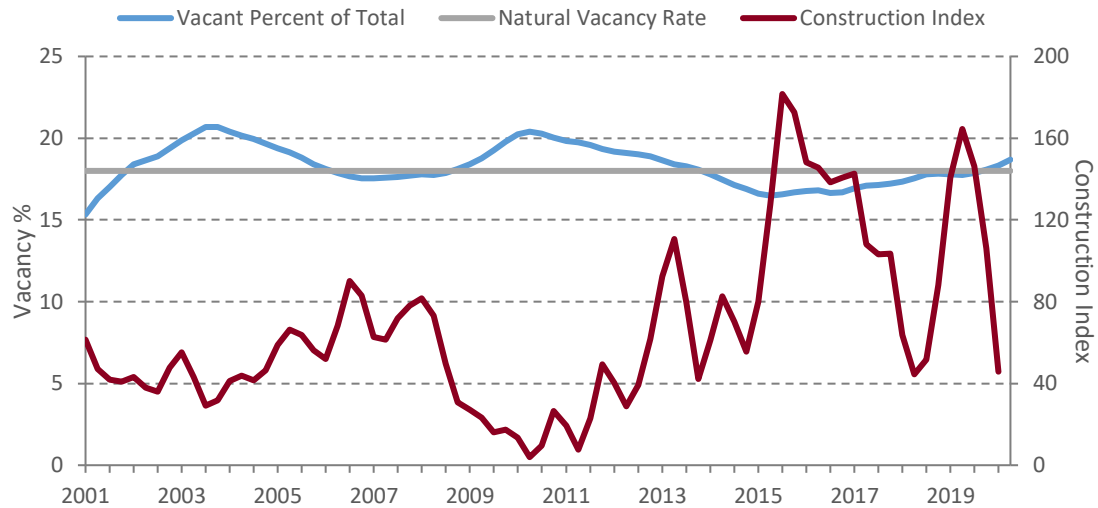
Figure 36. DFW Office Overall Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

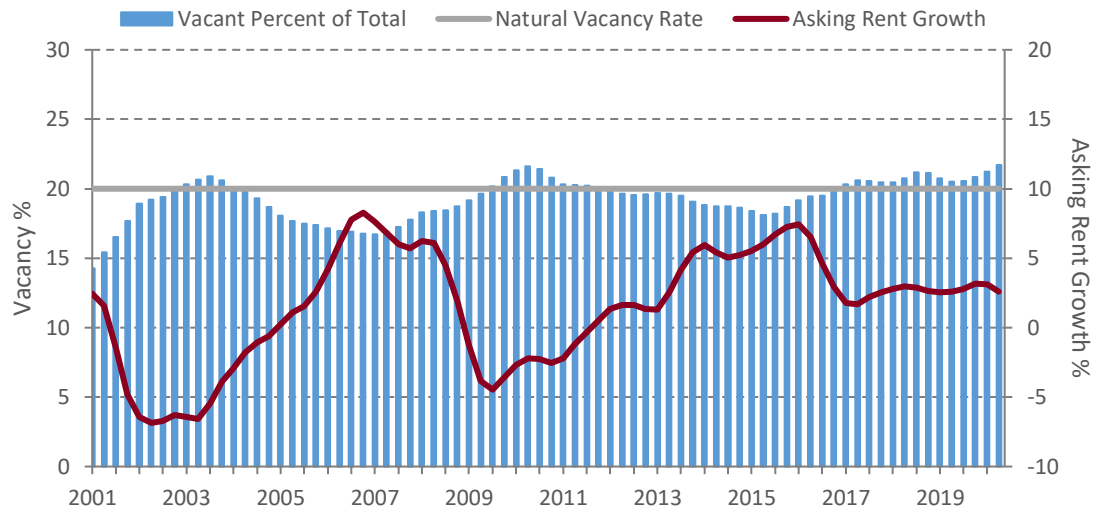
Sources: CoStar and Real Estate Center at Texas A&M University

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



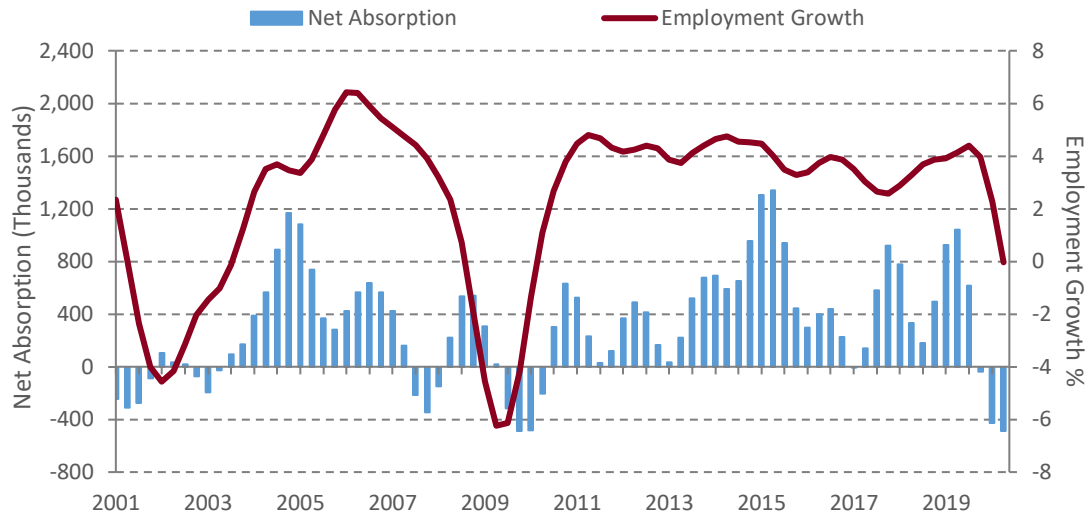
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

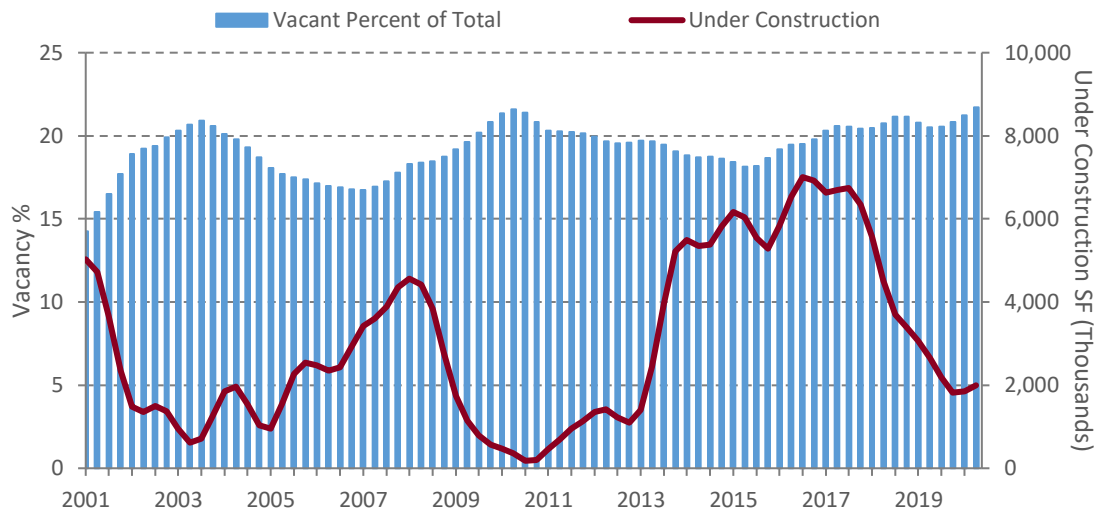
Figure 39. DFW Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

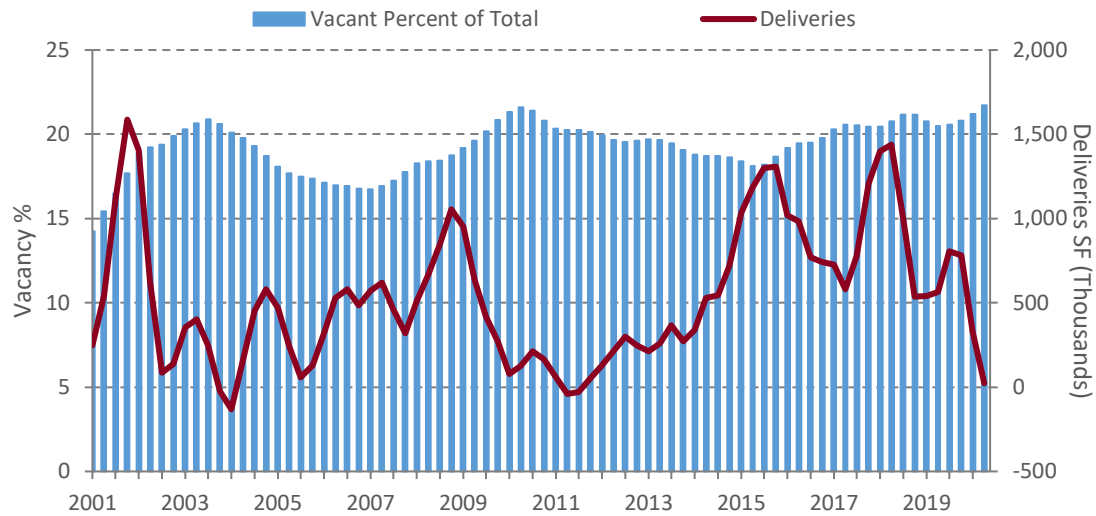
Figure 40. DFW Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

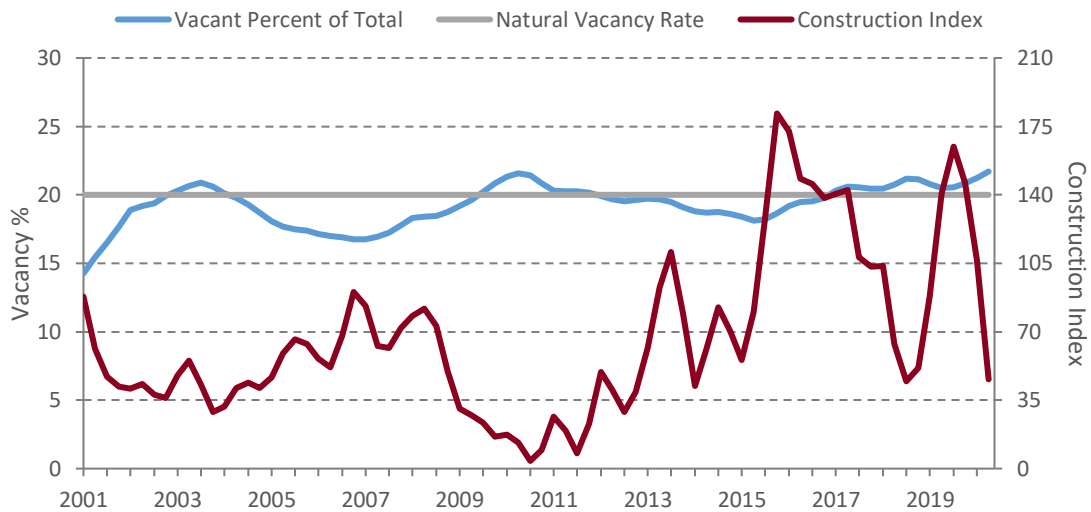
Figure 41. DFW Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

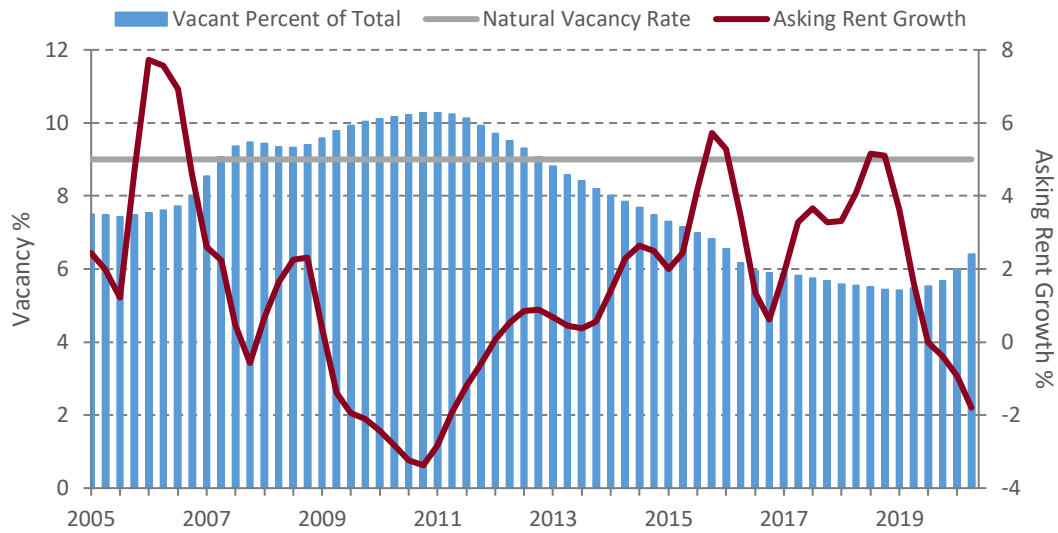
Figure 42. DFW Office Class A Vacancy and Construction Index (SA and TC)*
(Index 1982 Q1 = 100)



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

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

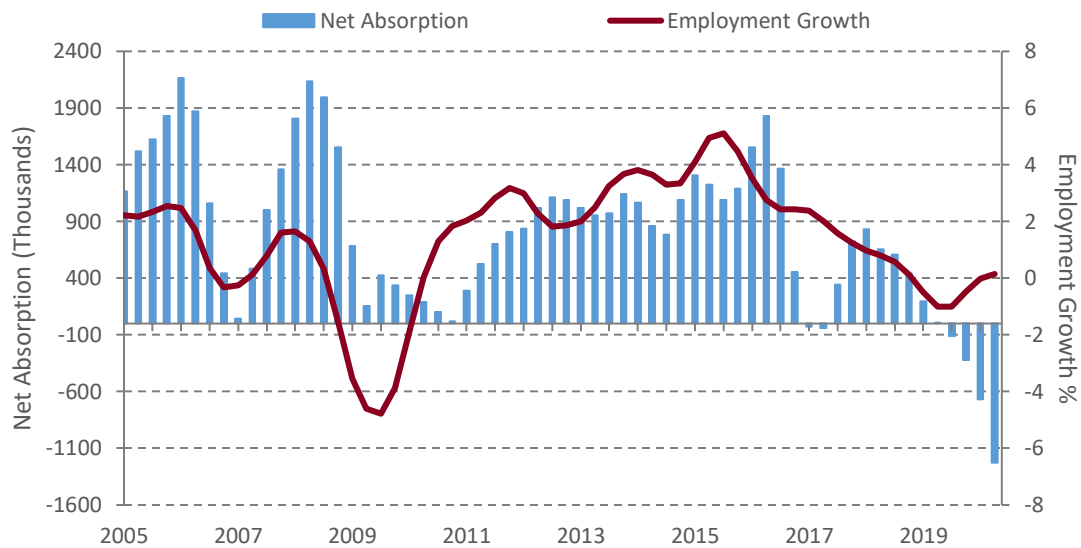
Figure 43. DFW Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

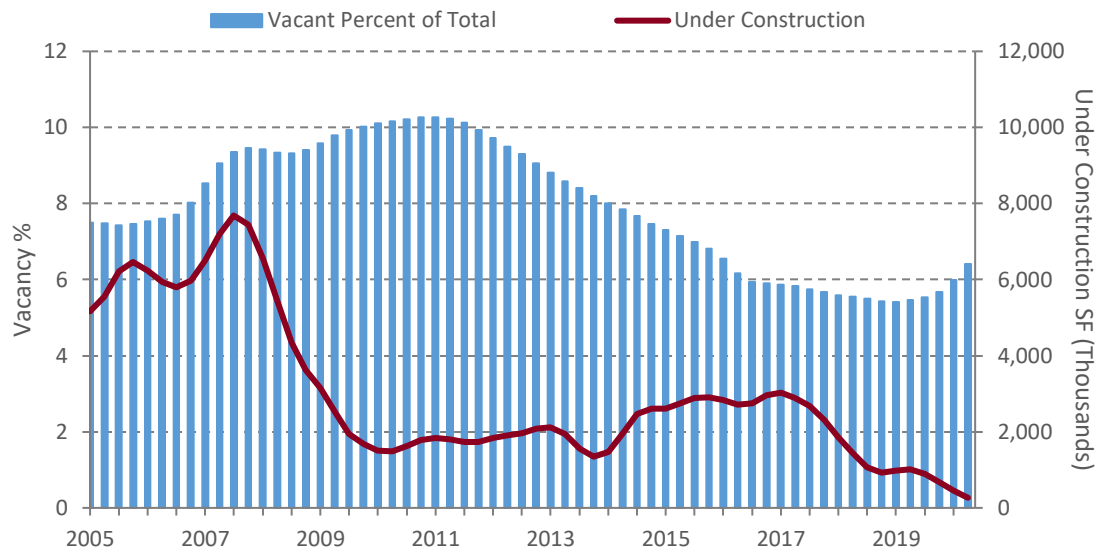
Figure 44. DFW Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

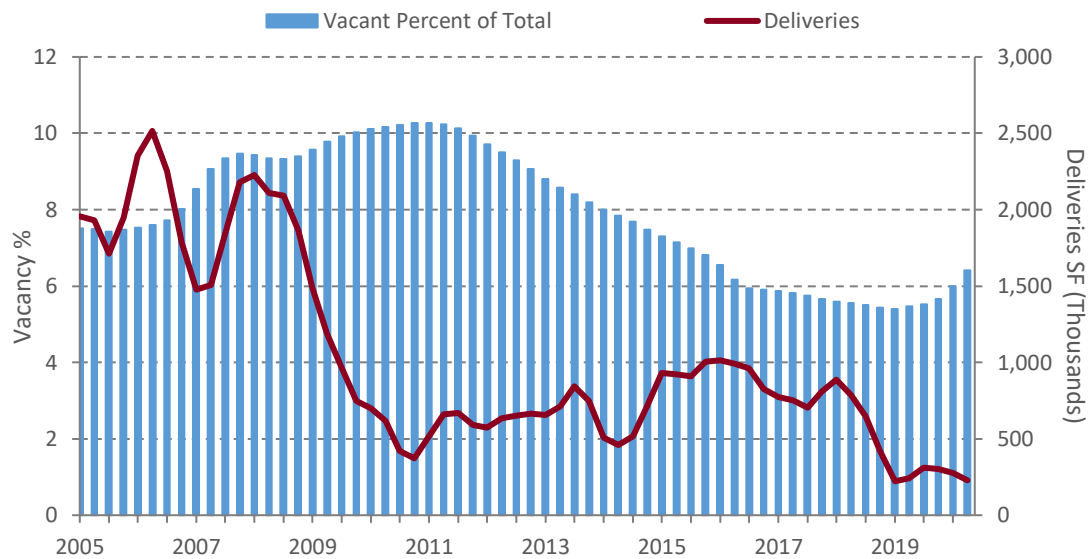
Figure 45. DFW Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

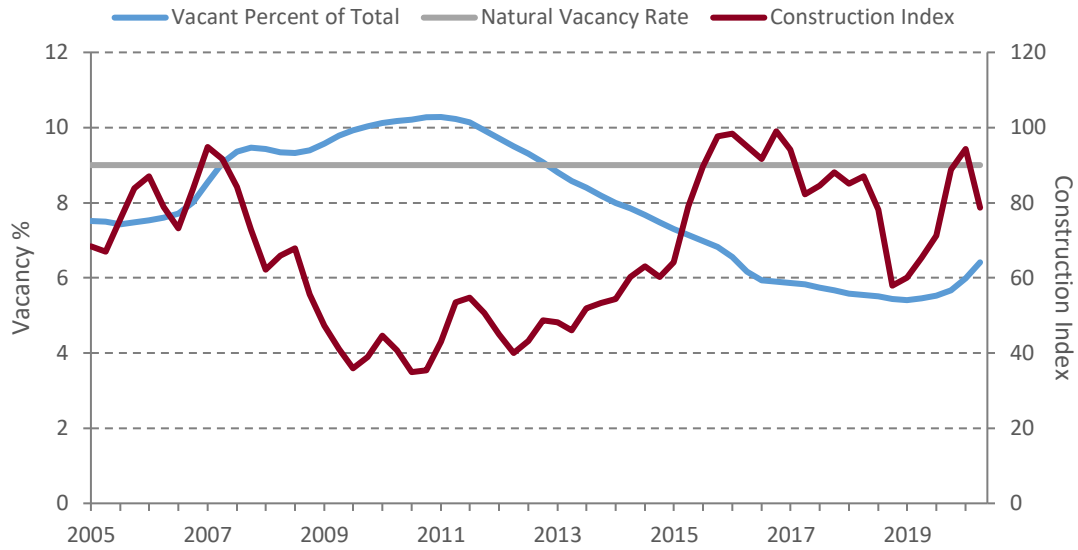
Figure 46. DFW Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

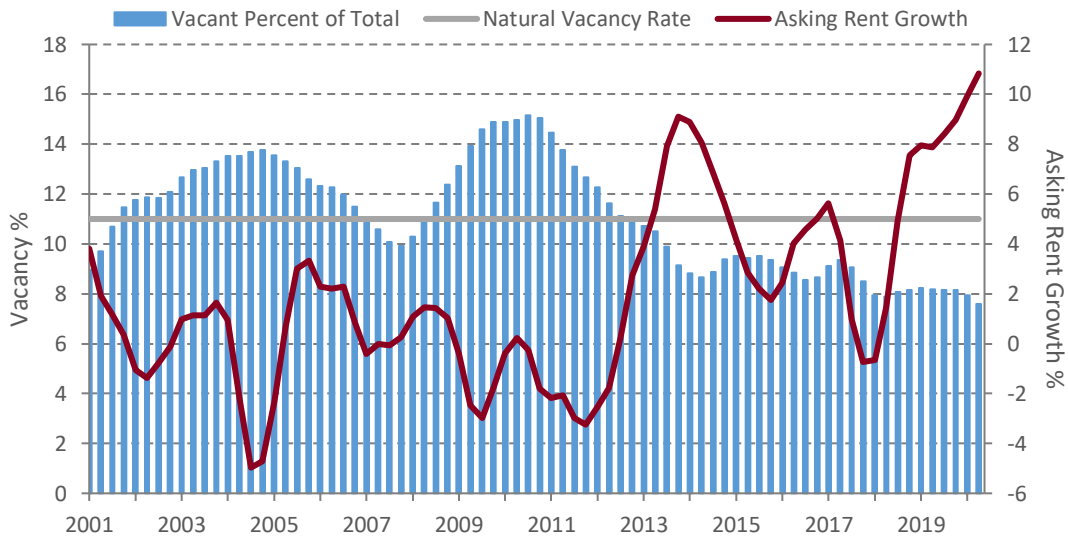
Figure 47. DFW Retail Vacancy and Construction Index (SA and TC)*
(Index 2000 Q1 = 100)



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

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

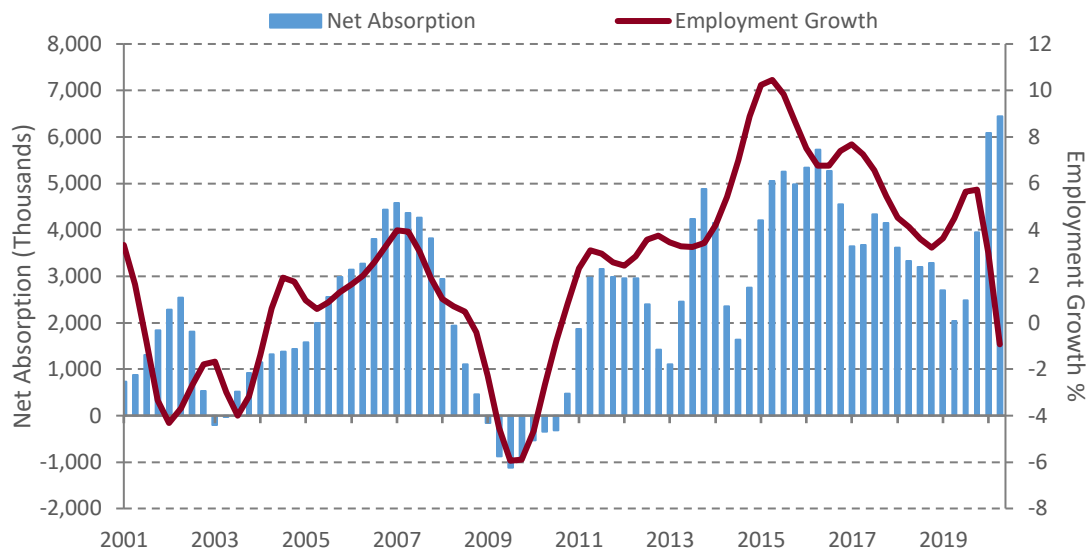
Figure 48. DFW Warehouse Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

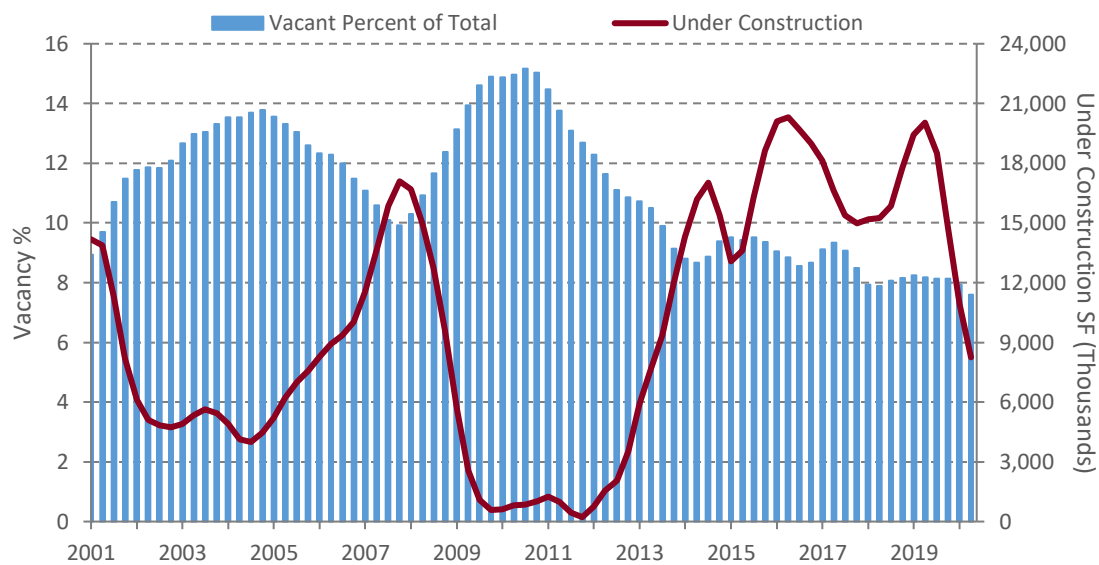
Figure 49. DFW Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

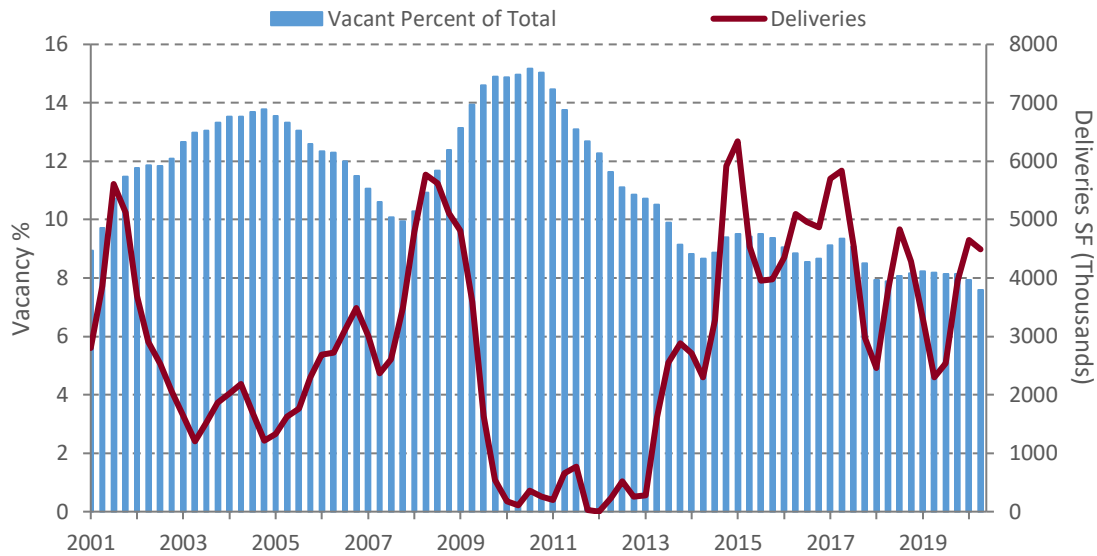
Figure 50. DFW Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

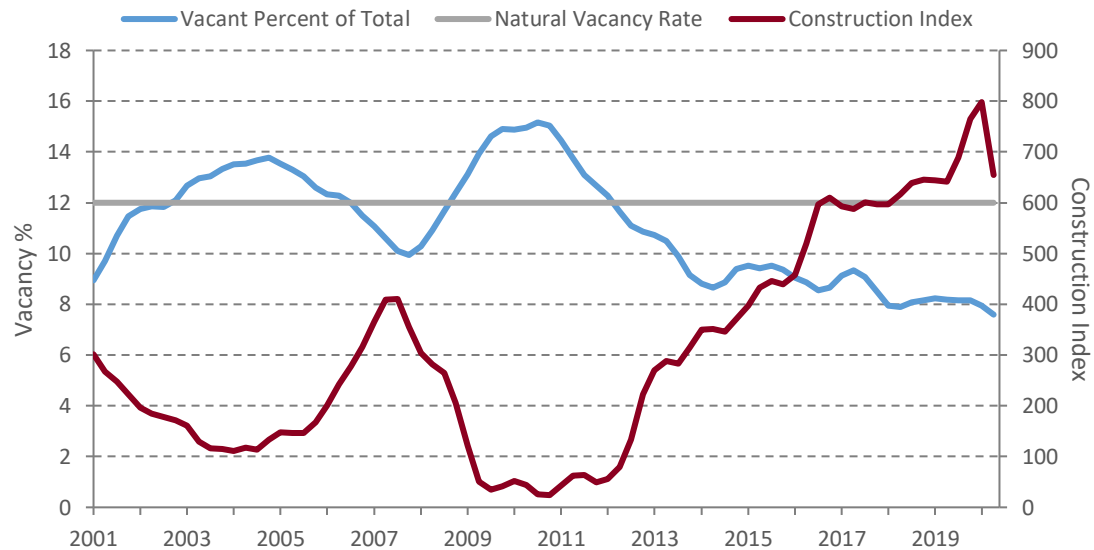
Sources: CoStar and Real Estate Center at Texas A&M University

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



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

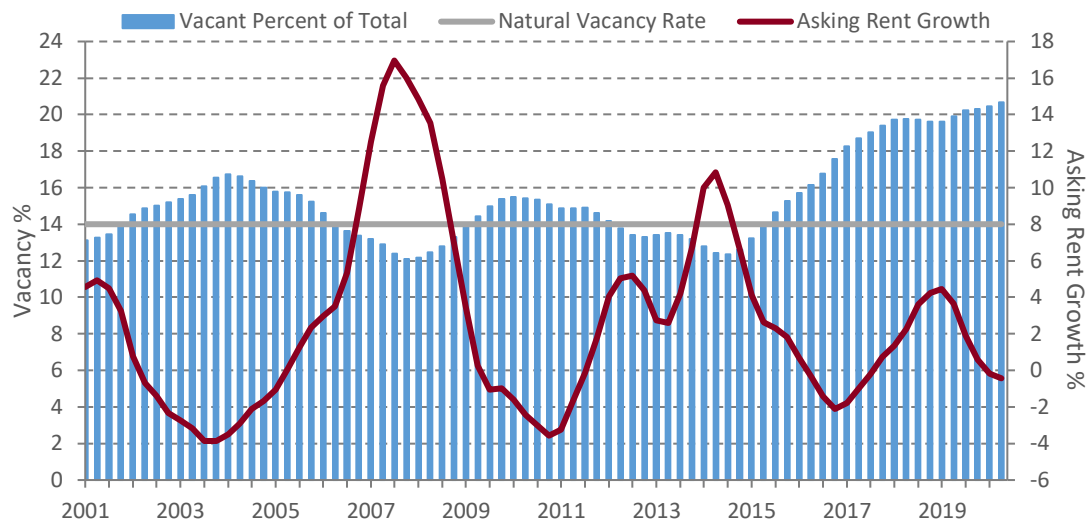
**Figure 52. DFW Warehouse Vacancy and Construction Index (SA and TC)*
(Index 1995 Q1 = 100)**



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

Houston

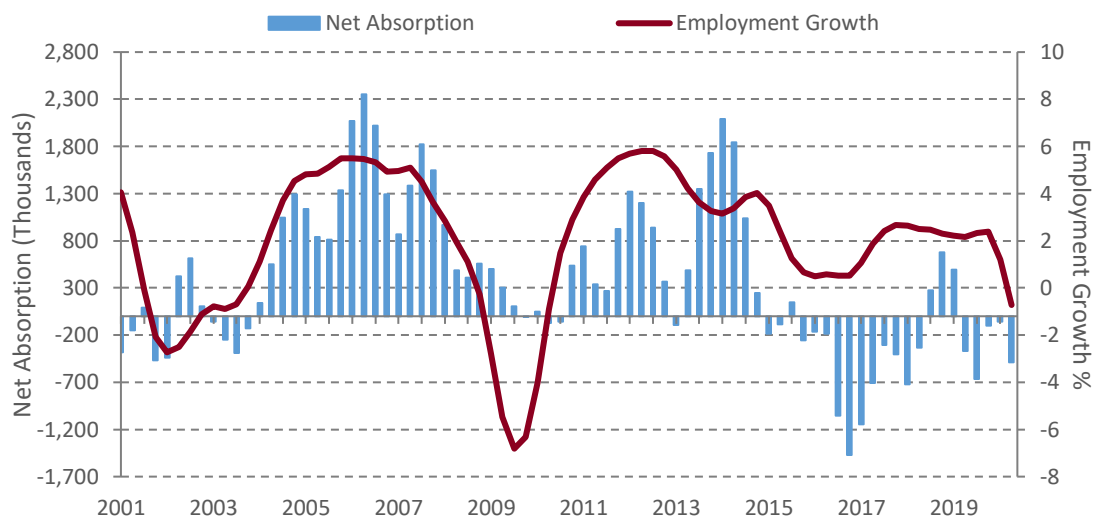
Figure 53. Houston Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

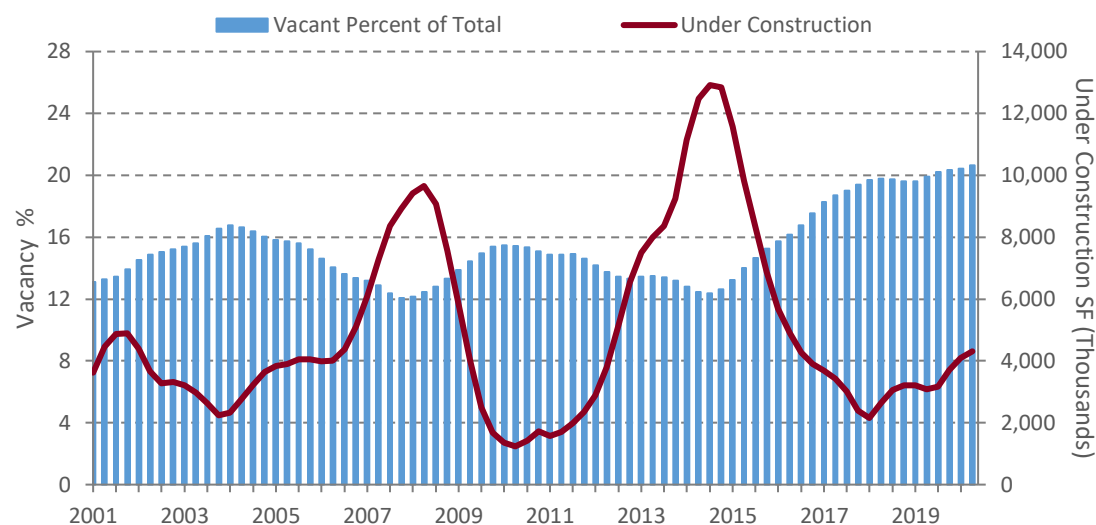
Figure 54. Houston Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

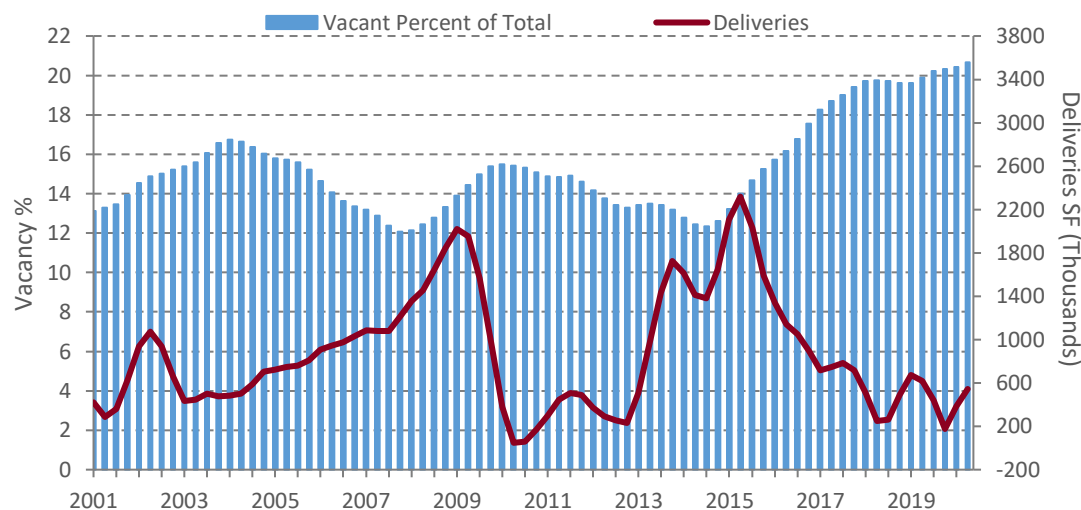
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



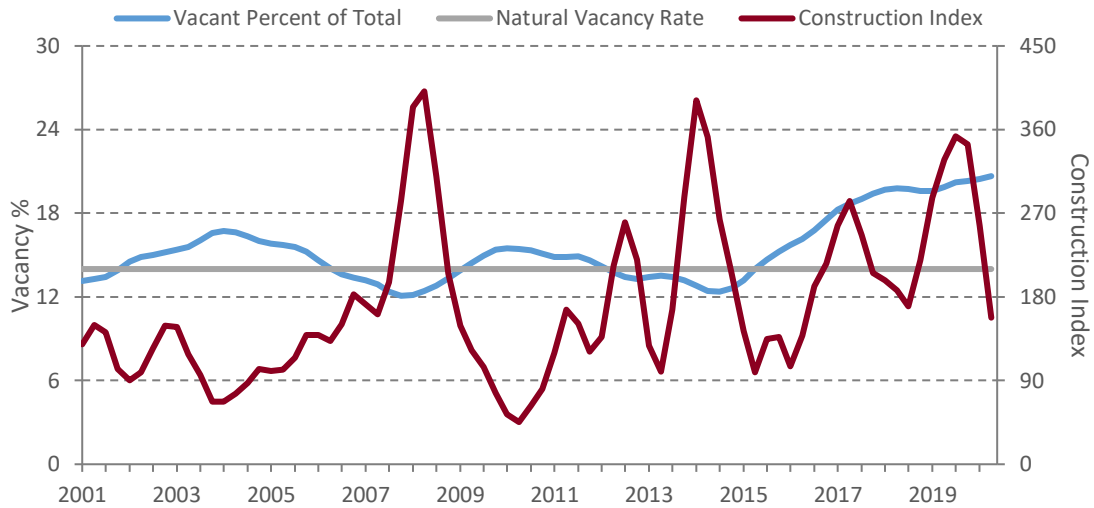
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



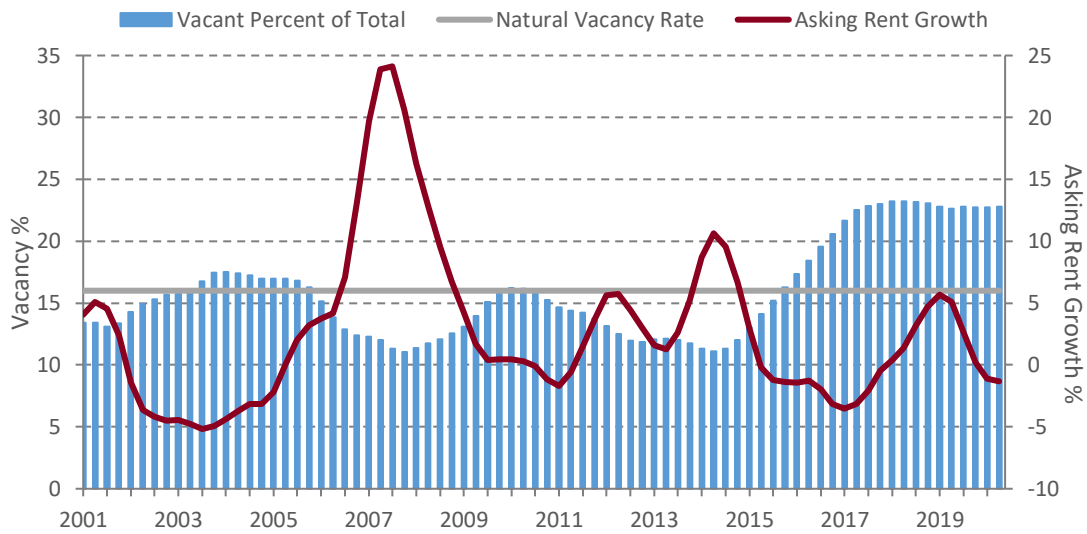
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



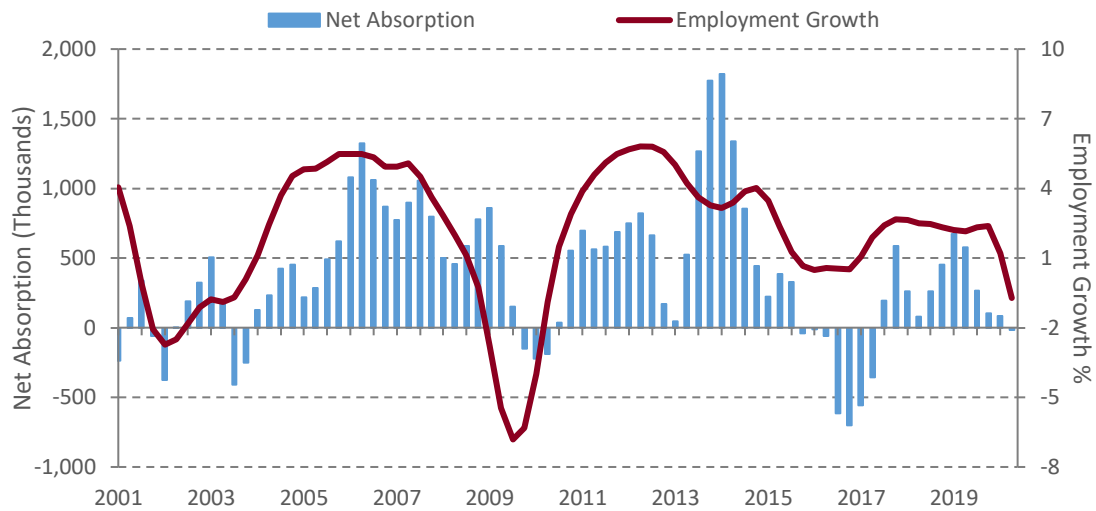
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

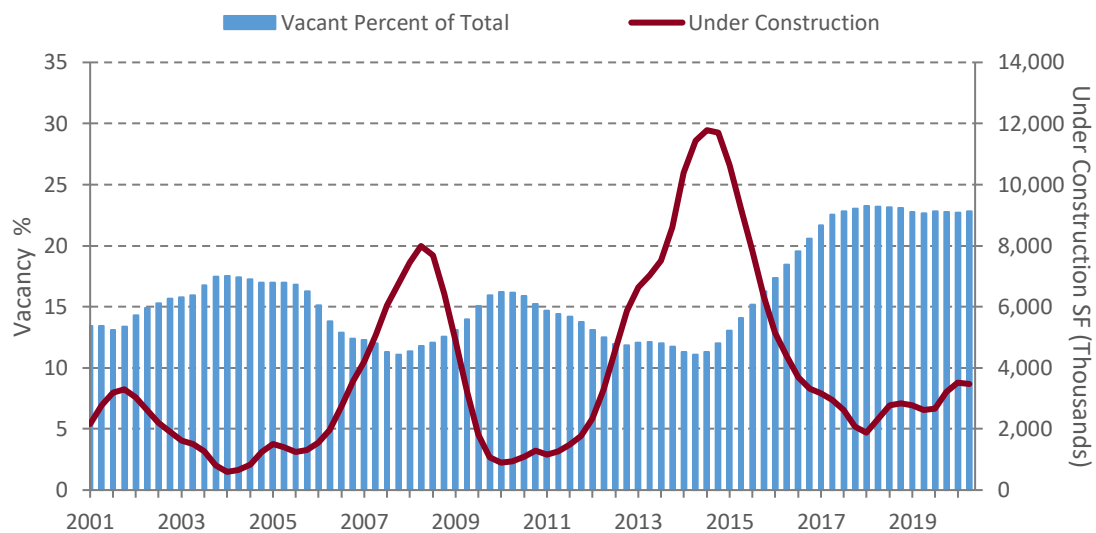
Figure 59. Houston Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

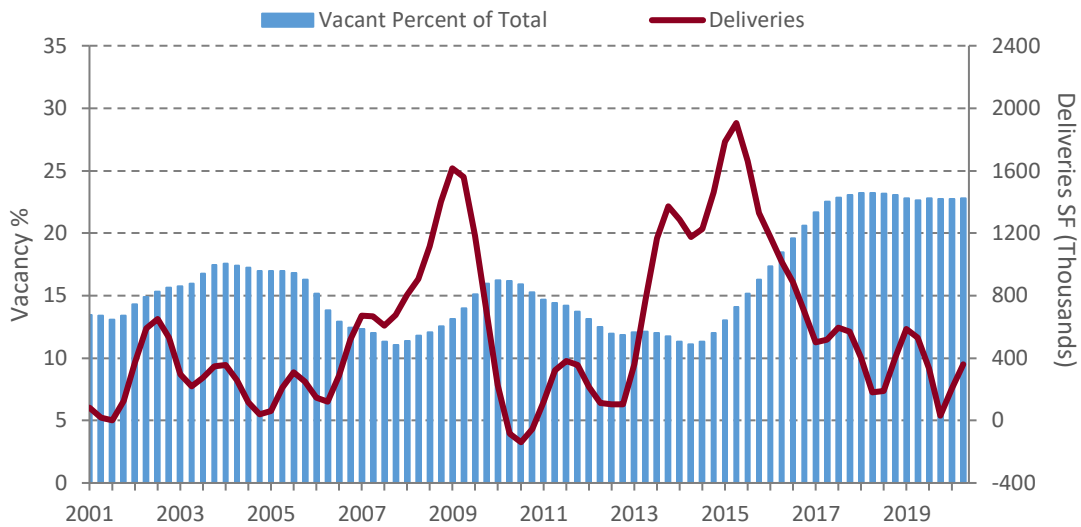
Figure 60. Houston Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

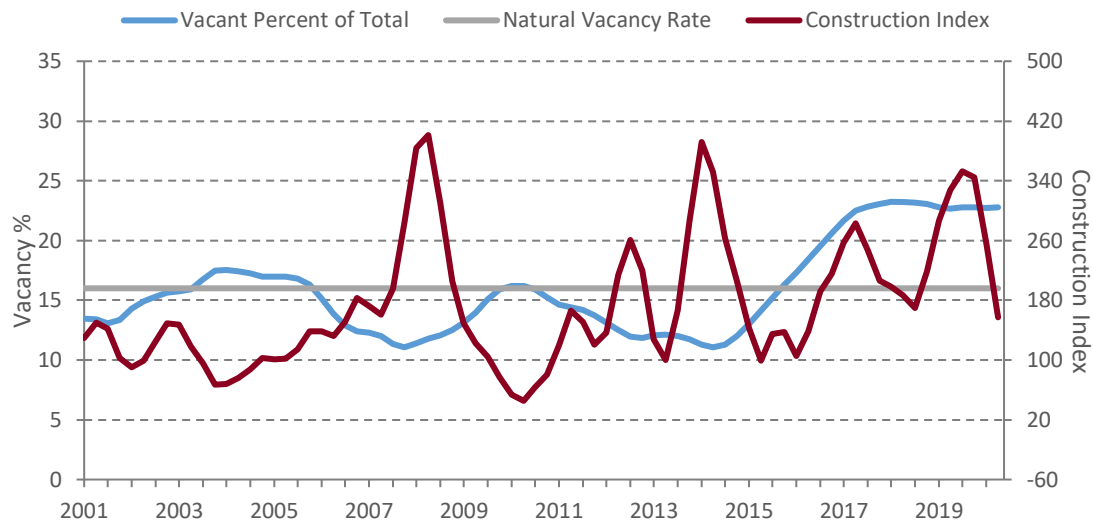
Figure 61. Houston Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

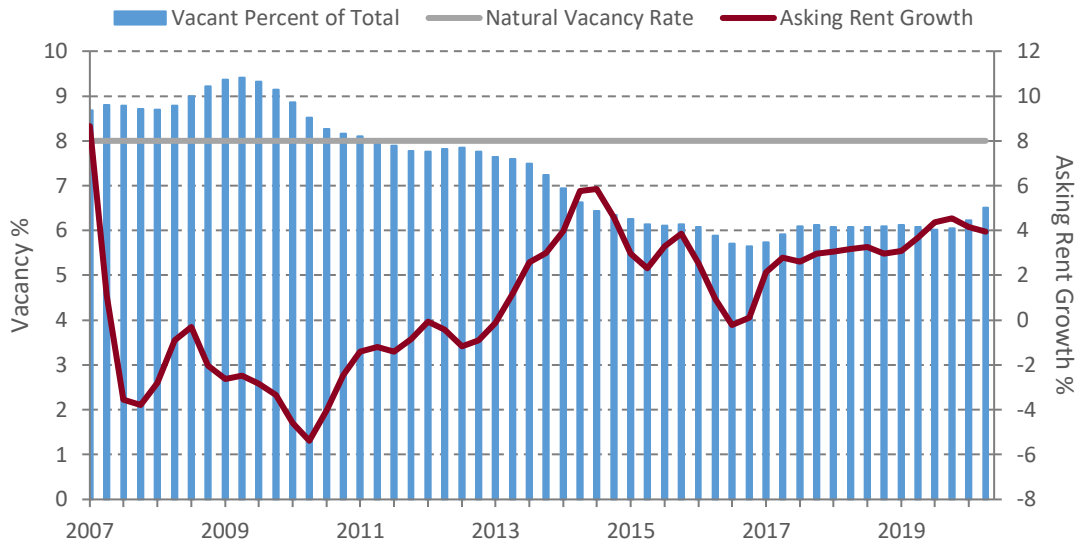
**Figure 62. Houston Office Class A Vacancy and Construction Index (SA and TC)*
(Index 1999 Q1 = 100)**



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

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

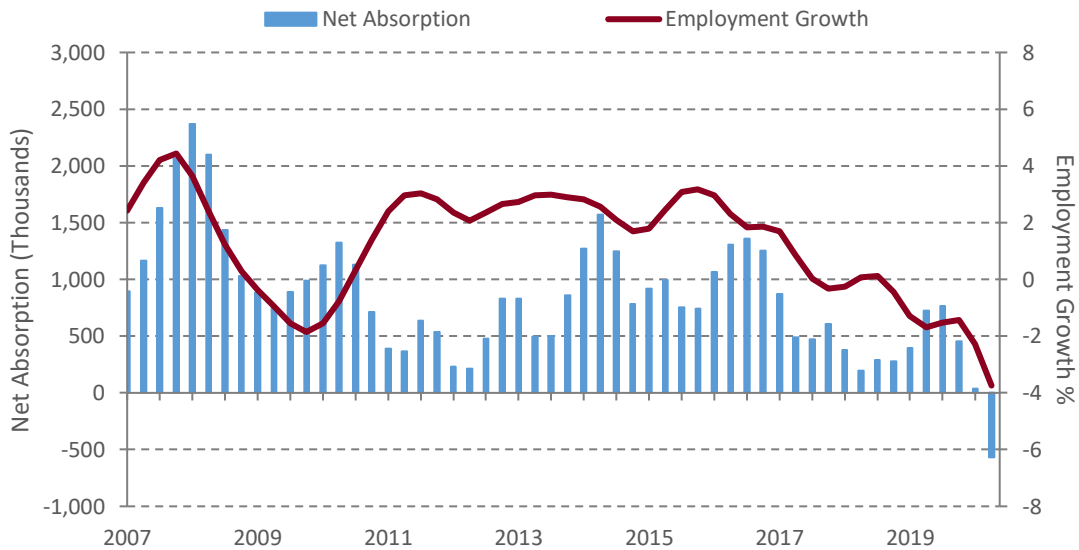
Figure 63. Houston Retail Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

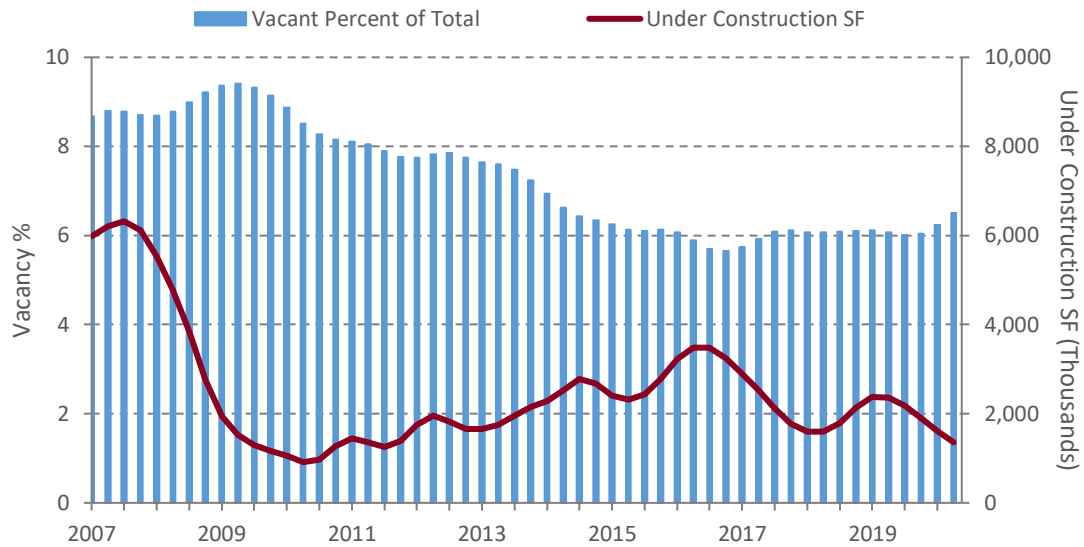
Figure 64. Houston Retail Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

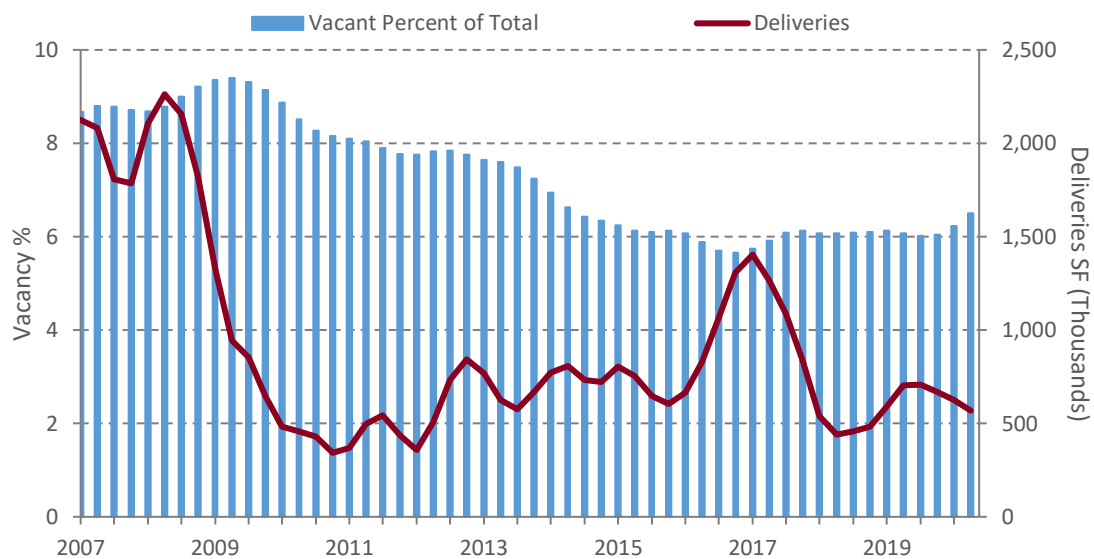
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



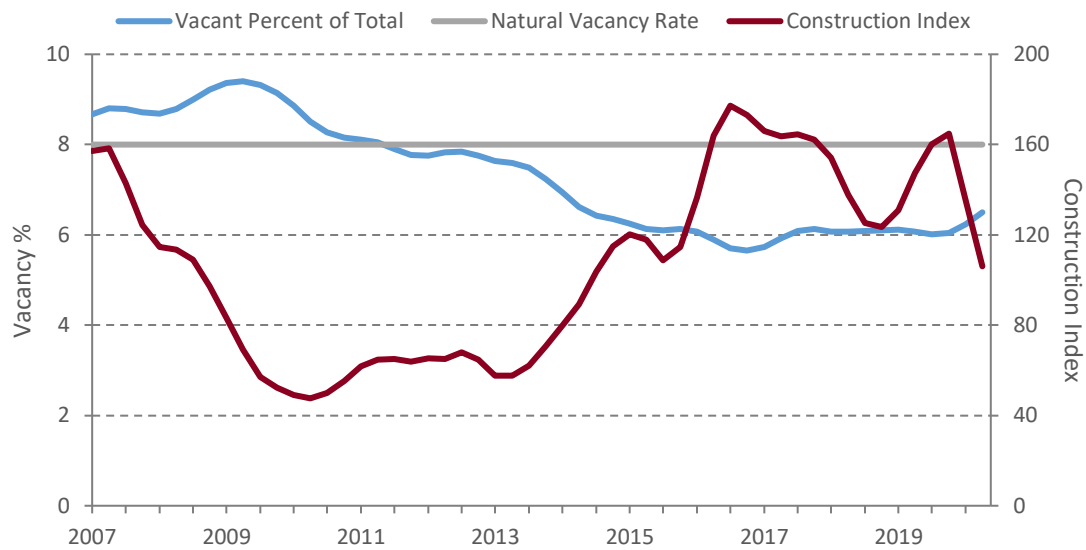
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



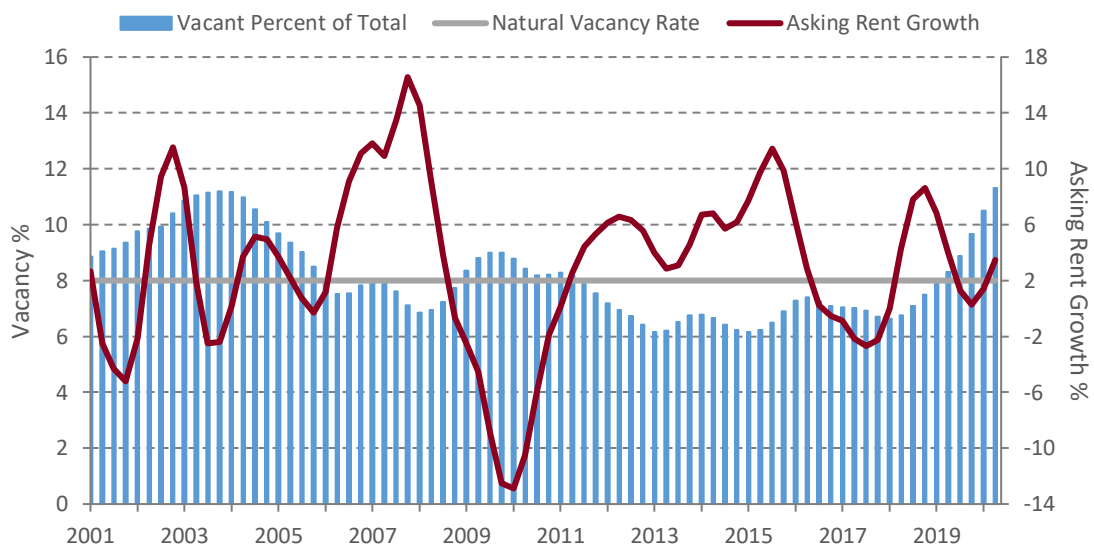
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



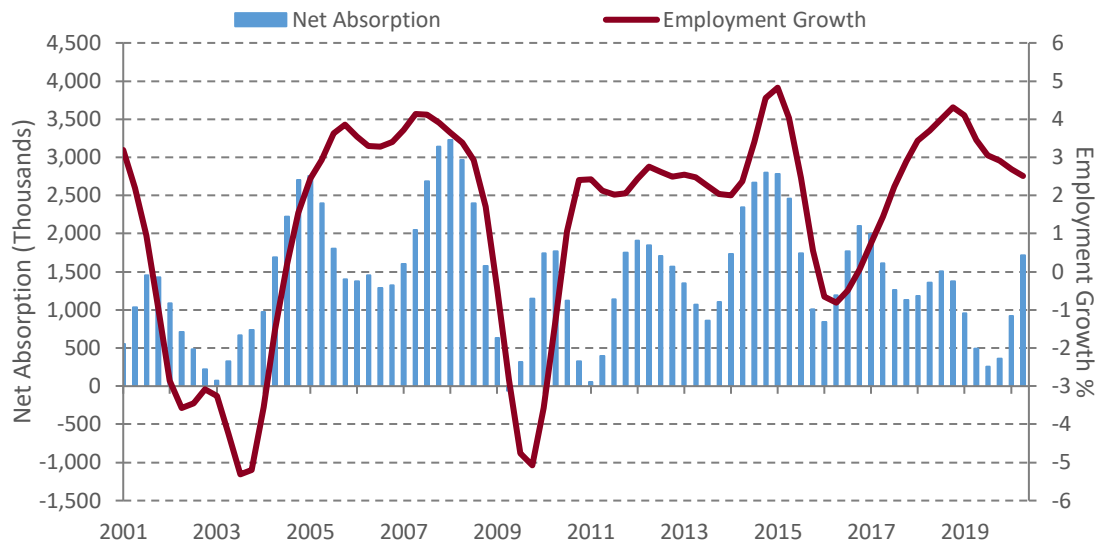
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

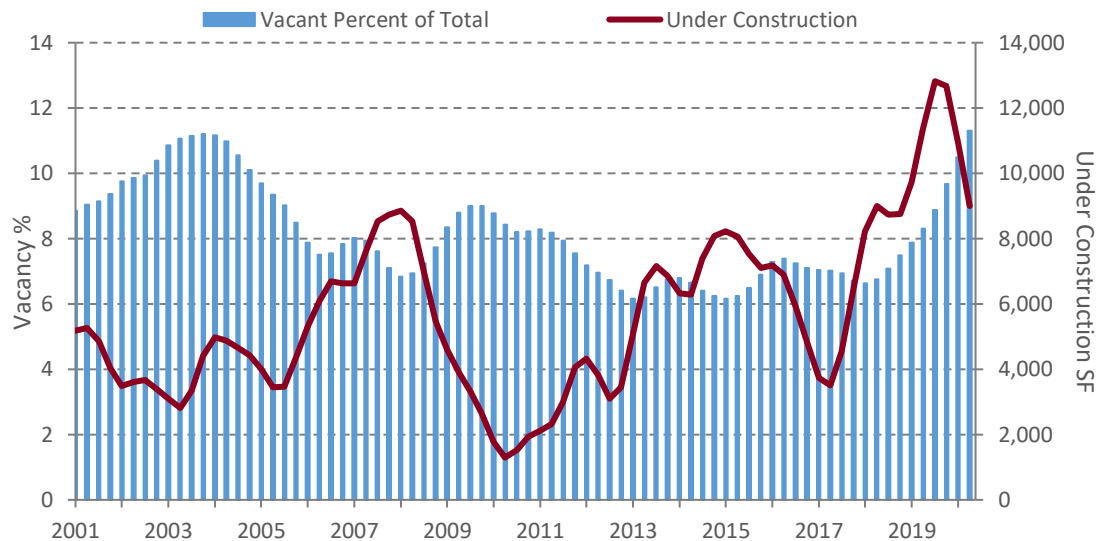
Figure 69. Houston Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

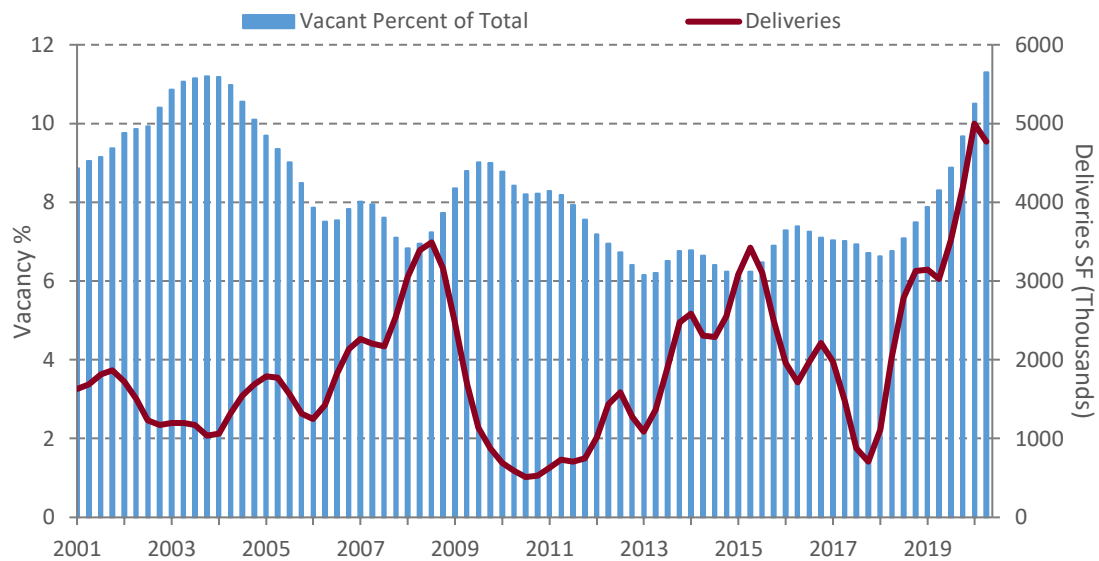
Figure 70. Houston Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

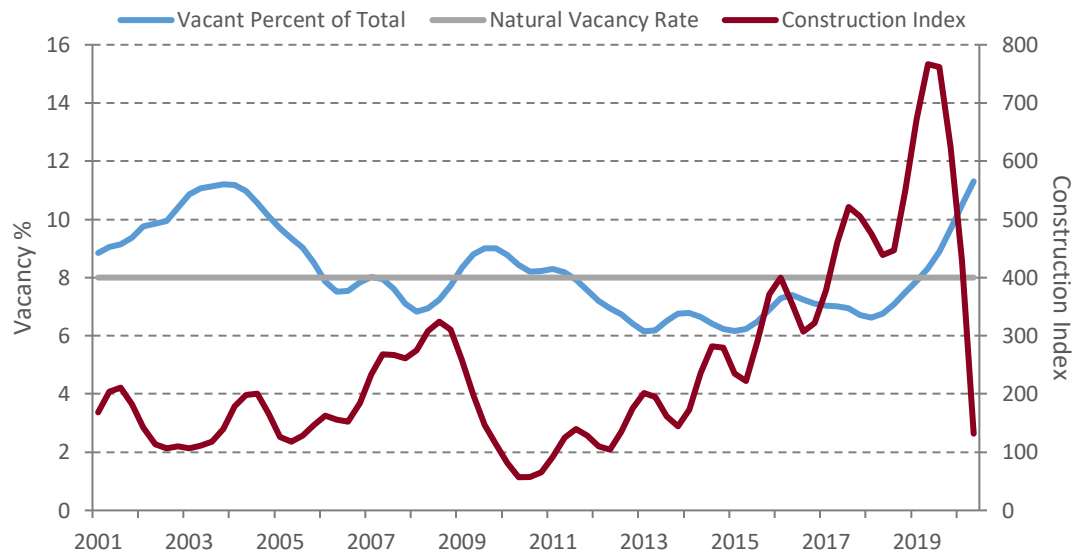
Figure 71. Houston Warehouse Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

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

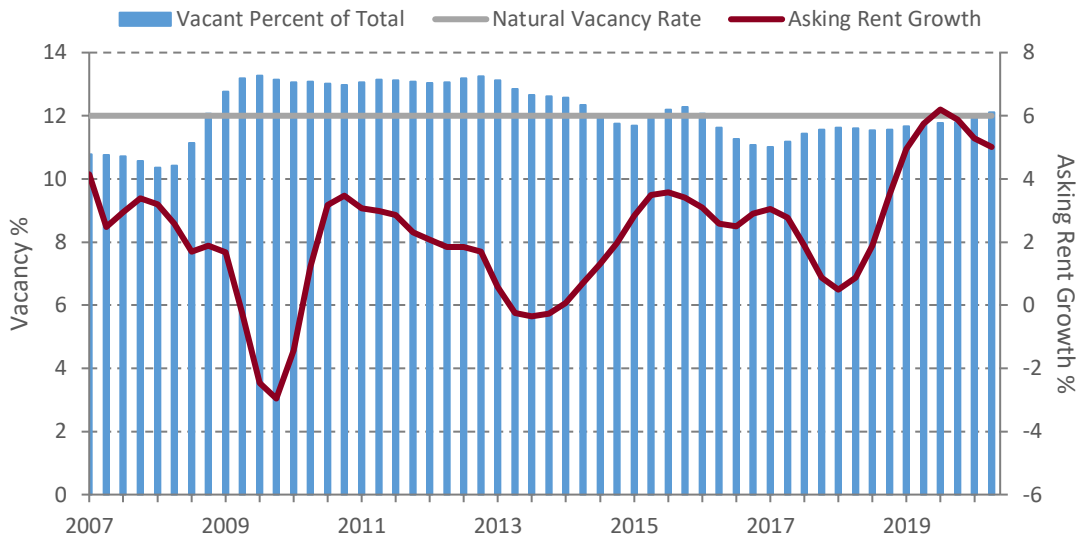


*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.

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

San Antonio

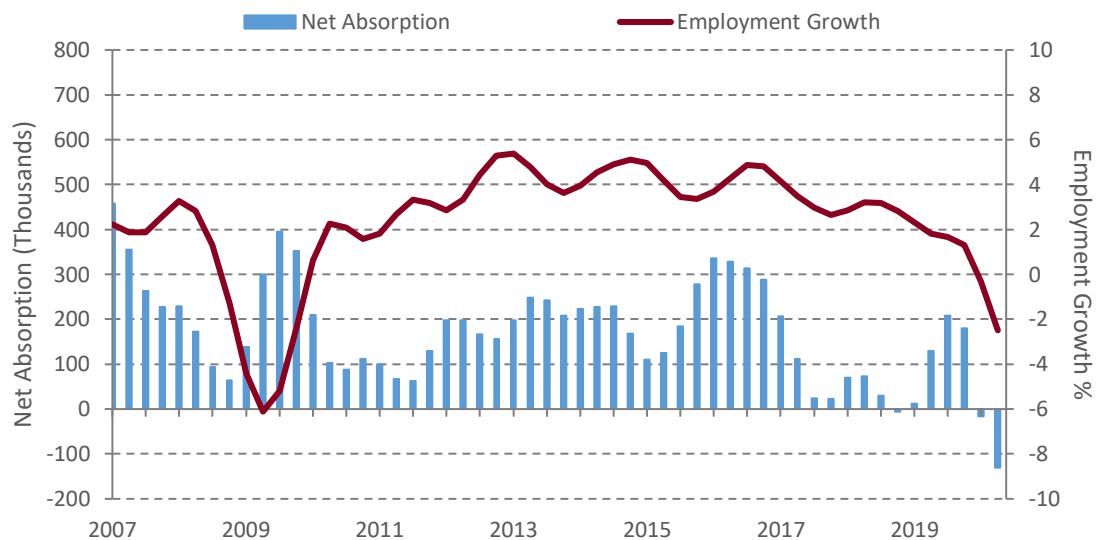
Figure 73. San Antonio Office Overall Vacancy and Asking Rent Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

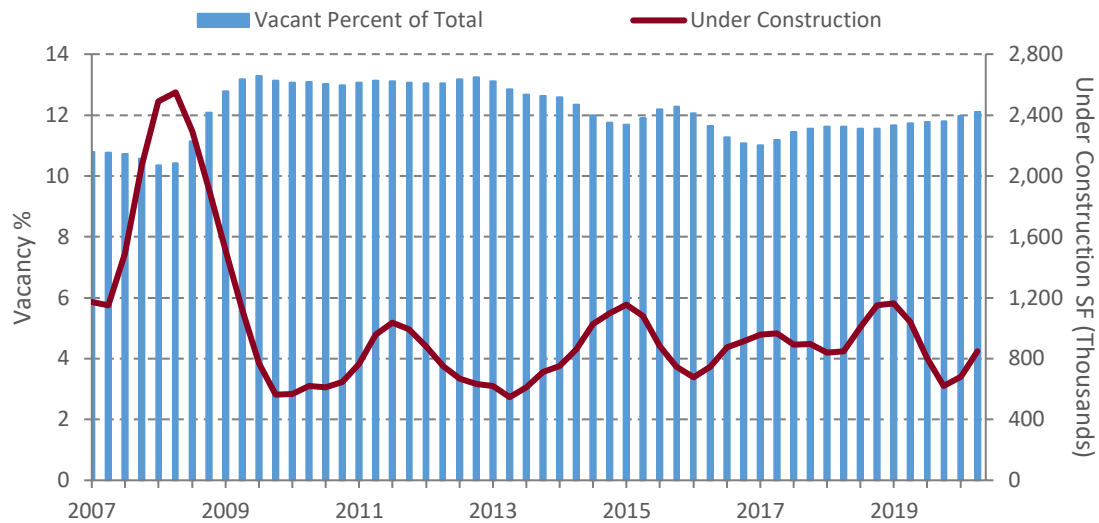
Figure 74. San Antonio Office Overall Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

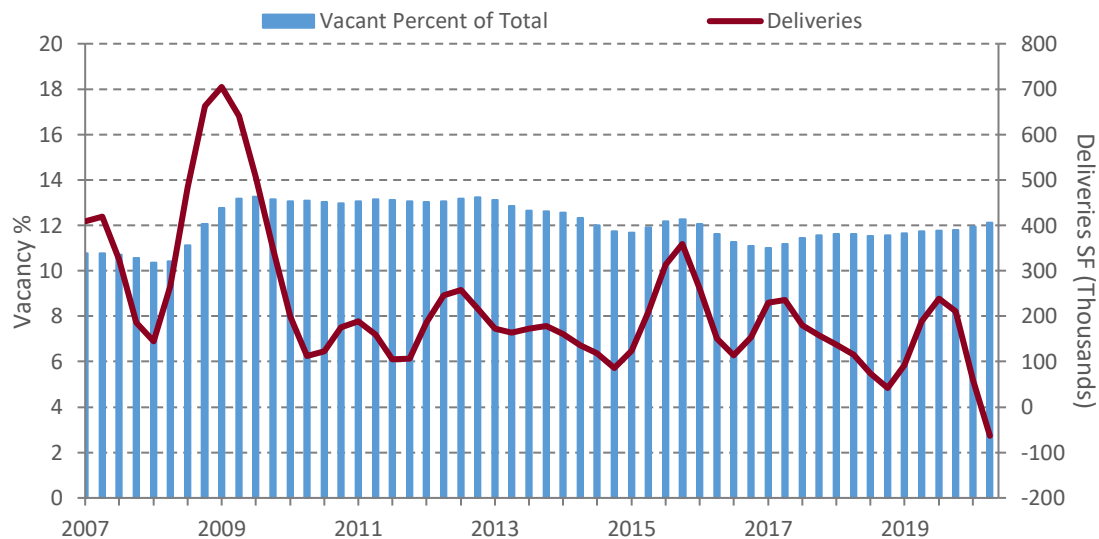
Sources: Bureau of Labor Statistics, CoStar, and Real Estate Center at Texas A&M University

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



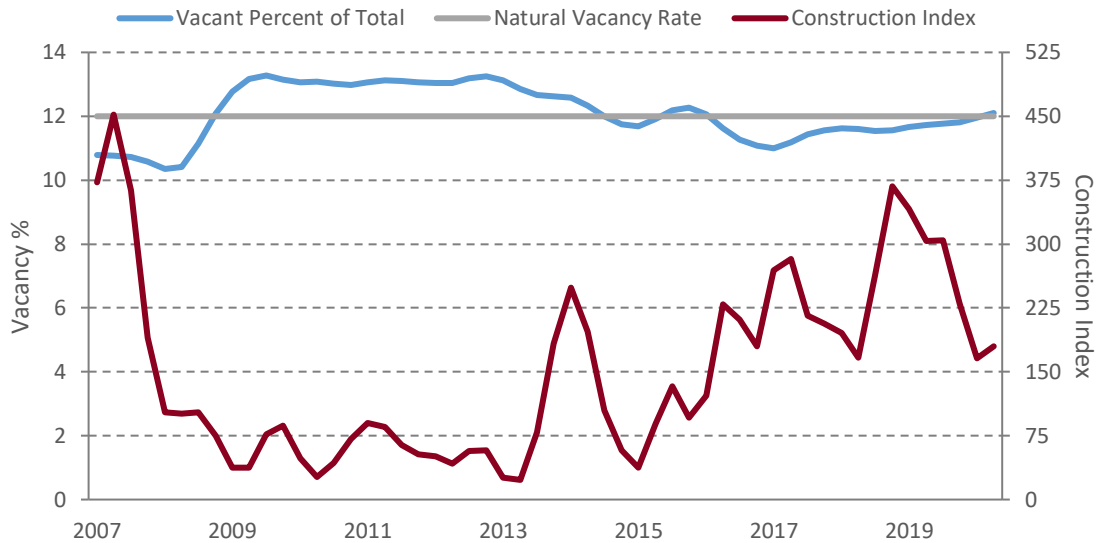
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



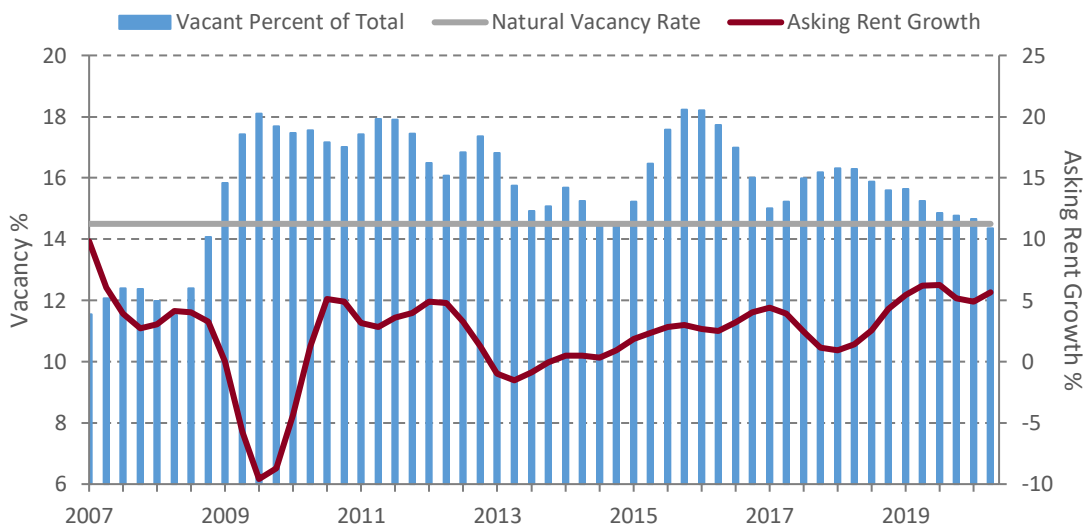
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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



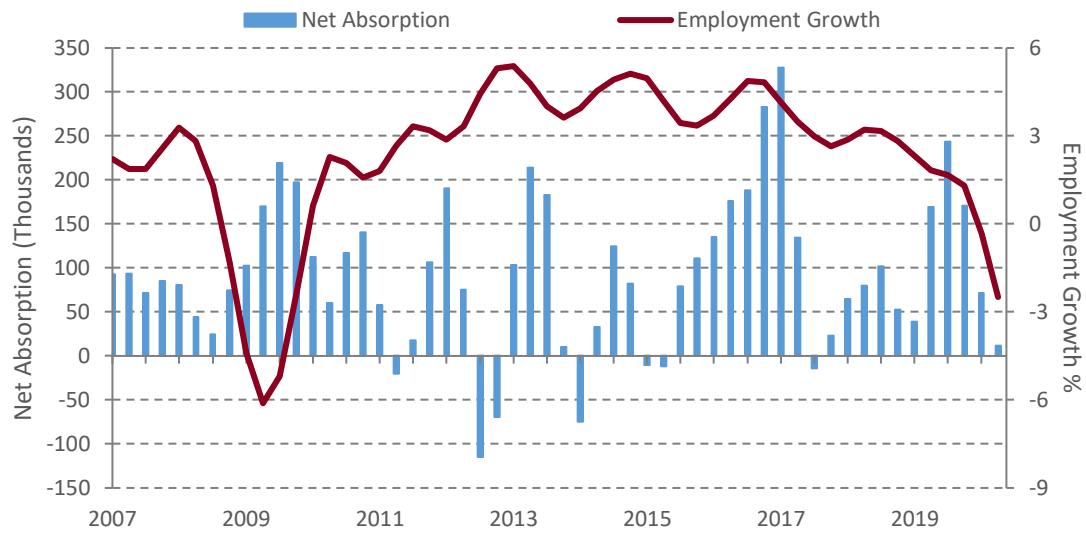
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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 Real Estate Center at Texas A&M University

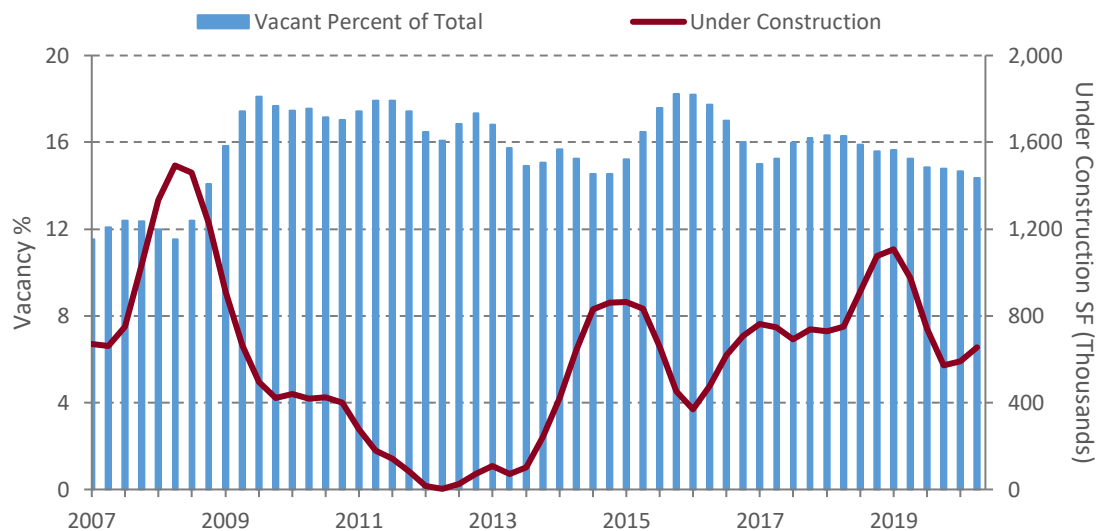
Figure 79. San Antonio Office Class A Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

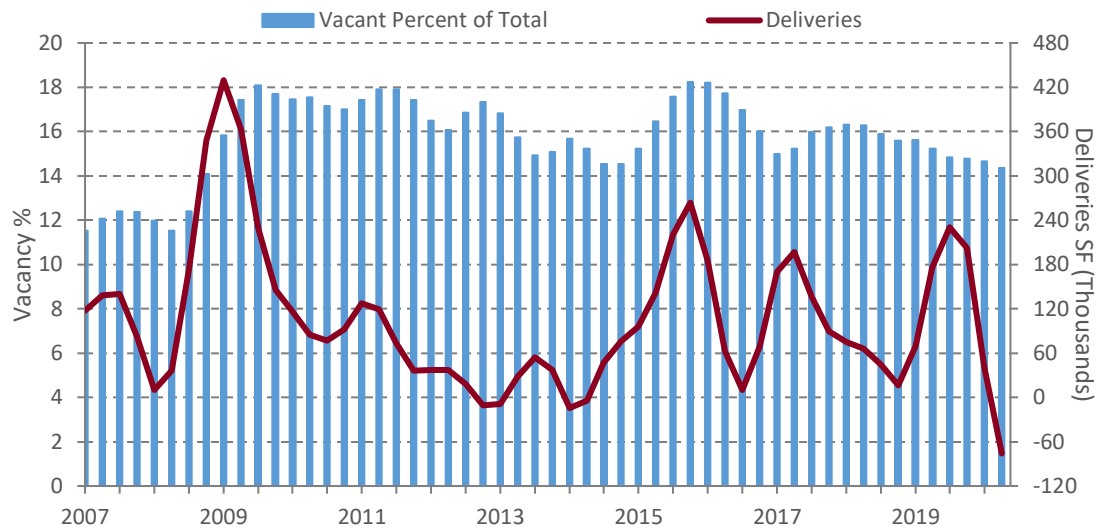
Figure 80. San Antonio Office Class A Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

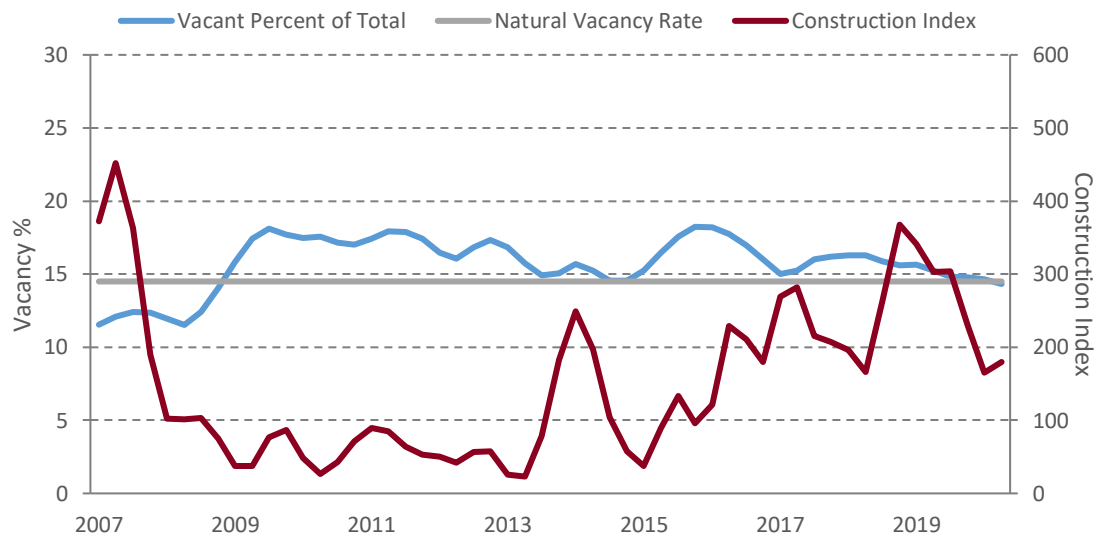
Figure 81. San Antonio Office Class A Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

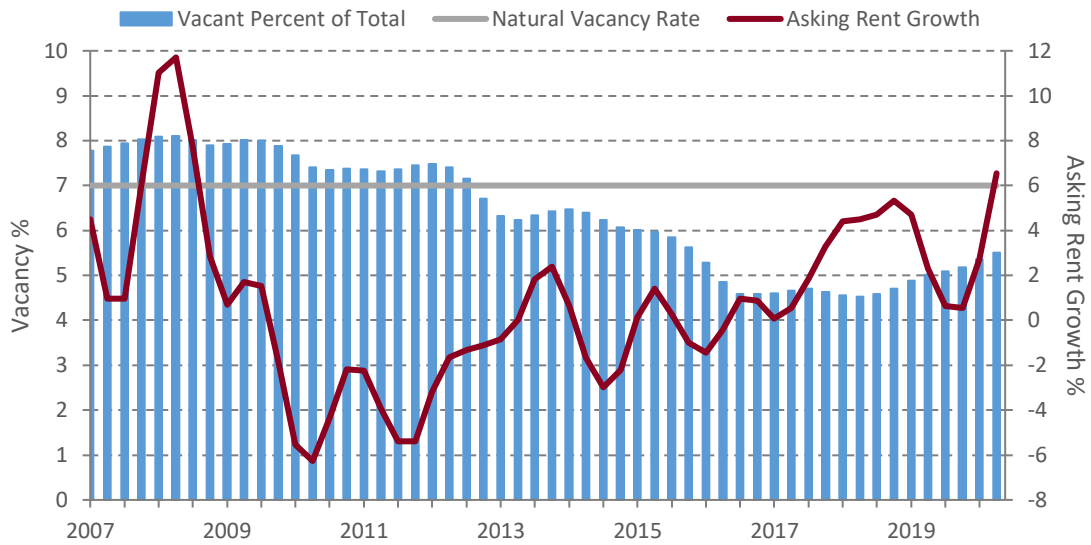
**Figure 82. San Antonio Office Class A Vacancy and Construction Index (SA and TC)*
(Index 2005 Q3 = 100)**



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

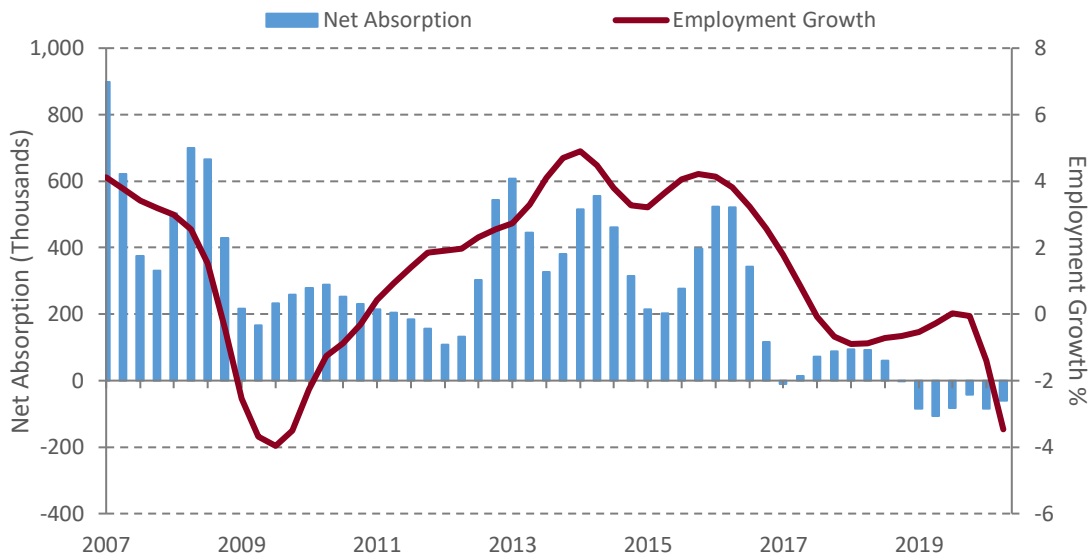
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



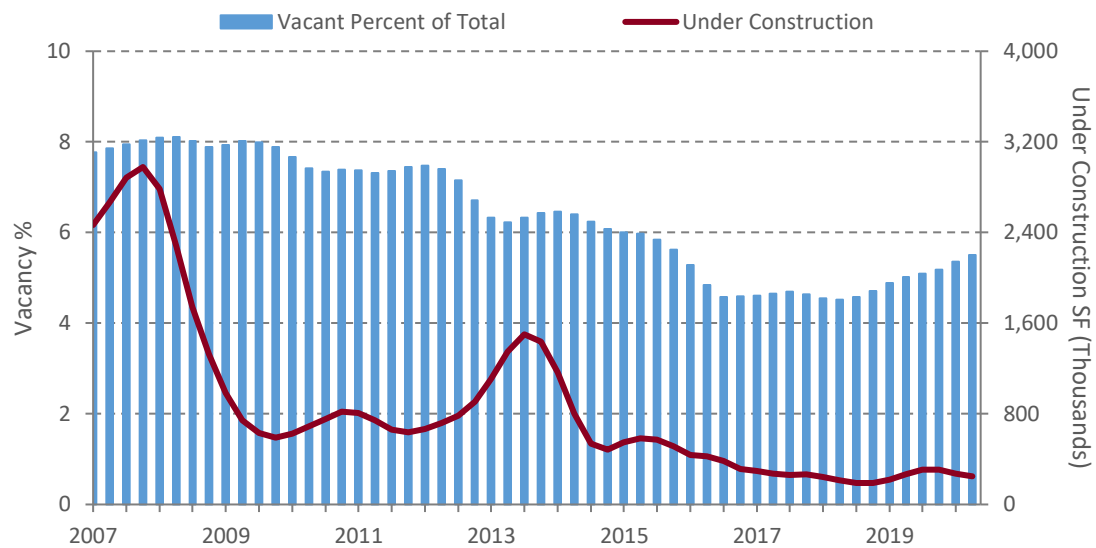
*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate Center at Texas A&M University

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 Real Estate Center at Texas A&M University

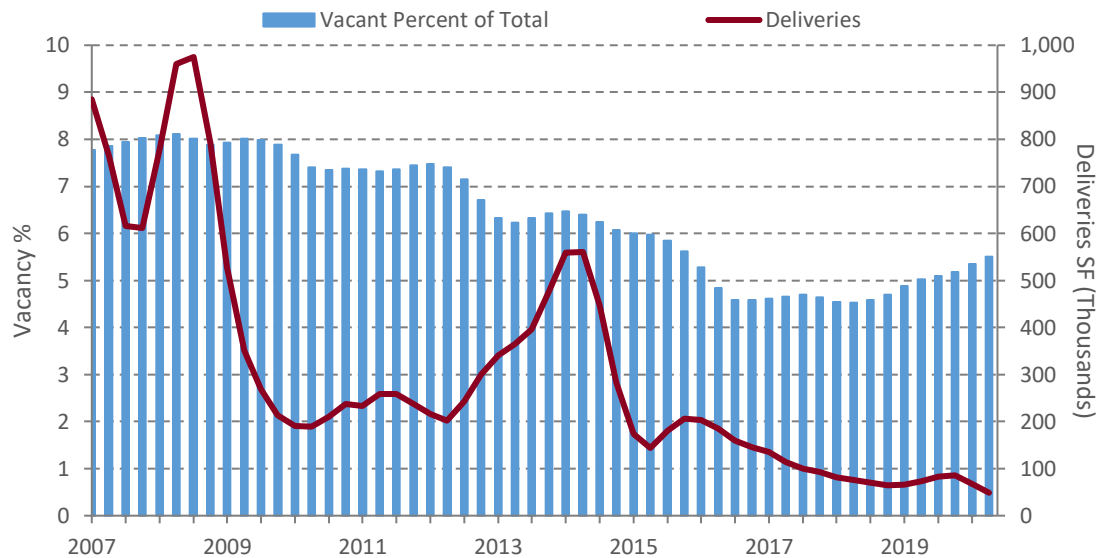
Figure 85. San Antonio Retail Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

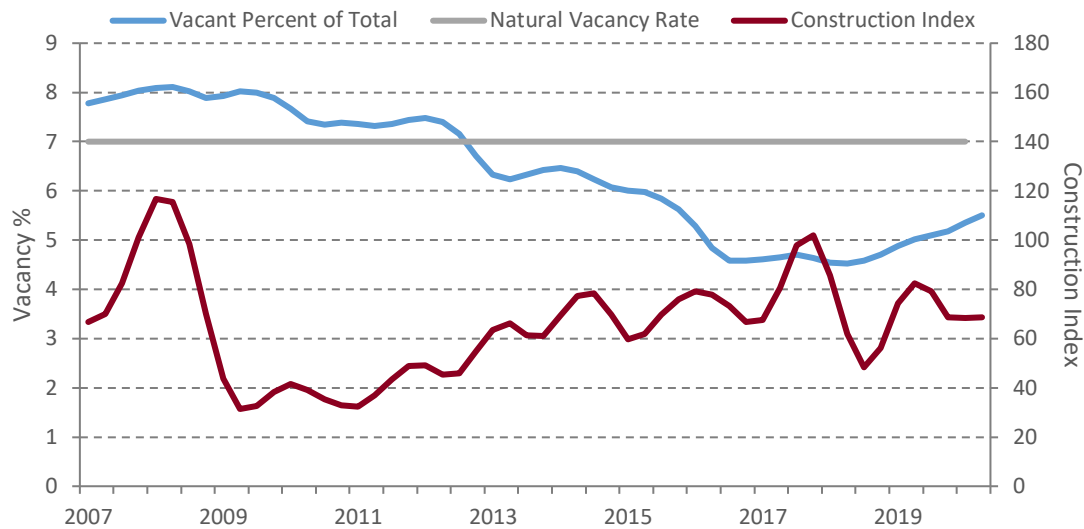
Figure 86. San Antonio Retail Vacancy and Deliveries (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

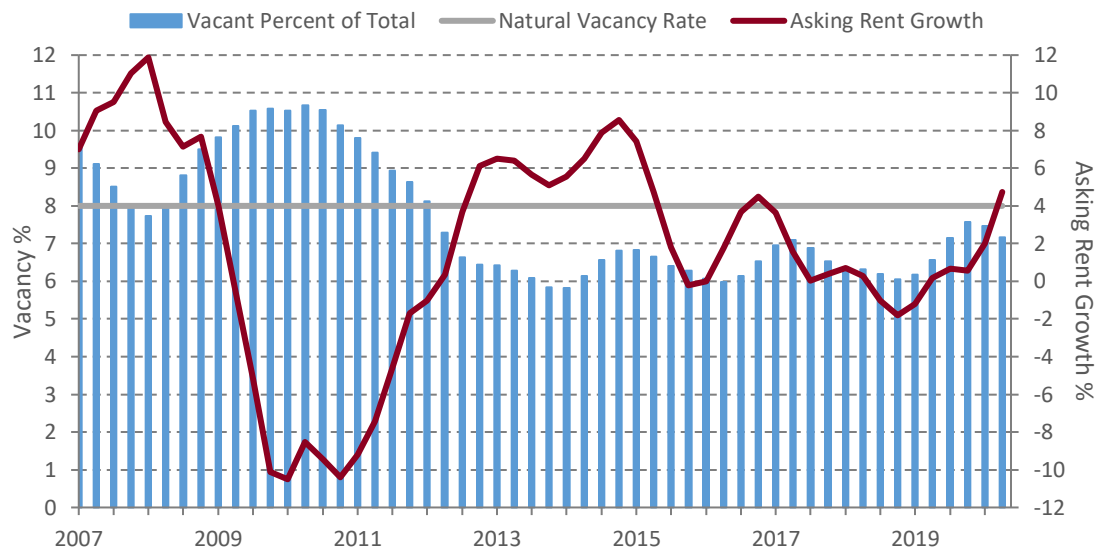
Sources: CoStar and Real Estate Center at Texas A&M University

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



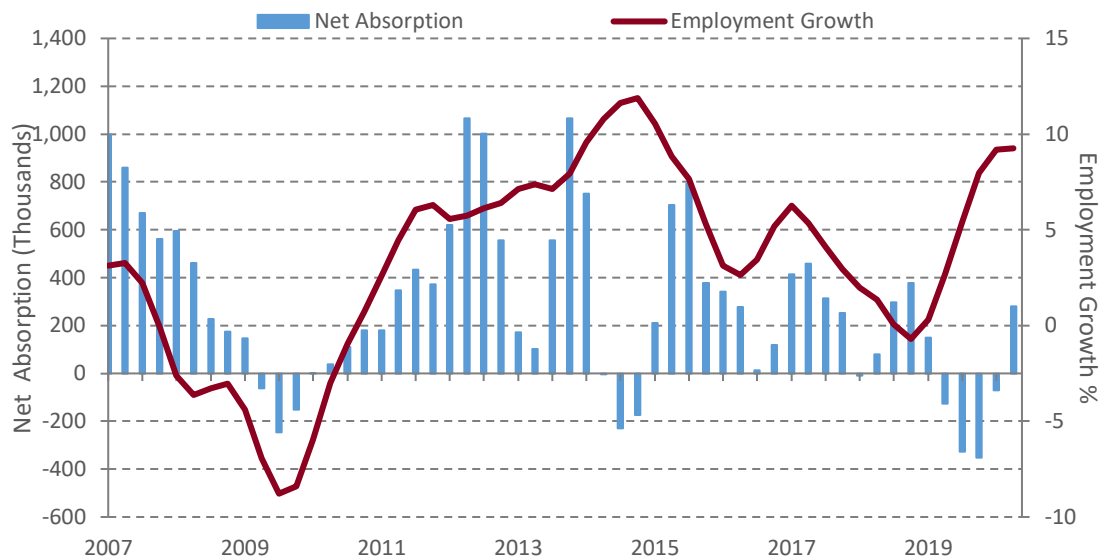
*Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

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



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

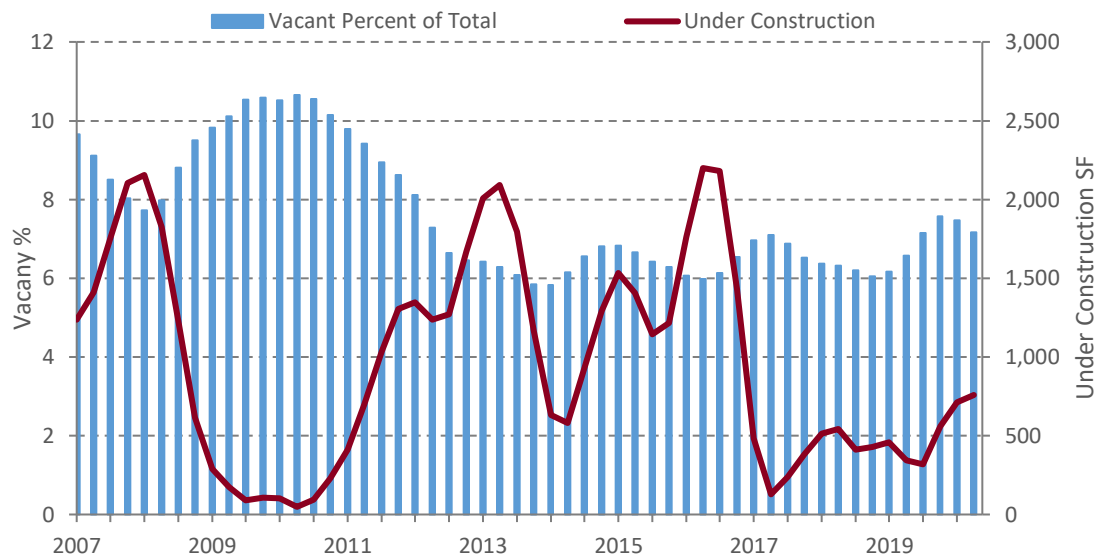
Figure 89. San Antonio Warehouse Net Absorption and Employment Growth (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

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

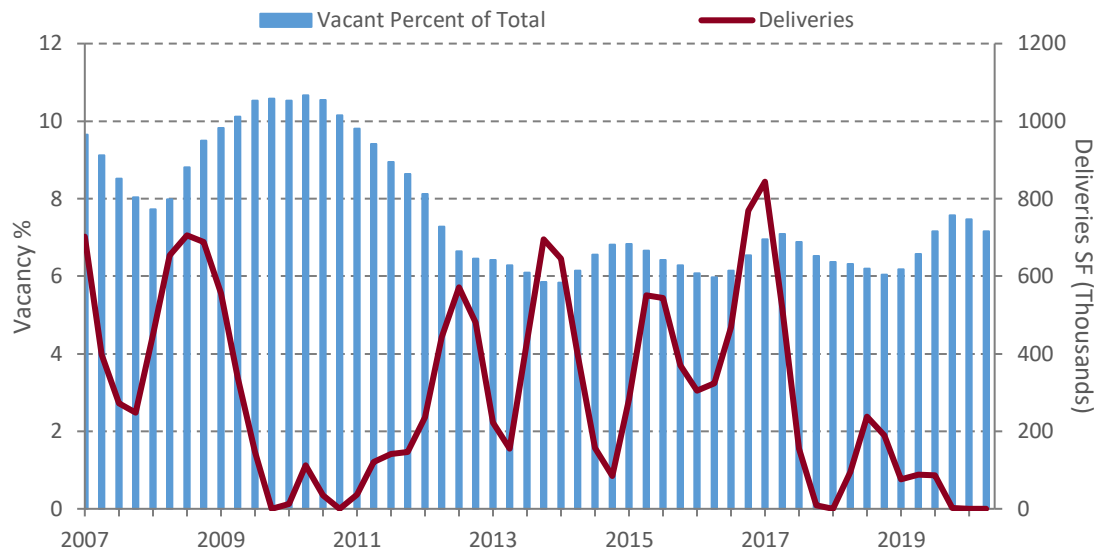
Figure 90. San Antonio Warehouse Vacancy and Under Construction (SA and TC)*



*Note: Seasonally adjusted and trend-cycle component.

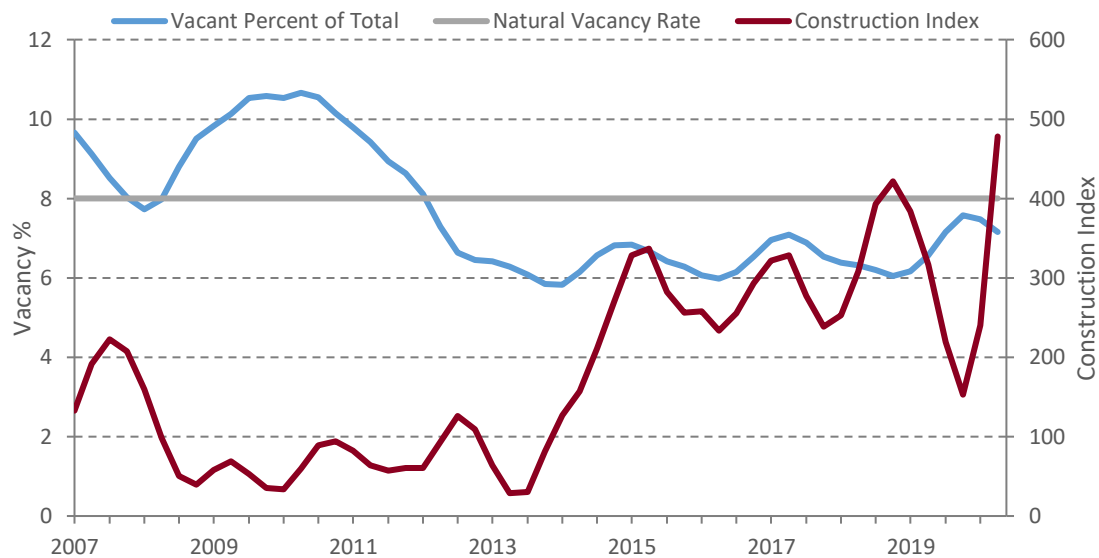
Sources: CoStar and Real Estate Center at Texas A&M University

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



*Note: Seasonally adjusted and trend-cycle component.
Sources: CoStar and Real Estate 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 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 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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