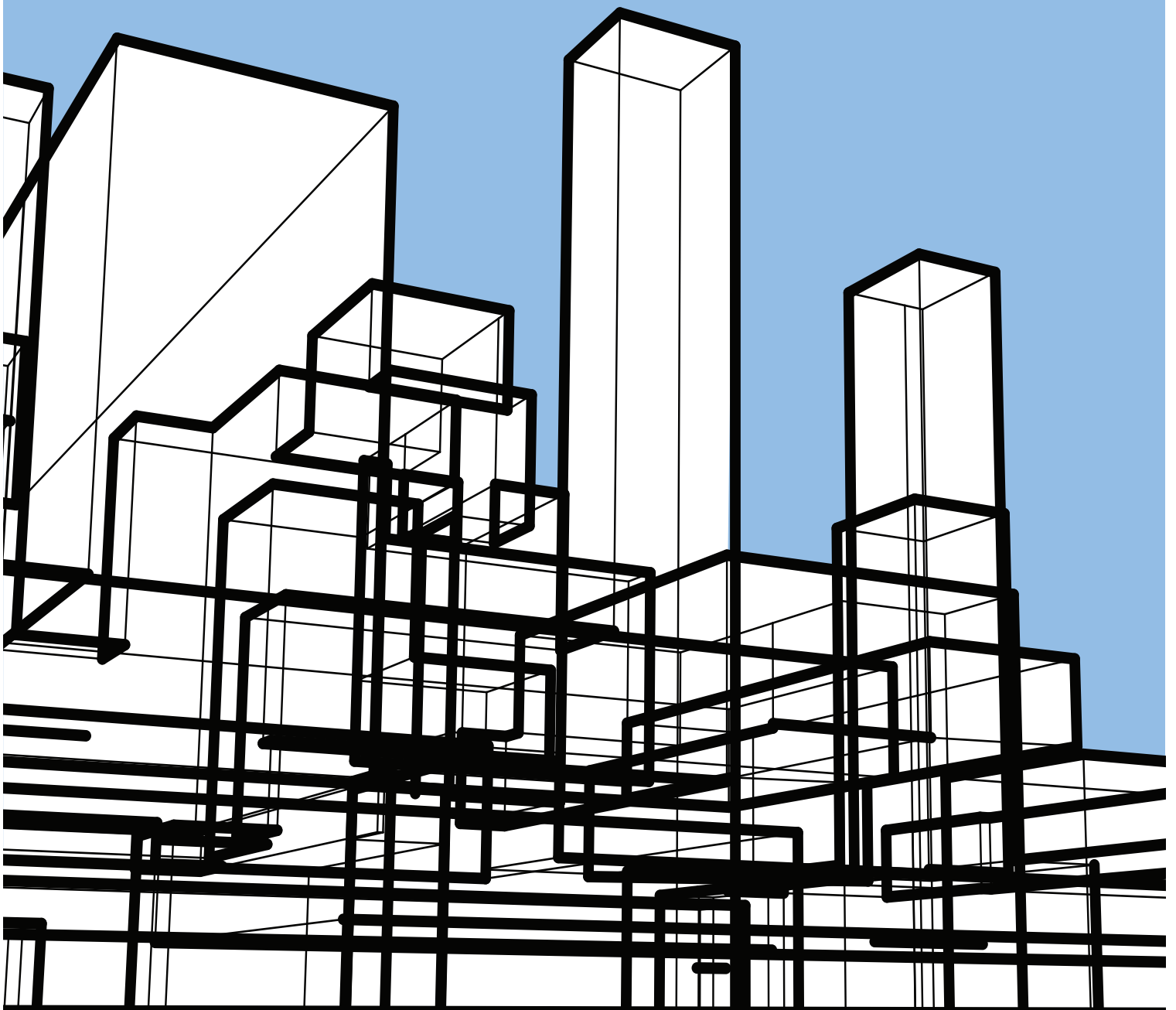


Texas Quarterly Commercial Report



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

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About this Report

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. Rents reflect nominal year-over-year estimates, unless stated otherwise. 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 in the data.

This report analyzes **asking rents**, which exclude tenant improvements and concessions, as opposed to **effective rents**. The report uses industry-specific employment growth to reflect the employment most relevant to each industry. For example, the employment data for the office sector represent finance, insurance, and real estate as well as professional and business services (FIRE & PBS) employment to include the bulk of employees working in the office sector.

This report 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.

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 Carter Neill



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.

Construction index. The construction value in relation to a specified base year.

Construction values. The collective dollar value of project starts for a particular sector.

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 its “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 and 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 **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.



Overview of the Texas Economy

The Texas economy continued to post strong growth in 2018. However, growth slipped slightly over the third quarter. Texas exports grew during the year, supported by crude oil and petroleum product exports. Additionally, activity in the energy sector expanded. Both the Texas Leading Index and Texas Business Outlook Surveys suggested the economy would continue to expand in 2018, albeit at a slower pace. For additional commentary and statistics, see [Outlook for the Texas Economy](http://www.recenter.tamu.edu) at www.recenter.tamu.edu.

The overall strong performance in the Texas economy translates into a positive outlook for the commercial real estate sector. The Texas Nonresidential Coincident Index, which measures current construction activity, indicates growth may slow as nonresidential construction values declined and interest rates increased in 2018. However, the Texas Leading Indicator, which measures future construction activity, indicates growth may slow as nonresidential construction values decline. See Figures 1-5 for the Nonresidential Coincident Index and Leading Indicator for Texas and the four major metros.

The pace of commercial mortgage borrowing and lending moderated in 2018. Compared with the first half of 2017, office borrowing remained unchanged. Overall, the dollar volume of mortgage originations in the office sector has stabilized since 2015. While industrial borrowing showed little movement from the first half of 2017, dollar volume of mortgage originations increased sharply from 2016 to 2017. Over the long term, retail borrowing has declined in dollar value of mortgage originations; new loans on retail properties measured 70 percent lower than 2007. Although market fundamentals remain strong—low long-term interest rates and increasing property values have incentivized commercial activity—mortgage borrowing and lending activity suggest that the performance of each sector varies.

The state's solid economy relies on the performance of the four major MSAs. Austin's economic activity held steady during 2018 as job growth continued its upward trend and wage gains followed. Employment continued to climb in Dallas-Fort Worth (DFW) with the goods sector leading job growth. In Houston, the overall outlook remains positive, supported by recent strong and broad-based job growth, although at a slower pace than during the oil boom. In contrast, San Antonio's job growth was softer through 2018, registering lower employment growth than the other MSAs.

The outlook for 2019 appears to be positive for the major Texas MSAs due to the strength of the U.S. and Texas economies. Although oil prices dipped in late 2018, fundamental factors appear to provide a positive tailwind moving forward. Interest rates should continue to rise as

inflation increases. On the negative side, volatility in the oil market, a slowing global economy, and a declining trade environment remain the greatest headwinds to the Texas economy, challenging some of the state's most productive industries. Although Mexico, Canada, and the U.S. announced an unofficial trade agreement, the net impact of the proposal is still uncertain. The U.S. economy may slow in 2019 as the effects of the 2018 fiscal stimulus dilute.

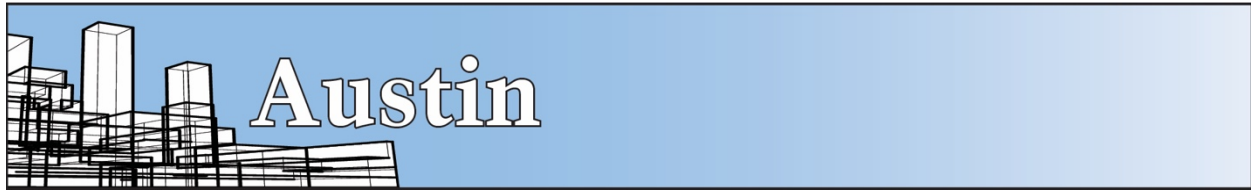


Table 1. Projected Overall Vacancy Rates and Percent Change in Nominal Asking Rents

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2017	2018	2019	2017	2018	2019
Office	13.0	9.3	9.2	9.2	3.4	1.8	0.7
Retail	6.0	4.0	3.9	3.8	6.6	6.4	5.5
Warehouse	11.0	5.6	5.2	4.8	7.2	1.2	0.5

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 the Real Estate Center at Texas A&M University

Austin Office (Figures 6 - 10)

Actual vacancy has hovered around 9 percent since mid-2015, well below the natural vacancy of 13 percent. Actual vacancy is expected to stay constant in the near-term, averaging 9.2 percent over 2018. Because actual vacancy measures considerably lower than natural vacancy, rents should increase. Rent growth is expected to slow to 0.7 percent in 2019.

Despite recent employment increases in FIRE & PBS, asking rent growth has declined over 7 percentage points since reaching a post-recessionary peak of 8 percent in early 2014. After declining for nearly two years, the employment growth rate climbed through 2017 and peaked in early 2018. The increased employment should provide an impetus to rent growth.

The square footage under construction has dampened significantly since 2015. However, despite the decline in deliveries, the supply of Austin office space outpaced demand in 2018. Net absorption has declined quarterly since the beginning of 2017, with the exception of an increase in 3Q2018.

The increase in construction values seen in 2016 translated into a boost in square footage under construction in 2017. However, the available data on square footage under construction do not yet reflect the large uptick depicted in the construction values in 2018.

Austin Retail (Figures 11 - 15)

Actual vacancy has hovered around 4 percent since the end of 2015, much lower than the natural vacancy of 6 percent. Even with sustained low actual vacancy, rents have seen a two-quarter decline since 1Q2018; rent growth approached 4.1 percent in 3Q2018. As new construction remains suppressed, little movement is expected in the vacancy rate, which was forecasted to average 3.9 percent over 2018. Rent growth was expected to remain flat through 2018, averaging 6.4 percent for the year.

The recent uptick in the retail employment growth rate through 2018 translated into increased net absorption; the supply of Austin retail space did not exceed demand. Low levels of new construction suggest retailers may be consolidating operations, downsizing, or struggling to locate desirable available space for lease.

New construction toppled in the aftermath of the Great Recession (GR) and has remained suppressed. While low actual vacancy suggests developers may consider building new space, diminished levels of new construction may indicate that market trends, such as the growth of e-commerce, are not conducive to new development.

Although the long-term trend since the GR points to a gradual uptick, construction values have recently declined, which coincides with the slight decrease in new construction.

Austin Warehouse (Figures 16 - 20)

Since the end of the recovery from the GR, actual vacancy has measured below the natural vacancy of 11.0 percent. The ongoing downward trend in actual vacancy suggests rent growth should have continued through 2018. However, the steep climb in rent growth, which peaked at 20.96 percent in 3Q2015, dropped to -6.09 percent in 3Q2018. Actual vacancy was expected to average 5.2 percent over 2018, which, at a level well below the natural vacancy, should spur new development.

Rent growth was expected to average 1.2 percent over 2018, bolstered by strong warehouse and transportation employment growth. Closely trailing rent growth, employment growth surged from mid-2015 to the end of 2016 but has since returned to a more moderate pace. However, despite considerable employment growth, net absorption measured negative from the end of 2016 to mid-2017. This is likely a factor of the significant climb in new construction since the end of the recovery from the GR. New construction has slowed slightly since reaching a post-recessionary peak in the beginning of 2016.

The large uptick in early 2017 construction values suggests new deliveries may increase near term.



Table 2. Projected Overall Vacancy Rates and Percent Change in Nominal Asking Rents

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2017	2018	2019	2017	2018	2019
Office	18.0	17.4	17.8	18.5	3.7	2.6	0.9
Retail	8.0	5.7	5.4	5.4	3.9	3.1	2.7
Warehouse	11.0	8.6	7.5	7.2	2.2	5.4	3.2

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 the Real Estate Center at Texas A&M University

Dallas-Fort Worth Office (Figures 21 - 25)

As actual vacancy has neared the natural vacancy of 18 percent, rent growth has declined. Actual vacancy was expected to average 17.8 percent over 2018. While rental rates are expected to average 2.6 percent in 2018, rent growth may struggle to meet expectations as the gap between actual and natural vacancy narrows.

FIRE & PBS employment growth has hovered between 2 and 4 percent since mid-2015. With the continued moderate growth in FIRE & PBS employment and less square footage under construction, net absorption unsurprisingly measured positive in 3Q2018. This indicates the demand of DFW office space continued to strengthen in 3Q2018. The net absorption in 3Q2018 was DFW's best in two years.

Construction values have shown increased volatility since 2015. However, the decline in values over the past three years precipitated the decline in the square footage under construction.

Dallas-Fort Worth Retail (Figures 26 - 30)

Actual vacancy, which was expected to average 5.4 percent over 2018, measures well below the natural vacancy rate of 8.0 percent. The widening divergence between actual and natural vacancy should reflect positively on rent growth, which was expected to average 3.1 percent over 2018. Rent growth peaked at 5.8 percent at the beginning of 2016 but declined

significantly over the year. An onslaught of deliveries in the beginning of 2016 may explain the downturn in rent growth through 2016.

As deliveries tapered, rent growth reversed its downward trend. However, the decline in retail employment growth, which reflects lower demand for space, has recently dampened rent growth. Net absorption has remained positive, which indicates that demand for Dallas retail space, while reduced, remains competitive.

New construction, which has not kept pace with demand, has contributed to the continued tightness in actual vacancy. While the large gap between actual and natural vacancy should dictate an increase in construction, the conditions for development—which include, among others, land availability, consumer trends, and investor sentiment—may not be ripe.

As anticipated, the decline in new construction follows the decline in construction values.

Dallas-Fort Worth Warehouse (Figures 31 - 35)

Although actual vacancy has measured below natural vacancy since 2012, rent growth largely trended downward through 2017. However, rent growth has since increased to 8.6 percent, the largest increase in over two decades. Average rent growth is expected to be 5.4 percent over 2018. New construction increased significantly following the end of the GR, which may have suppressed rent growth by providing an onslaught of new deliveries. Actual vacancy should remain well below natural vacancy in the near-term, with expectations for an average vacancy rate of 7.5 percent over 2018.

Warehousing and transportation employment growth posted a substantial hike in the aftermath of the GR, reaching 10.4 percent in mid-2015. Employment growth has since trended downward, but net absorption has remained positive. This indicates demand for Dallas warehouse space showed continued strength.

New construction has reached levels unobserved since before the GR. The significant uptick and recent decline in new construction coincides with the rise and recent fall in construction values.



Table 3. Projected Overall Vacancy Rates and Percent Change in Nominal Asking Rents

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2017	2018	2019	2017	2018	2019
Office	14.0	19.5	20.1	20.6	-0.5	1.7	1.6
Retail	7.0	5.8	5.7	5.7	2.6	4.2	3.7
Warehouse	8.0	7.0	6.9	6.6	-0.6	3.1	1.8

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 the Real Estate Center at Texas A&M University

Houston Office (Figures 36 - 40)

The oil downturn, which began in mid-2014, has proven troublesome to Houston's office market. Since mid-2015, actual vacancy (20 percent in 3Q2018) has exceeded natural vacancy (14.0 percent). Vacancy, which is expected to average 20.0 percent over 2018, should remain relatively flat for the rest of the year.

Rent growth declined steadily in the wake of the oil downturn, dipping to -1.8 percent at the end of 2016. Rent growth turned positive at the end of 2017. Robust FIRE & PBS employment growth should induce continued rent growth; expectations dictate rent growth will average 1.7 percent over 2018.

FIRE & PBS employment growth declined in the aftermath of the oil downturn, precipitating a decline in the demand for office space. This is reflected in the negative net absorption from 2016 to mid-2018. However, FIRE & PBS employment growth has experienced robust growth since mid-2016, climbing to 6.3 percent in 3Q2018, which explains net absorption's change from negative to positive in 3Q2018. Combined with the decline in the square footage under construction, high employment growth suggests net absorption should stay positive as long as demand continues to strengthen.

Although construction values showed an uptick in 2017, the square footage under construction doesn't reflect the increase in values. Both the oil downturn and Hurricane Harvey appear to have dampened new construction, which has declined significantly since mid-2015.

Houston Retail (Figures 41 - 45)

Actual vacancy (5.7 percent in 3Q2018) remained well below the natural vacancy of 7 percent. The growing divide between actual and natural vacancy should place upward pressure on rent growth; however, the oil downturn did dampen 2017 rent growth. In the aftermath of the GR, rent growth proved robust until the oil downturn in 2014, at which point rent growth declined considerably, reaching a low of -1.0 percent in mid-2016. Rent growth has since turned positive, measuring 5.4 percent in 3Q2018, and was expected to average 4.2 percent over 2018 as the Houston economy gains momentum. Actual vacancy was expected to hold constant over 2018, averaging 5.7 percent.

The oil downturn precipitated a decline in retail employment growth through mid-2017, but the employment growth rate has since increased by 2 percentage points to reach 2.8 percent in 3Q2018. Employment growth remained positive in the wake of the oil downturn, which along with low levels of new construction facilitated positive net absorption throughout the downturn. While new construction initially climbed after the GR and even increased during the oil downturn, it has tapered significantly since the end of 2016. This has allowed demand for Houston retail space to outpace supply.

As anticipated, the decline in construction values precedes the decrease in new construction.

Houston Warehouse (Figures 46 - 50)

Actual vacancy, which measured 7.2 percent in 3Q2018, has remained below the natural vacancy of 8 percent since mid-2011. Rent growth climbed in the immediate wake of the oil downturn, peaking at 11.1 percent in mid-2015 before plunging into negative territory in 2017. Due to the large uptick in 2018, rent growth was expected to average 3.1 percent over 2018. Meanwhile, expectations dictate actual vacancy should have averaged 7 percent for the year.

Warehousing and transportation employment growth preceded the significant rent growth observed in 2014 and 2015. While employment growth initially increased in the wake of the oil downturn, it soured in 2015 before plunging into negative territory in 2016. Although employment growth has since increased, its more moderate growth led to a recent tapering of demand. However, net absorption has remained positive, suggesting that demand should remain firm.

New construction increased considerably following the GR, slowed in the aftermath of the oil downturn, and picked up the pace in mid-2017. Construction values have followed a generally positive trend since the GR. However, more recent values have declined sharply, which is not yet reflected in new construction.



Table 4. Projected Overall Vacancy Rates and Percent Change in Nominal Asking Rents

Property Type	Natural Vacancy Rate	Vacancy Rates (%)			Asking Rents (y-o-y %)		
		2017	2018	2019	2017	2018	2019
Office	12.0	11.4	11.7	11.9	3.4	2.3	1.9
Retail	6.0	4.5	4.4	4.3	1.8	4.4	3.0
Warehouse	8.0	6.3	6.2	6.0	1.7	-0.1	-0.6

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 the Real Estate Center at Texas A&M University

San Antonio Office (Figures 51 - 55)

The actual vacancy of 11.5 percent is approaching the natural vacancy of 12.0 percent. While actual vacancy has been less than natural vacancy since mid-2014, earlier actual vacancy had exceeded natural vacancy for several years. Expectations dictate that actual vacancy should have averaged 11.7 percent in 2018. Rent growth, which measured 2.8 percent in 3Q2018, is expected to decrease through 2018, reaching 2.3 percent for the year.

The decline in FIRE & PBS employment growth rate since mid-2016 translated into negative net absorption from 3Q2017 through 1Q2018. This suggests softening demand. However, the last two quarters have seen positive net absorption despite the decreasing employment growth rate, which can be explained by the decreases in new construction. As actual vacancy approaches natural vacancy, little new development is expected.

New construction has fluctuated little since the recovery from the GR. However, construction values have proven more erratic, a level of volatility that is not reflected in the square footage under construction.

San Antonio Retail (Figures 56 - 60)

Rent growth has largely been negative since the GR but reached a post-recessionary high of 6.1 percent in 3Q2018. Since mid-2012, natural vacancy has exceeded actual vacancy, which should have dictated an increase in rent growth. The sharp decline in employment growth rate since

the end of 2015 has likely suppressed rent growth. However, rent growth was expected to average 4.4 percent over 2018, while actual vacancy will also average 4.4 percent, much less than the natural vacancy of 6 percent.

The retail employment growth rate dipped into negative territory at the end of 2017 but measured positive in 3Q2018. The decline in employment growth precipitated negative net absorption in 2Q2018 and slightly positive in 3Q2018.

New construction declined significantly in the aftermath of the GR and has generally continued its downward trend, with the exception of a brief uptick in 2013. Despite the decline in employment growth from 2015 to 2017, suppressed levels of new construction likely facilitated positive net absorption.

Construction values have dropped significantly in the last two quarters, indicating that the level of new construction may slow further.

San Antonio Warehouse (Figures 61 - 65)

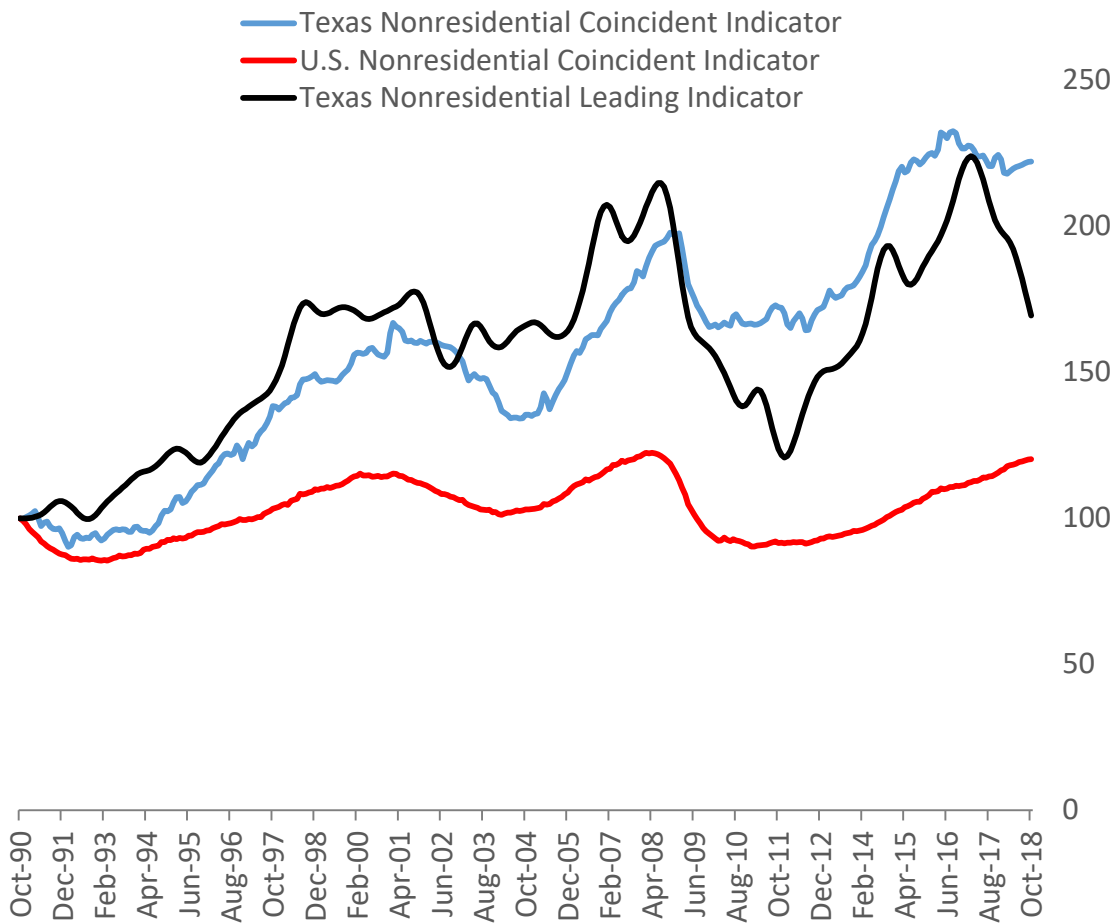
Actual vacancy has been below the natural vacancy of 8 percent since the end of the recovery from the GR, largely hovering between 6 and 7 percent. Vacancy was expected to remain flat the rest of 2018 to average 6.2 percent for the year. However, rent growth has declined overall since the end of 2014 and entered negative territory in 2018. Although rent growth sank to a seven-year low of -2.1 percent in 3Q2018, it was expected to remain flat over 2018, averaging -0.1 percent for the year.

Warehousing and transportation employment growth climbed rapidly in the aftermath of the GR, which contributed to positive rent growth. Employment growth experienced an uptick in 2016, which should have reflected positively on rent growth. As a result of the decline in employment growth in 2018, net absorption declined after 2Q2018.

The level of new construction has proven volatile; a sharp uptick in new construction after the GR was succeeded by a considerable decline. In mid-2017, new construction reached a low unobserved since the GR. The confluence of low actual vacancy, high employment growth, and low levels of new construction should facilitate future rent growth. Although new construction has not increased in response to the uptick in construction values, this trend should become apparent in future quarters.

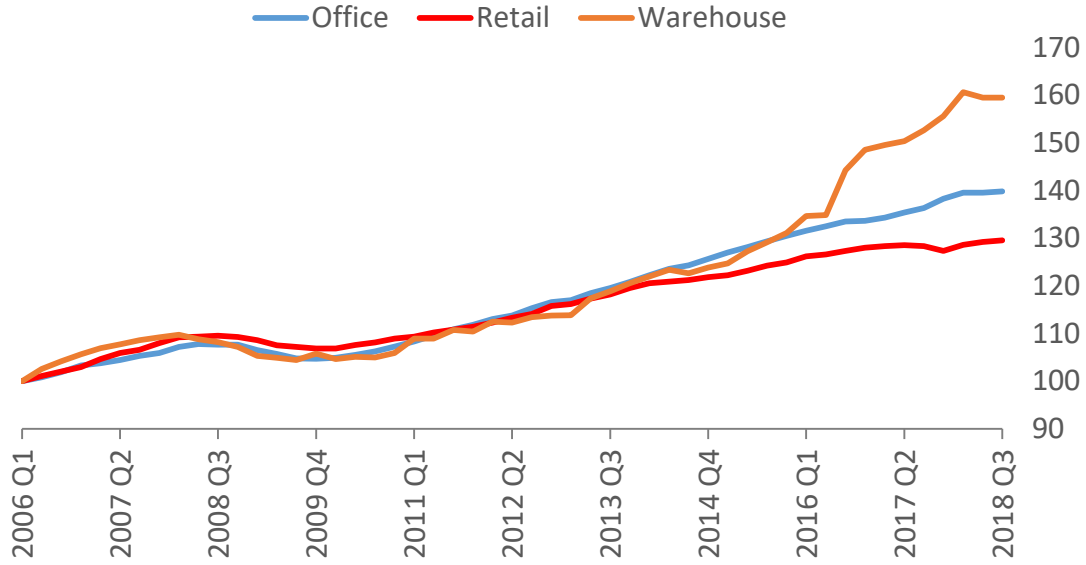
Figures

Figure 1. Texas Nonresidential Coincident and Leading Indicators
(Index Oct. 2009 = 100)



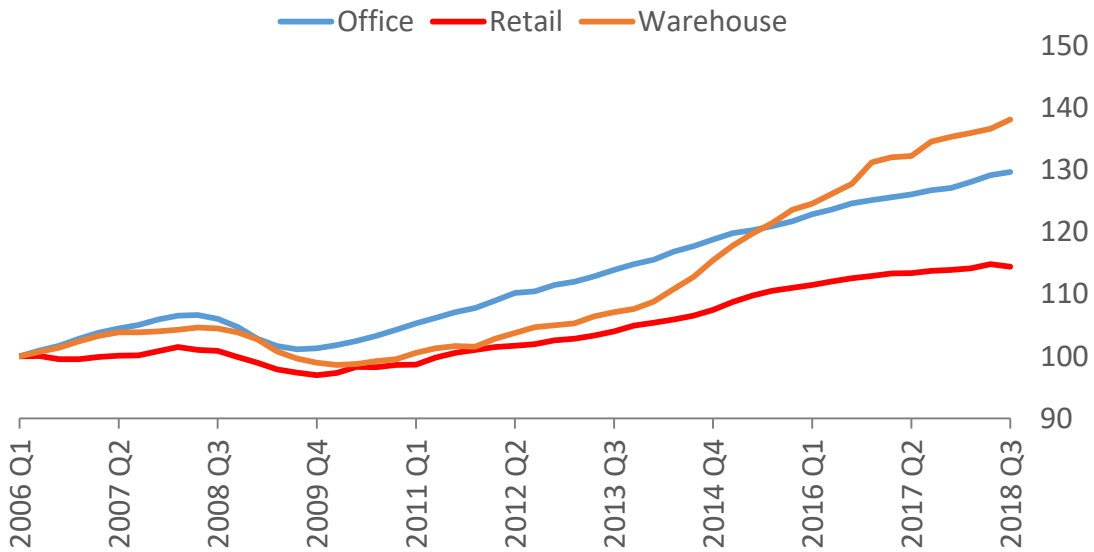
Source: Real Estate Center at Texas A&M University

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



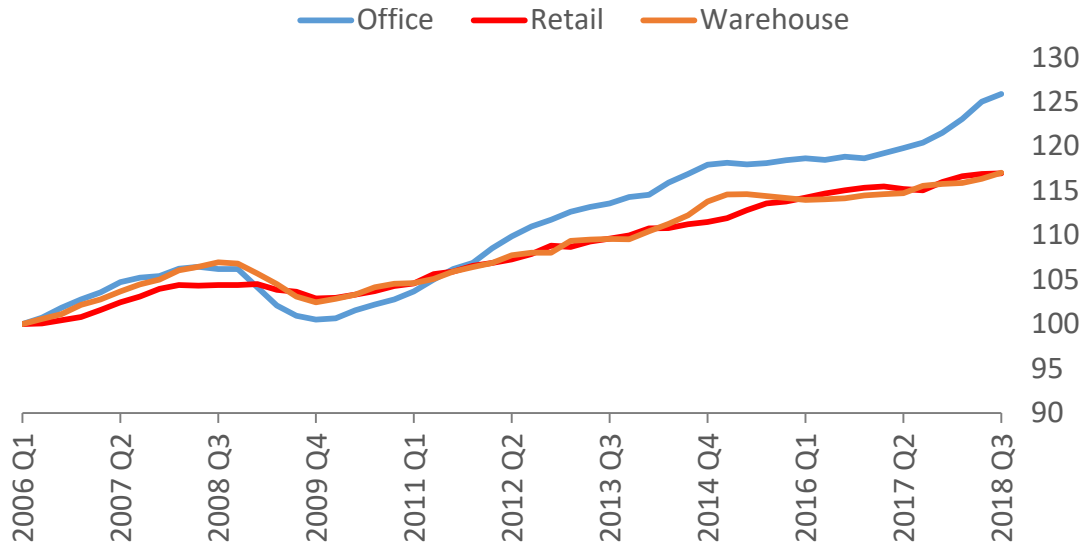
Source: Real Estate Center at Texas A&M University

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



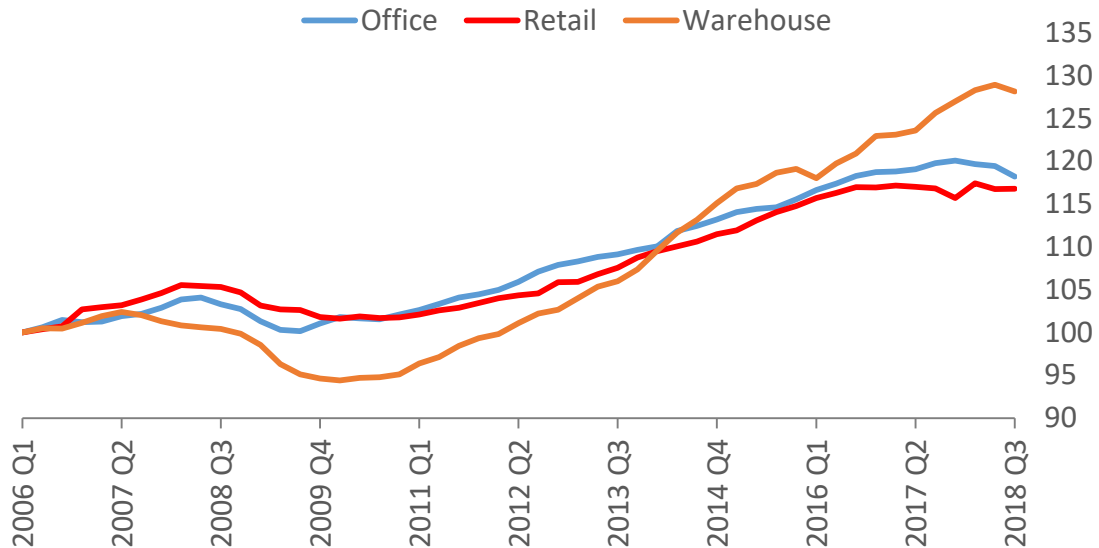
Source: Real Estate Center at Texas A&M University

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



Source: Real Estate Center at Texas A&M University

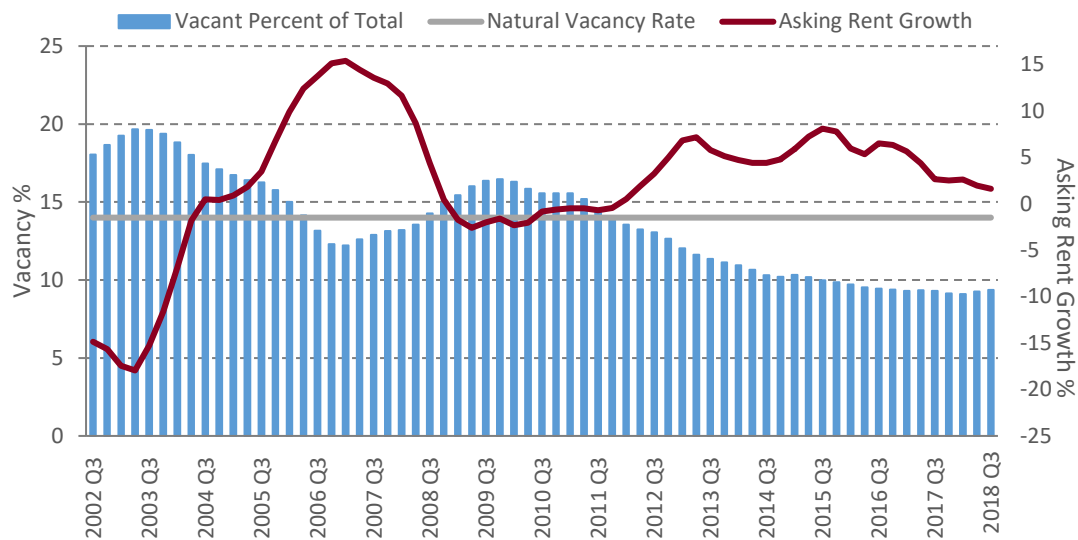
Figure 5. San Antonio Nonresidential Leading Indicators
(Index 2006 Q1 = 100)



Source: Real Estate Center at Texas A&M University

Austin

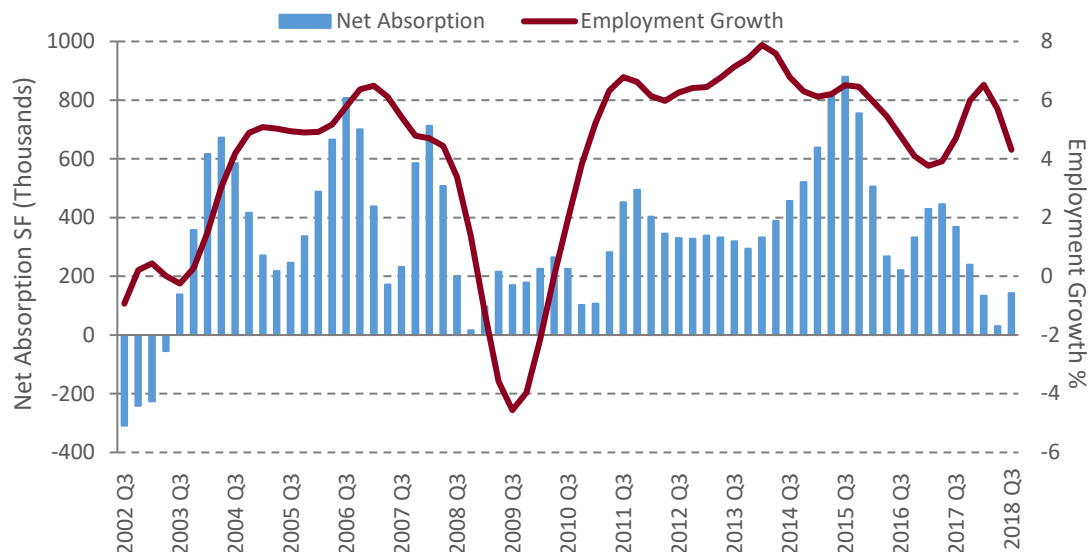
Figure 6. Austin Office Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

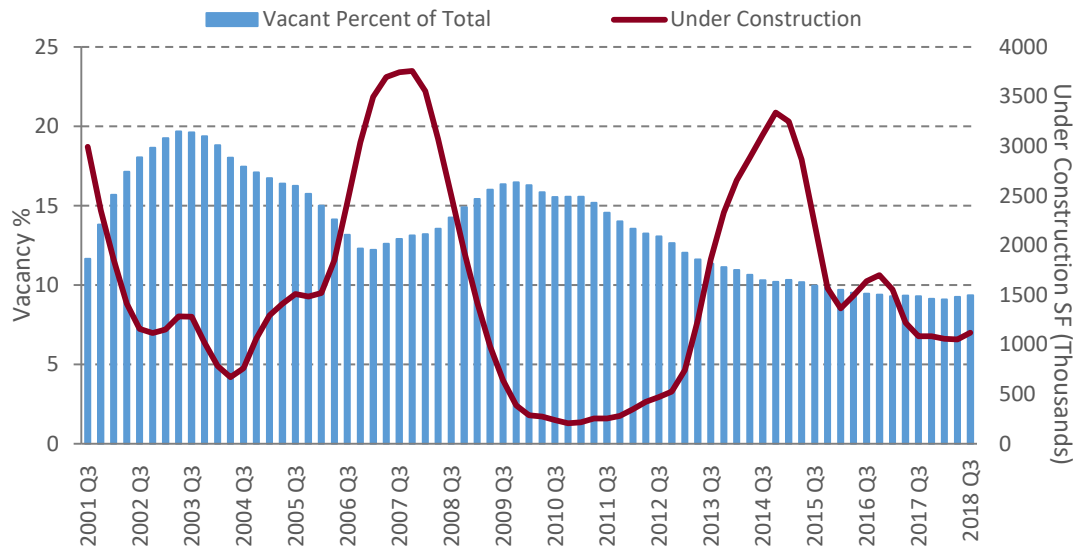
Figure 7. Austin Office Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

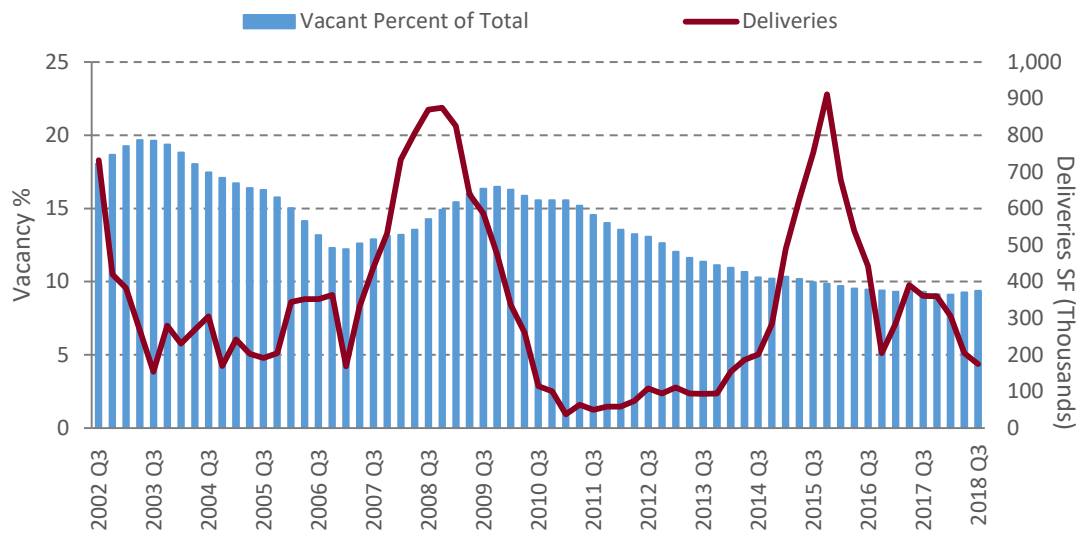
Figure 8. Austin Office Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

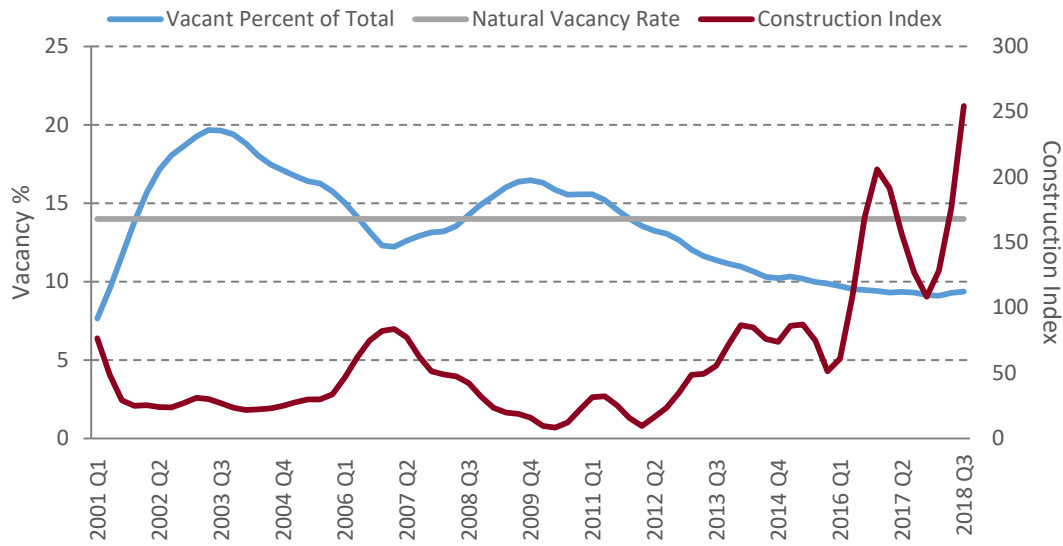
Figure 9. Austin Office Vacancy and Deliveries



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

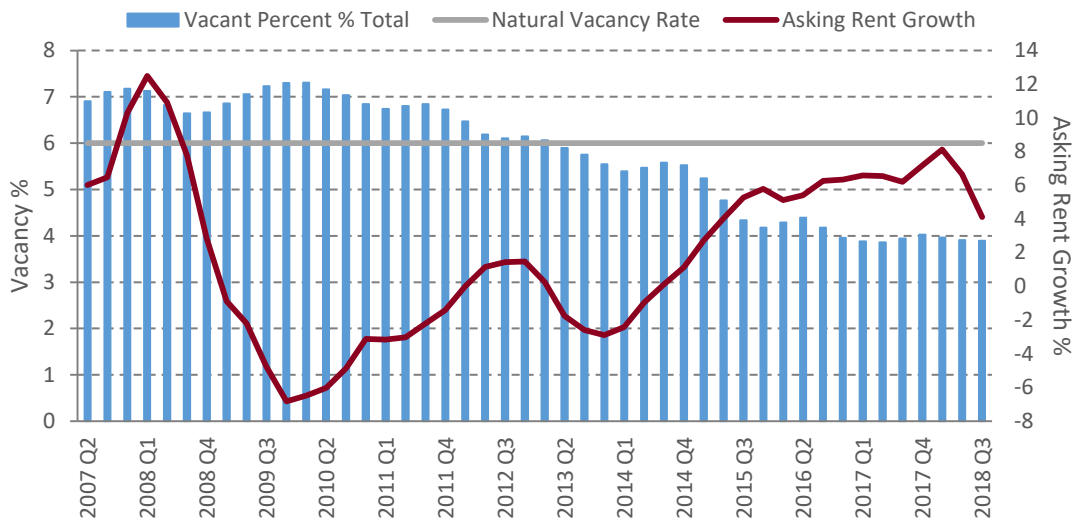
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 10. Austin Office Vacancy and Construction Index
(Index 2000 Q4 = 100)



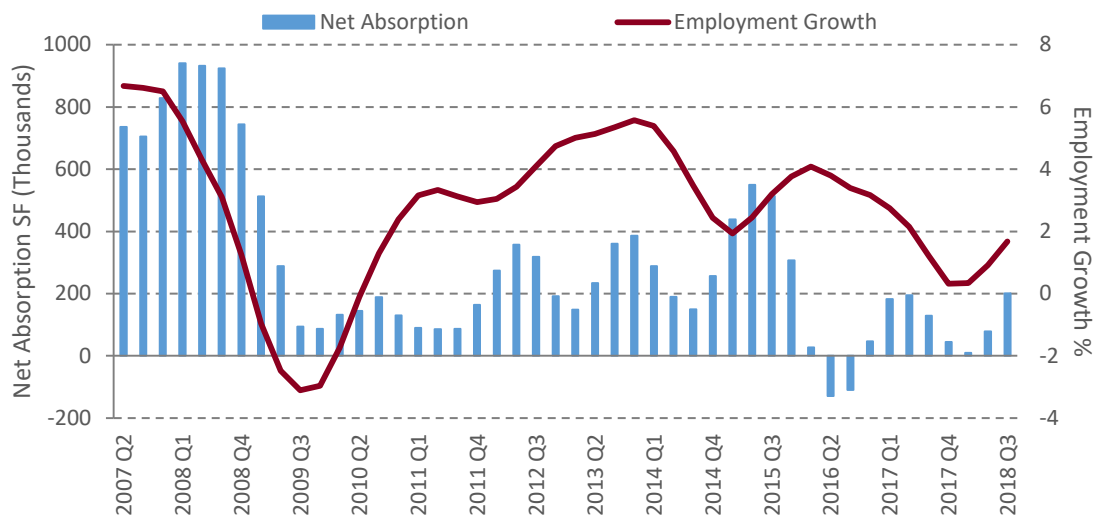
Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 11. Austin Retail Vacancy and Asking Rent Growth



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

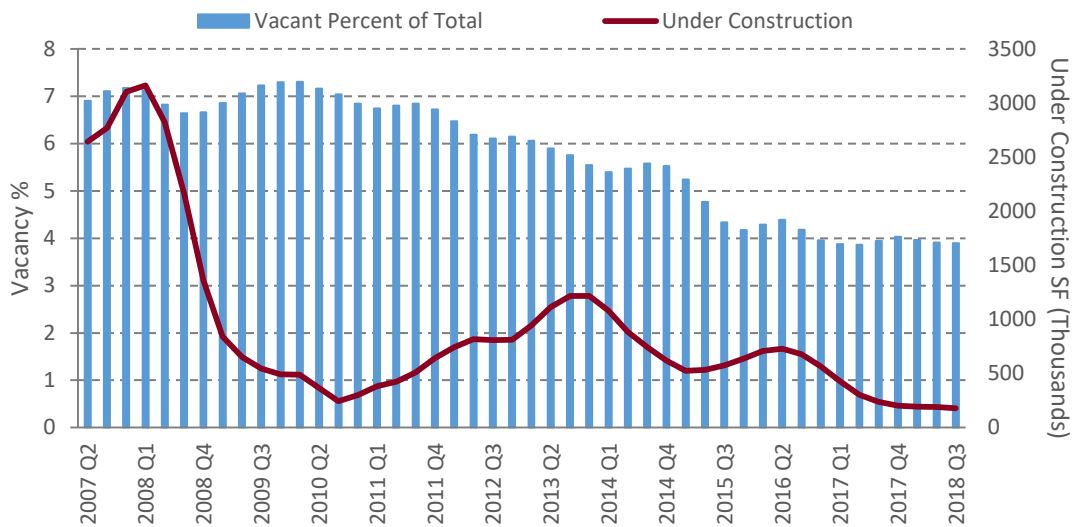
Figure 12. Austin Retail Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

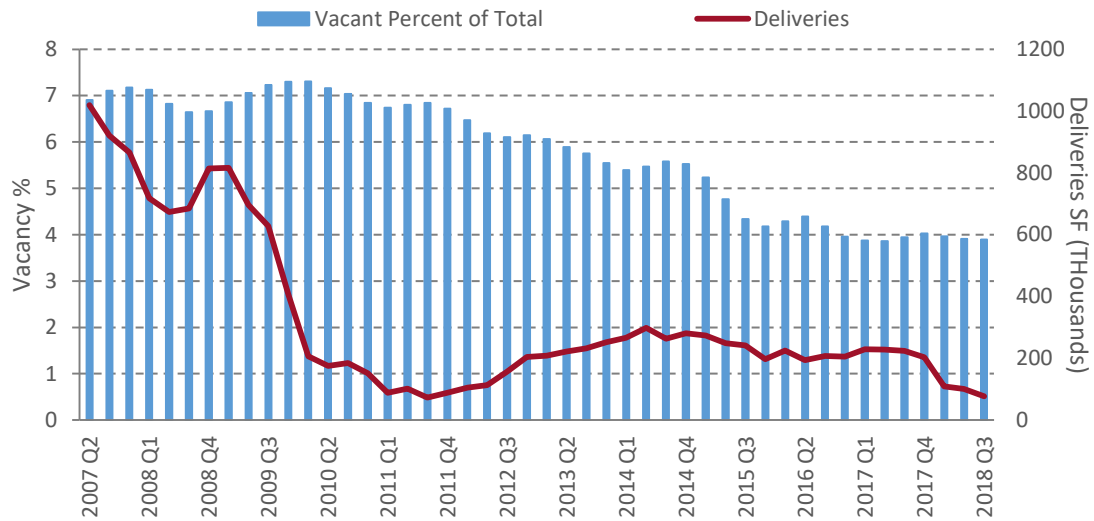
Figure 13. Austin Retail Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

Figure 14. Austin Retail Vacancy and Deliveries

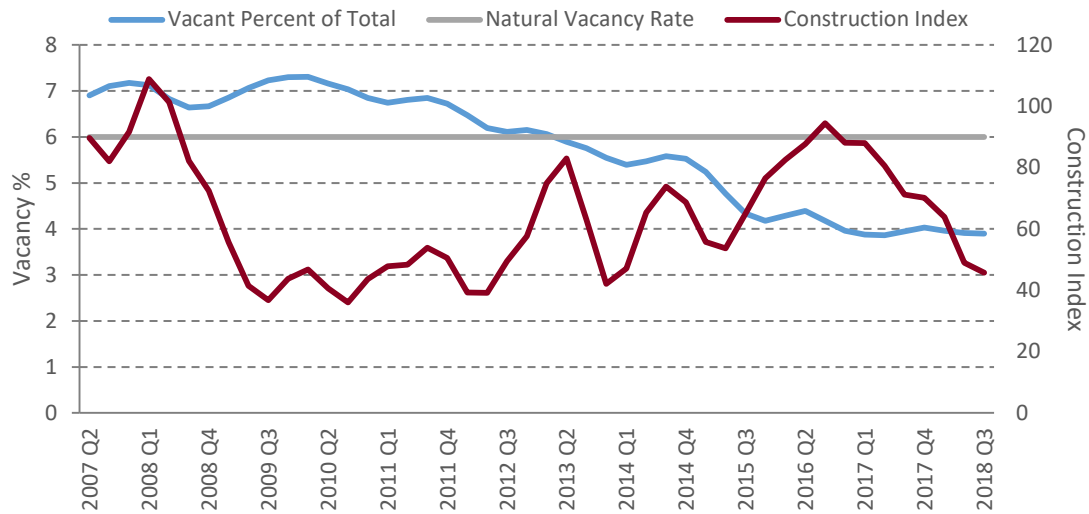


Note: Seasonally adjusted and trend-cycle component.

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

Figure 15. Austin Retail Vacancy and Construction Index

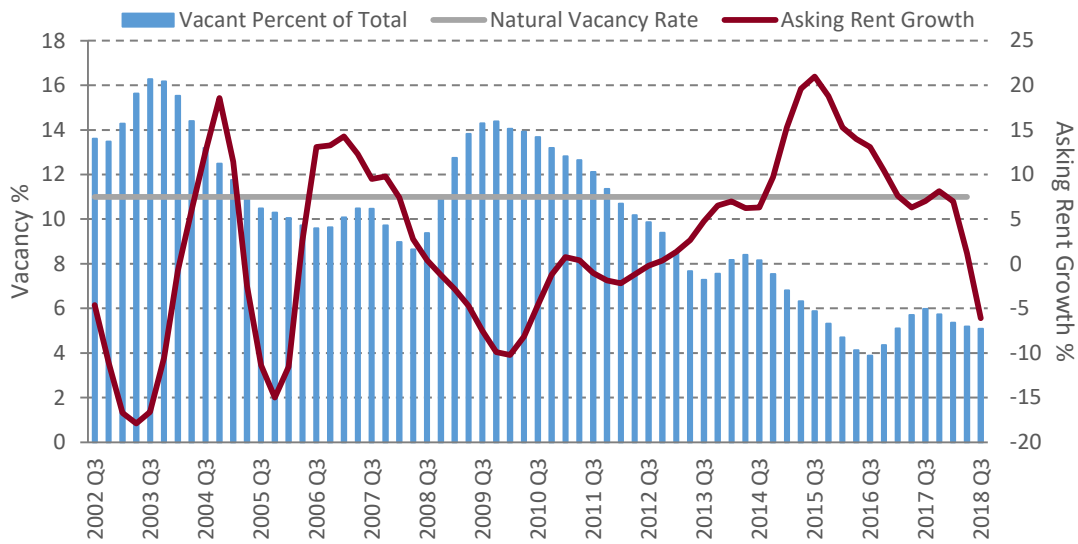
(Index 2006 Q1 = 100)



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

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

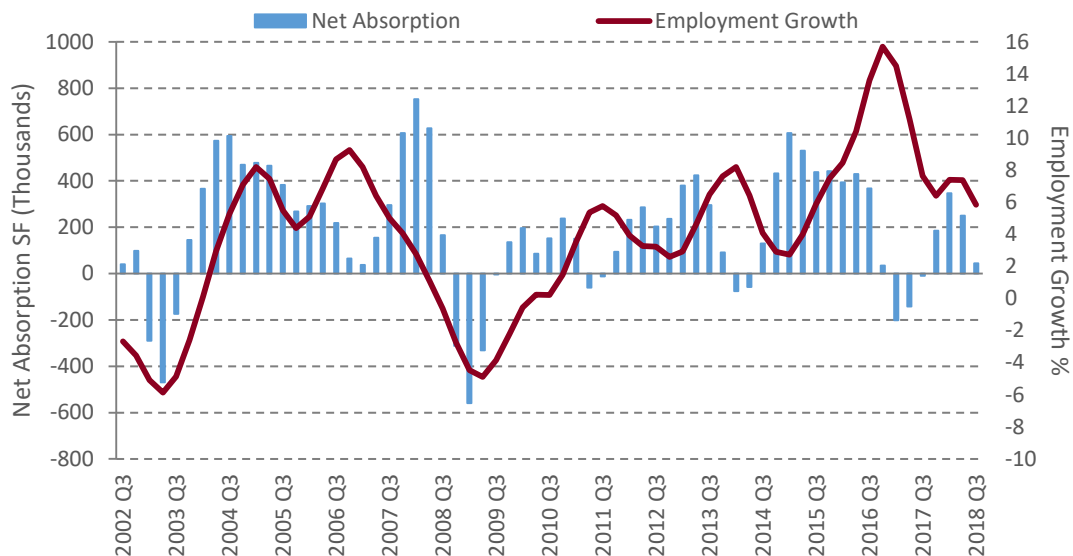
Figure 16. Austin Warehouse Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

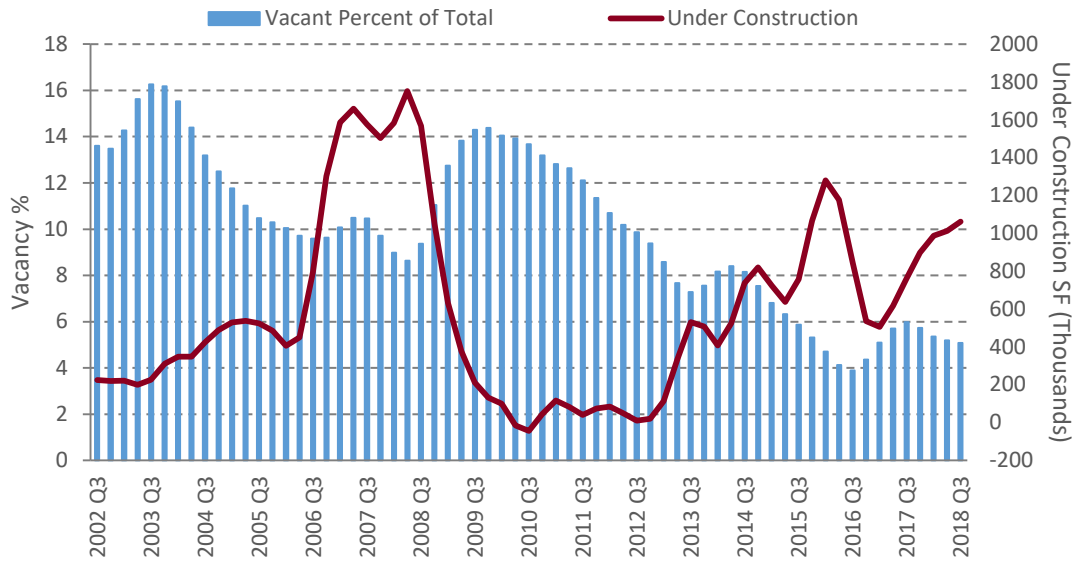
Figure 17. Austin Warehouse Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

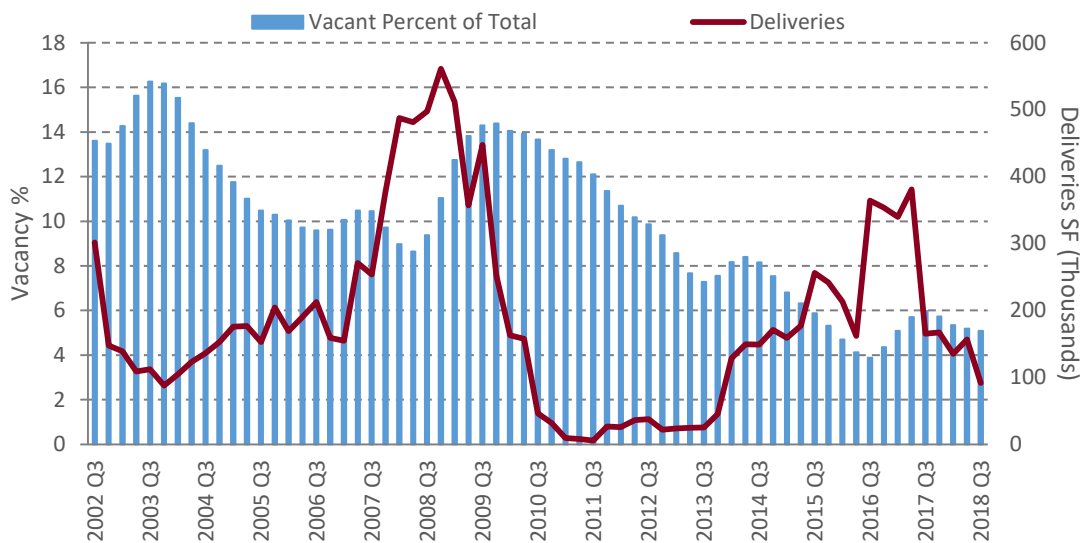
Figure 18. Austin Warehouse Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

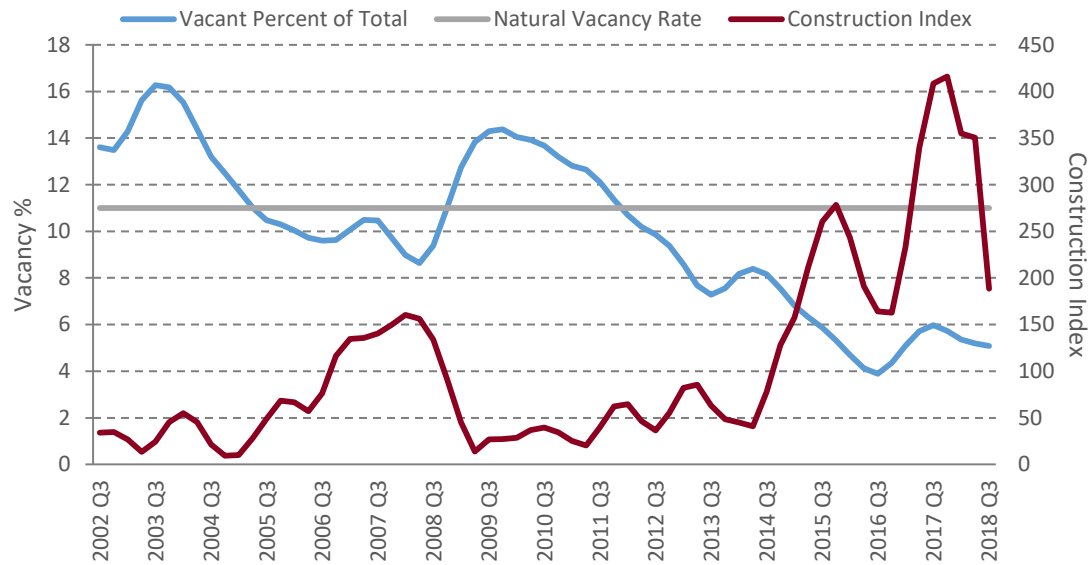
Figure 19. Austin Warehouse Vacancy and Deliveries



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

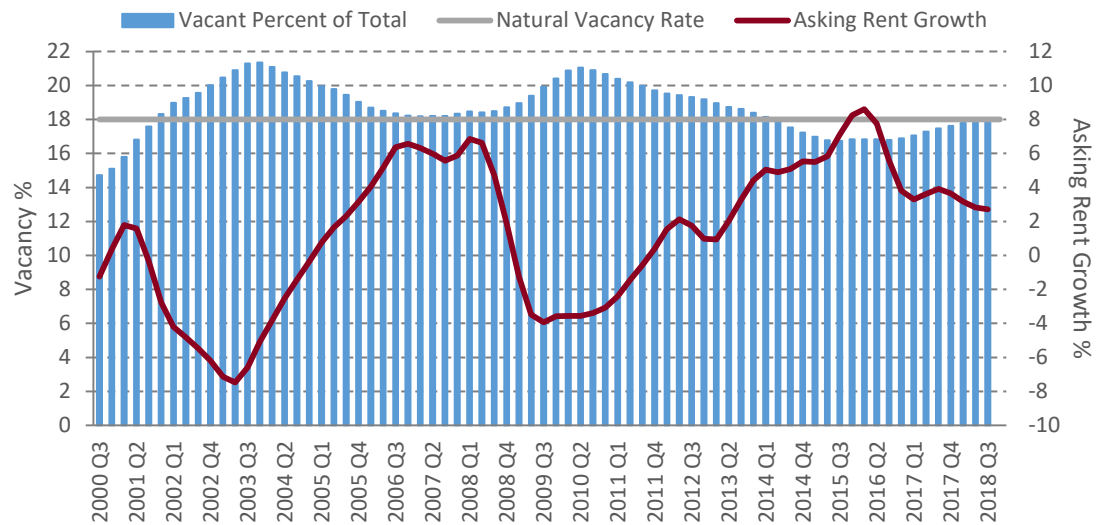
Figure 20. Austin Warehouse Vacancy and Construction Index
(Index 2000 Q4 = 100)



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

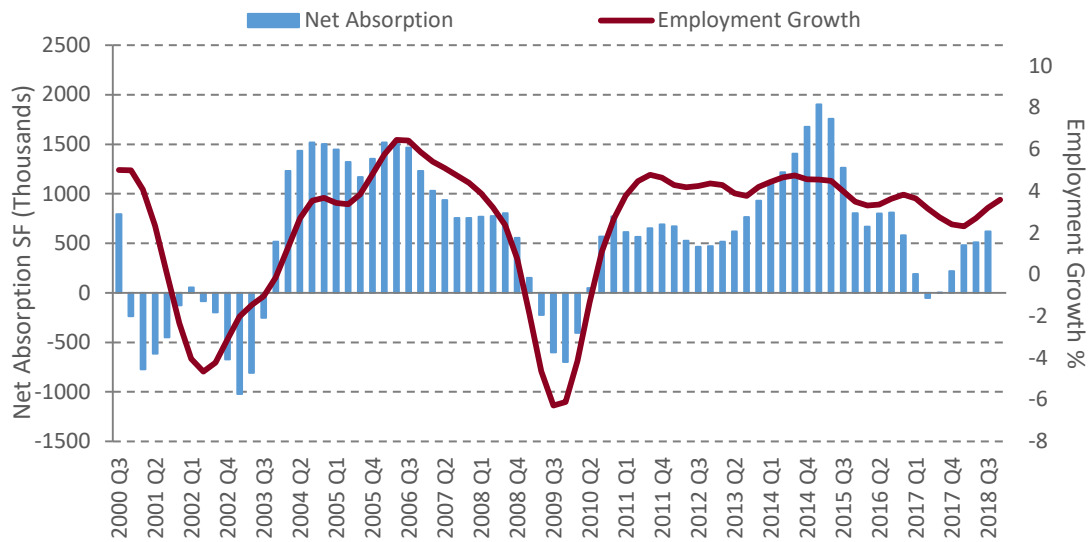
DFW

Figure 21. DFW Office Vacancy and Asking Rent Growth



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

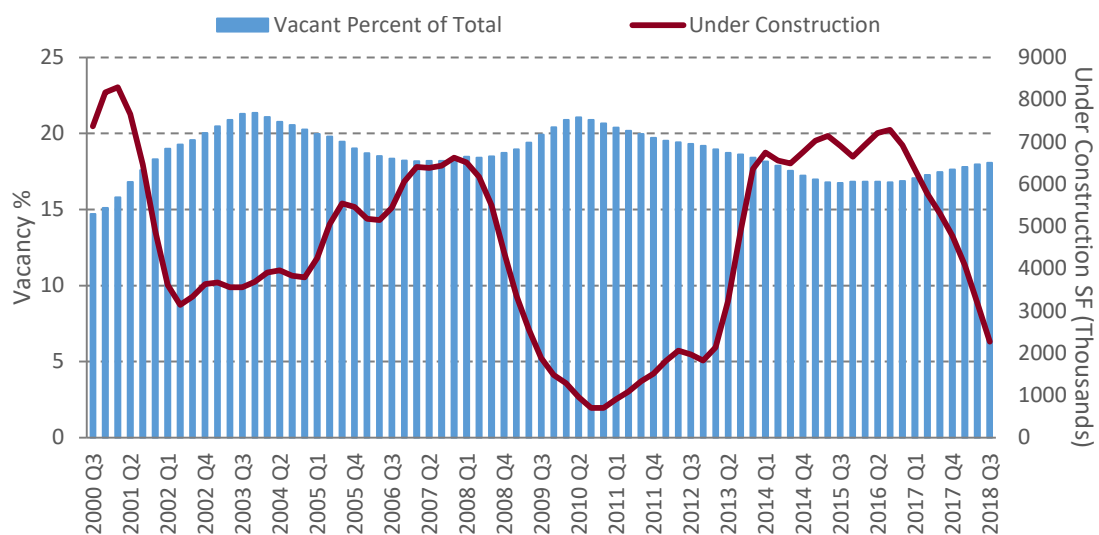
Figure 22. DFW Office Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

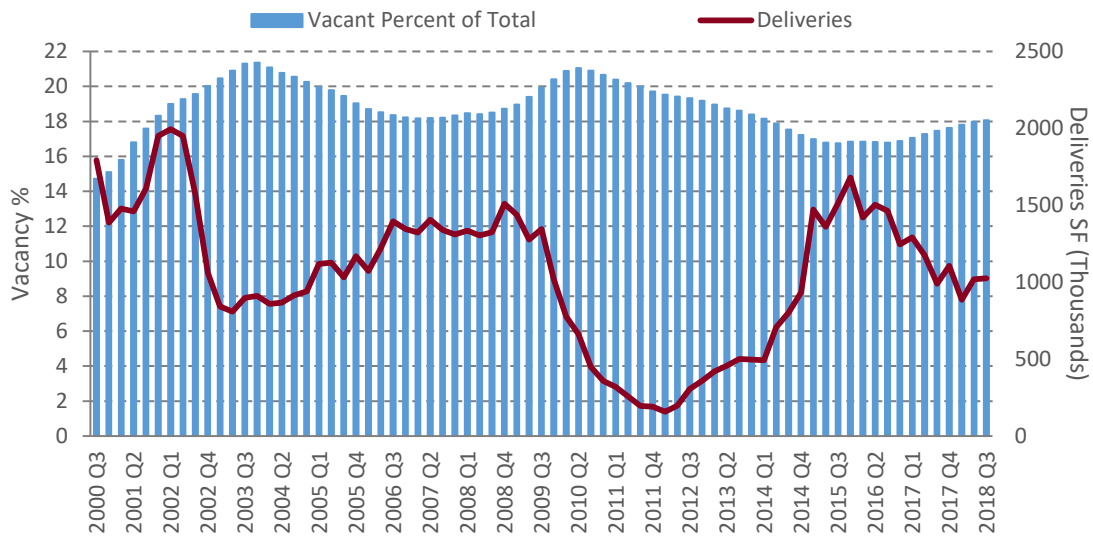
Figure 23. DFW Office Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

Figure 24. DFW Office Vacancy and Deliveries

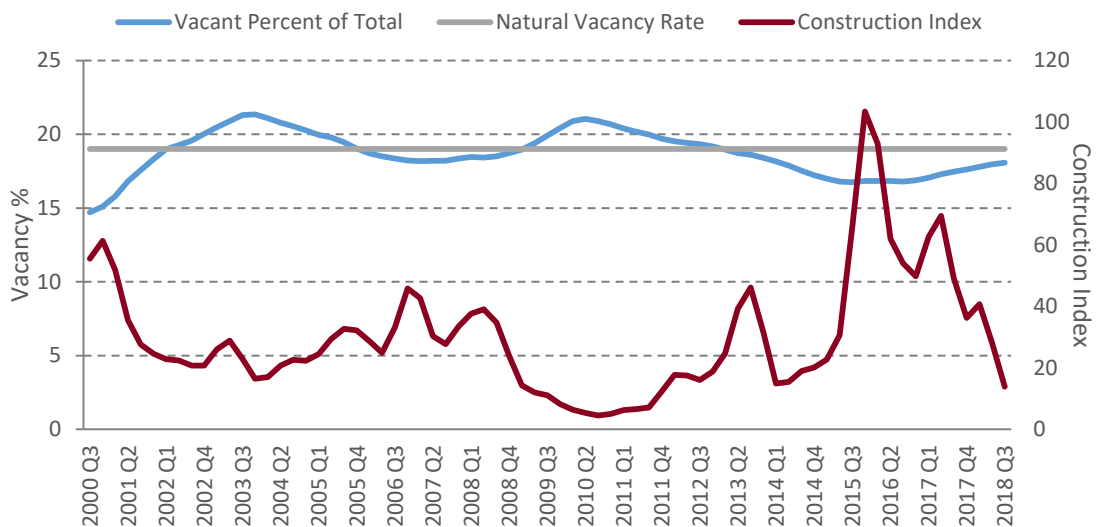


Note: Four-quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.

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

Figure 25. DFW Office Vacancy and Construction Index

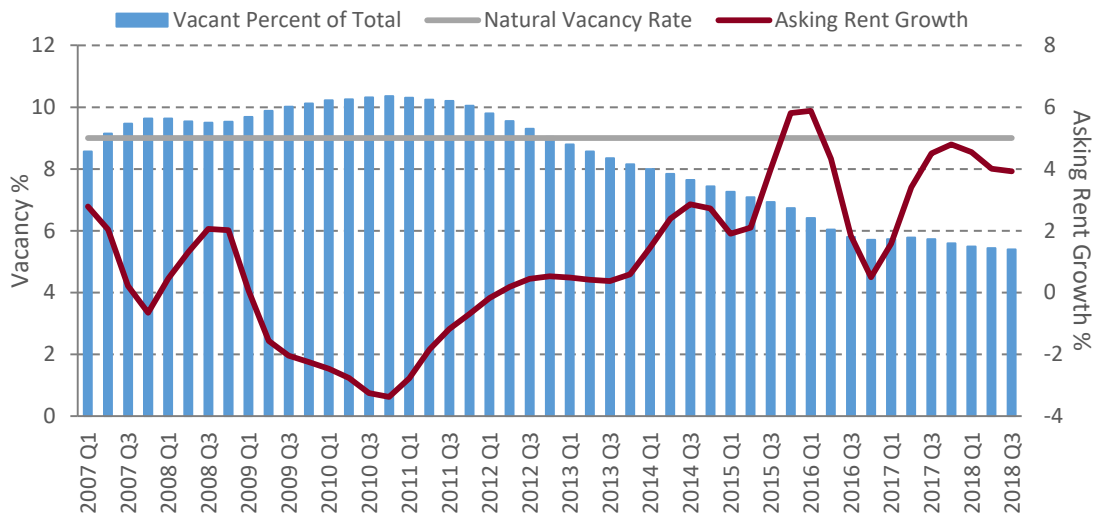
(Index 1982 Q1 = 100)



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

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

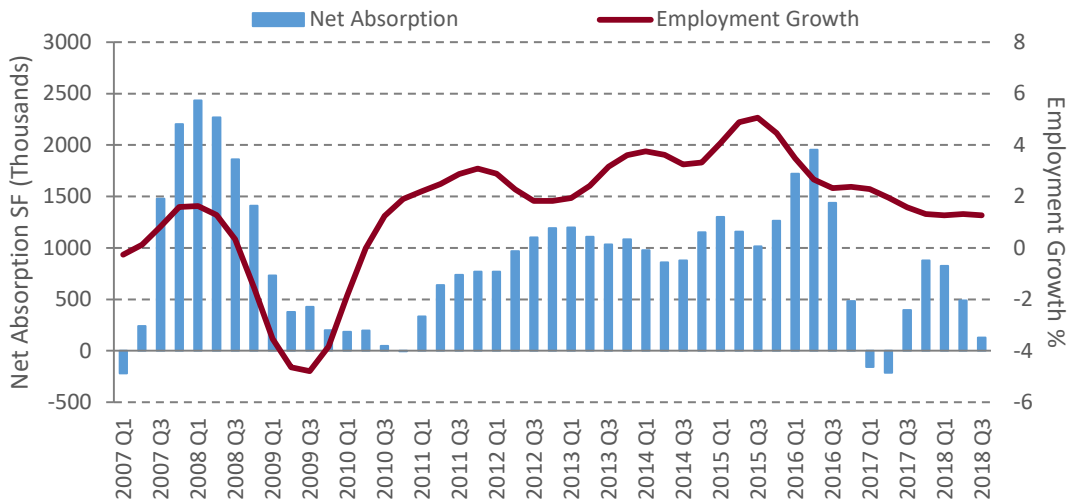
Figure 26. DFW Retail Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

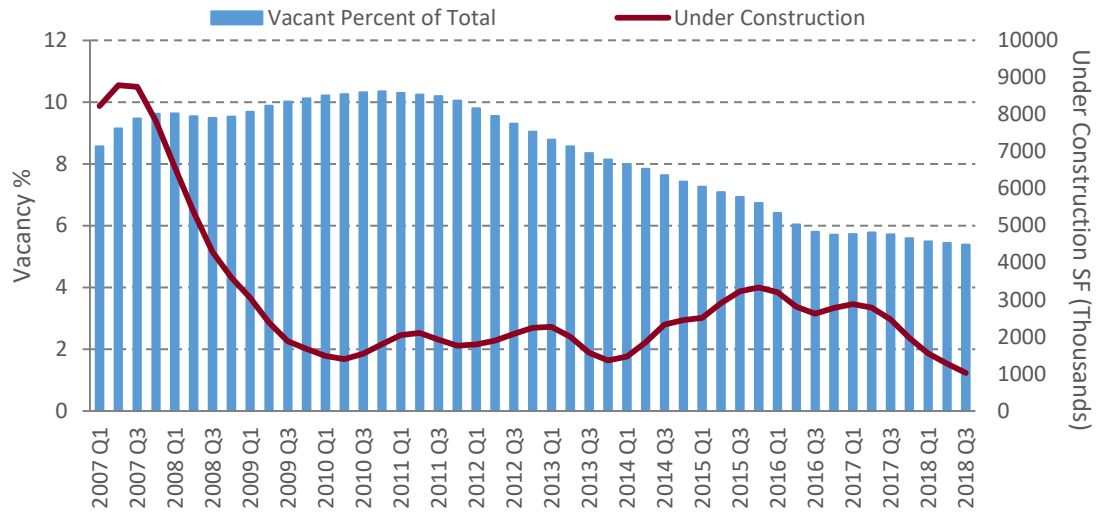
Figure 27. DFW Retail Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

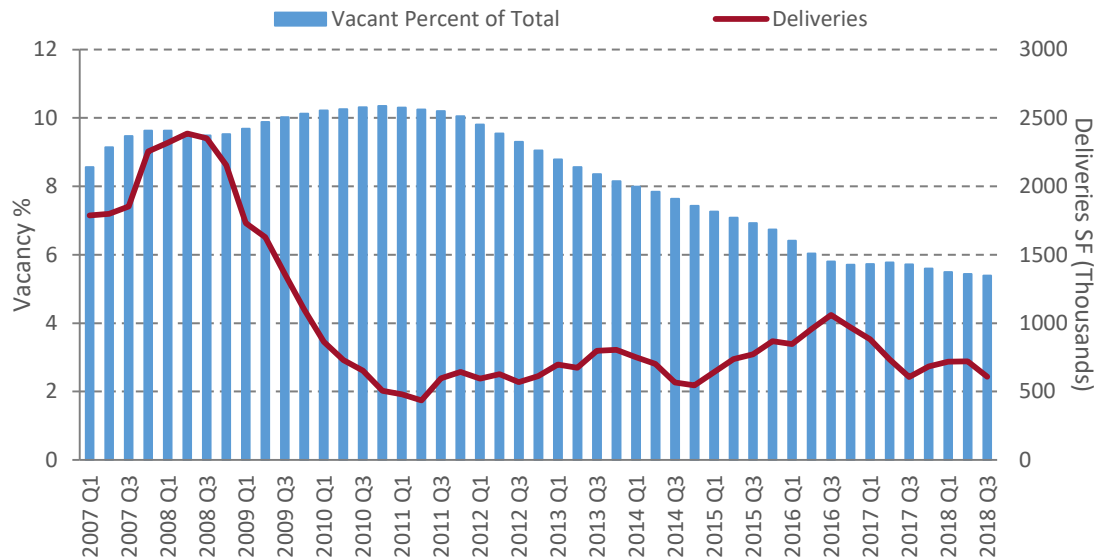
Figure 28. DFW Retail Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

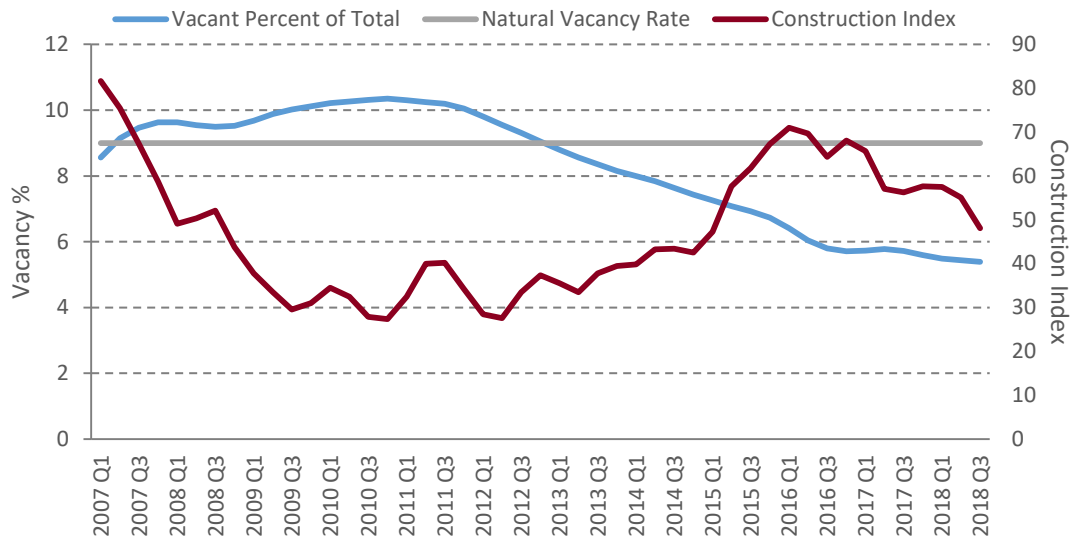
Figure 29. DFW Retail Vacancy and Deliveries



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

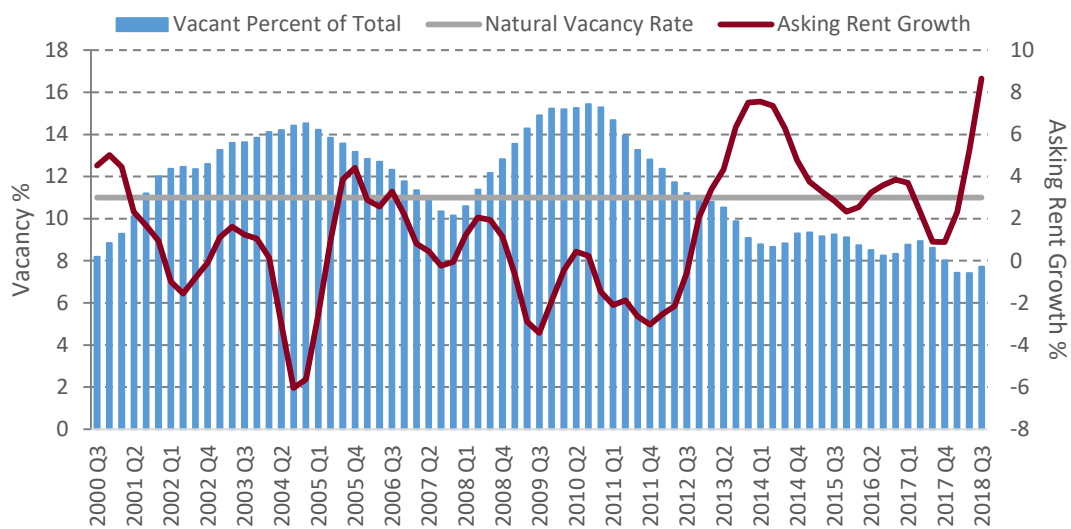
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 30. DFW Retail Vacancy and Construction Index
(Index 2000 Q1 = 100)



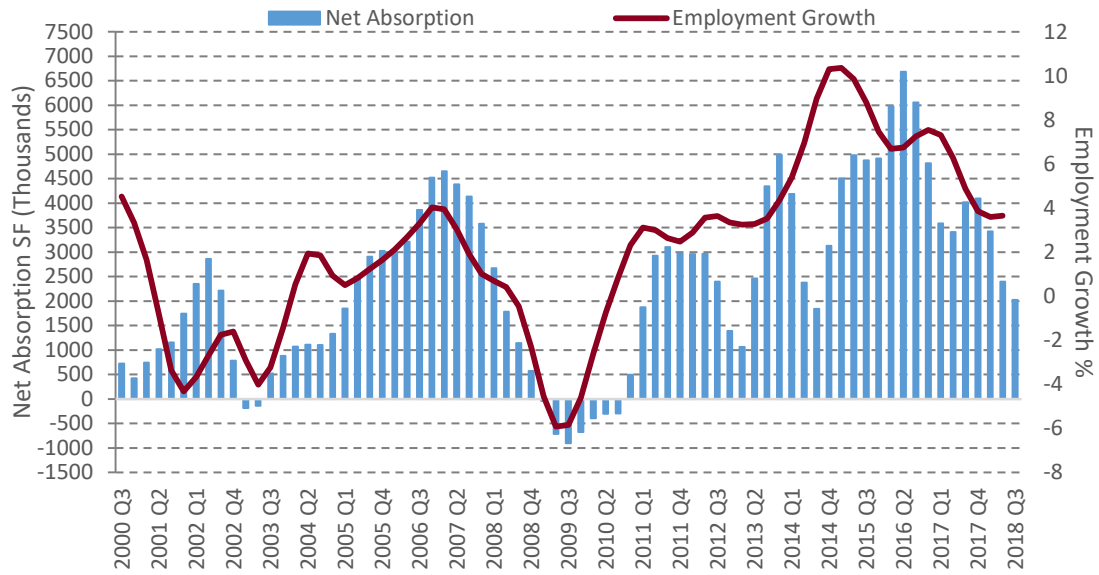
Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 31. DFW Warehouse Vacancy and Asking Rent Growth



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

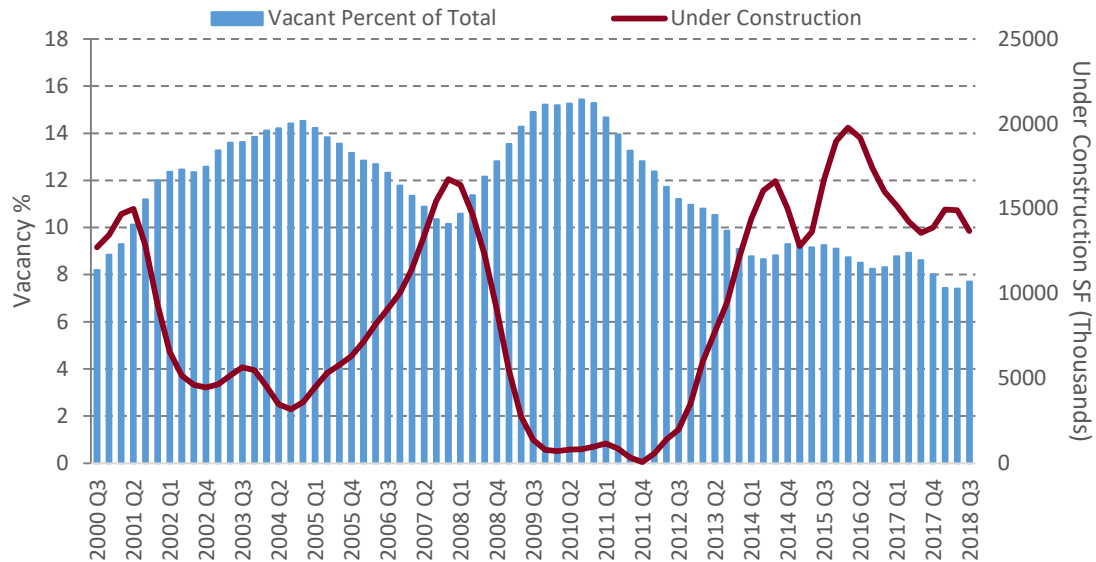
Figure 32. DFW Warehouse Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

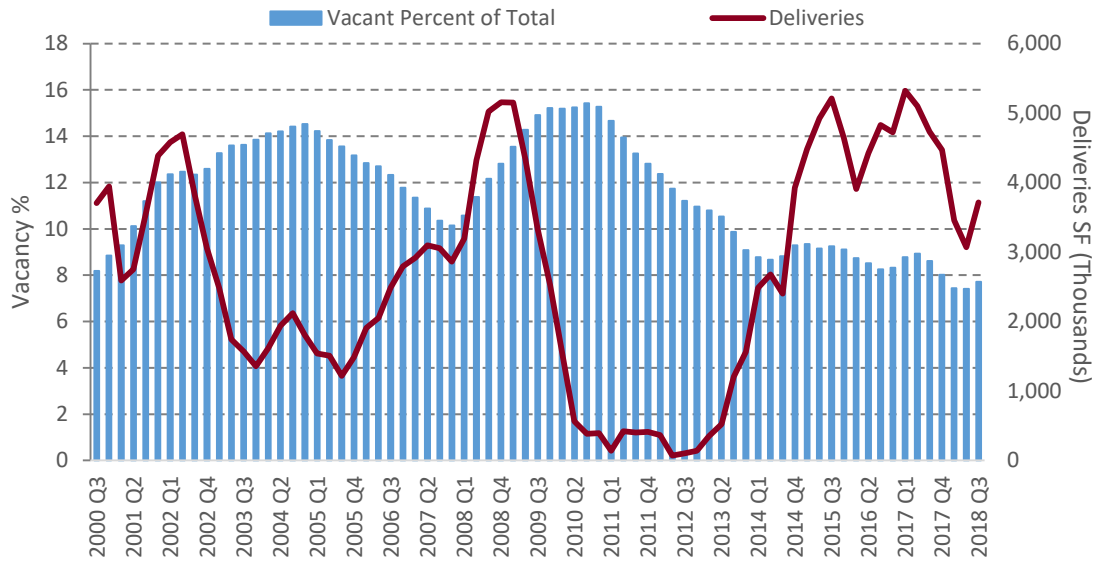
Figure 33. DFW Warehouse Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

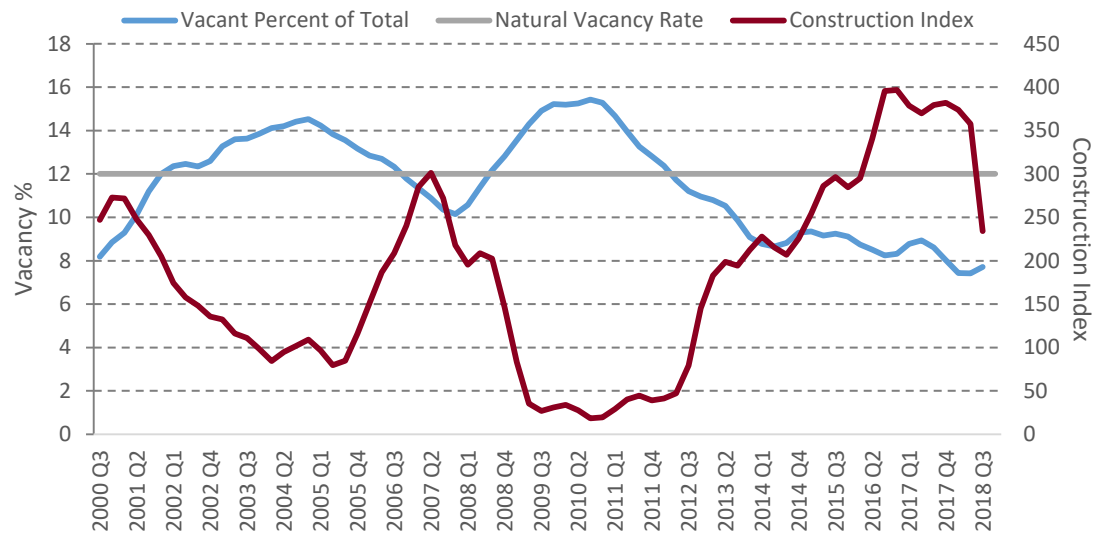
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 34. DFW Warehouse Vacancy 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

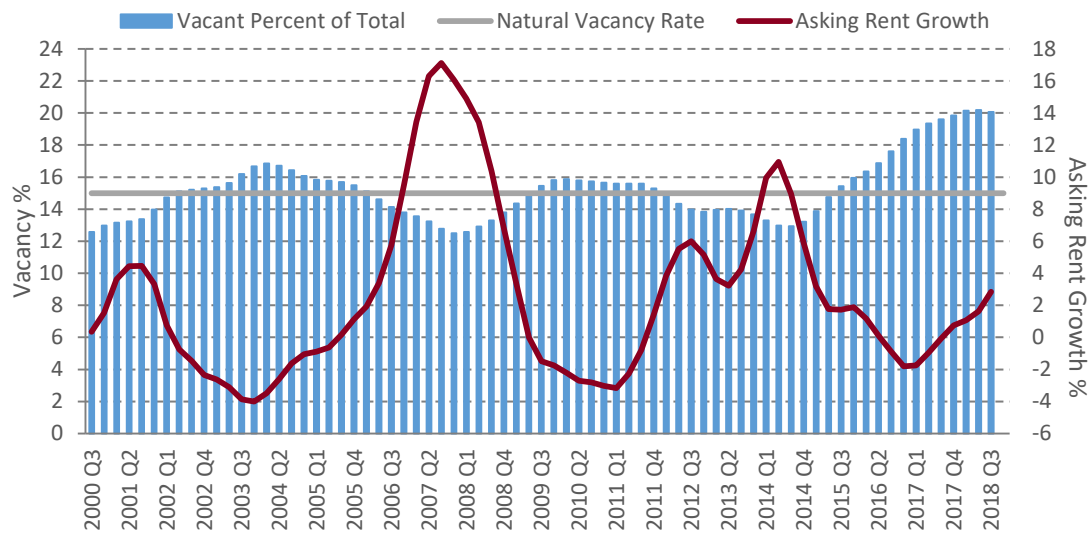
Figure 35. DFW Warehouse Vacancy and Construction Index
(Index 1995 Q1 = 100)



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

Houston

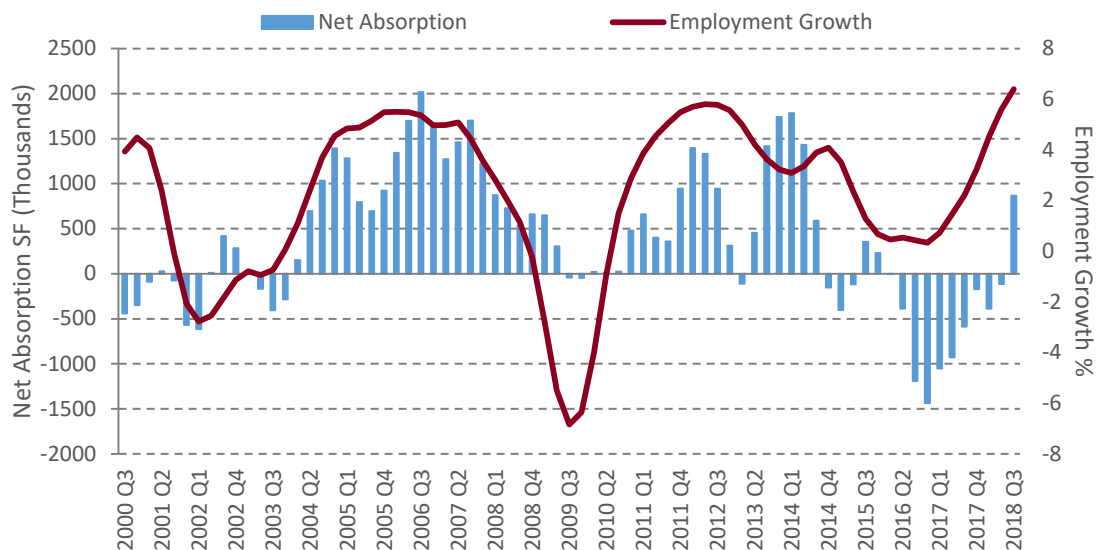
Figure 36. Houston Office Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

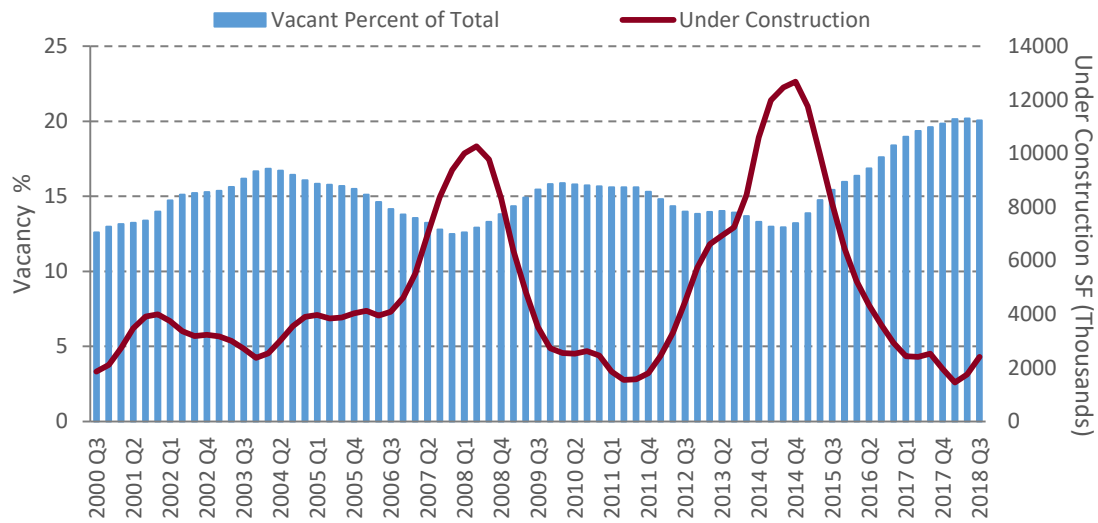
Figure 37. Houston Office Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

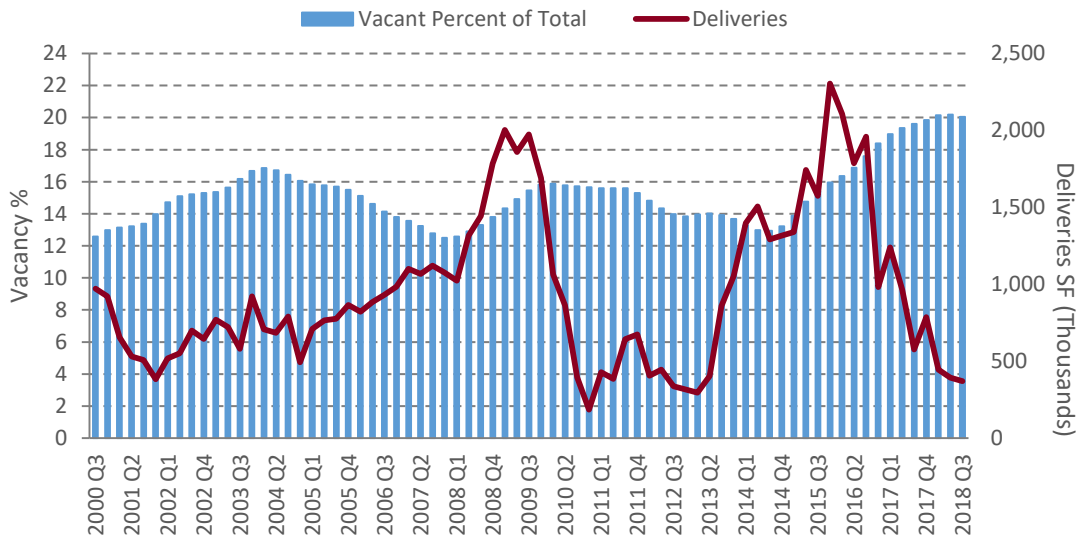
Figure 38. Houston Office Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

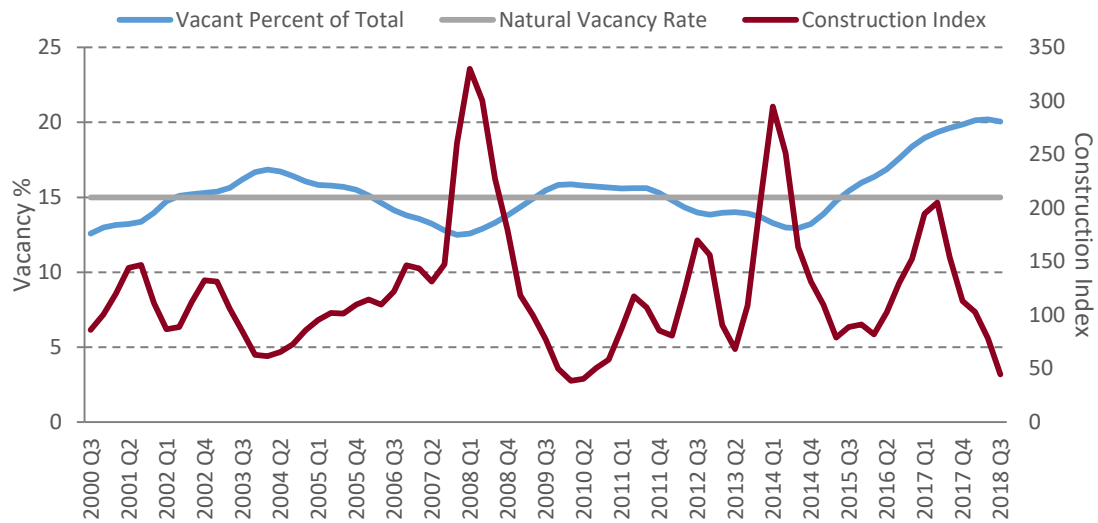
Figure 39. Houston Office Vacancy and Deliveries



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

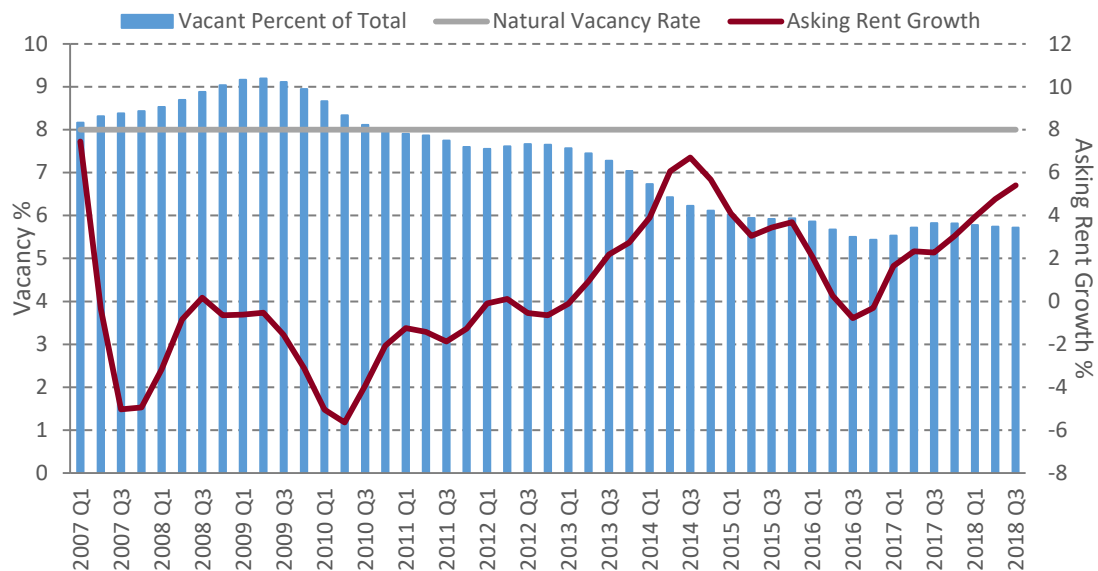
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 40. Houston Office Vacancy and Construction Index
(Index 1999 Q1 = 100)



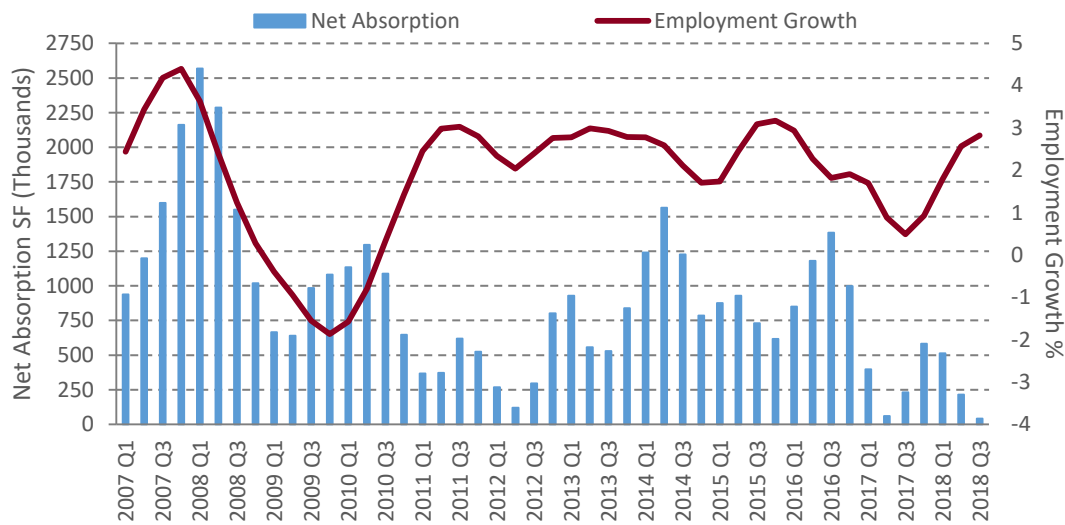
Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 41. Houston Retail Vacancy and Asking Rent Growth



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

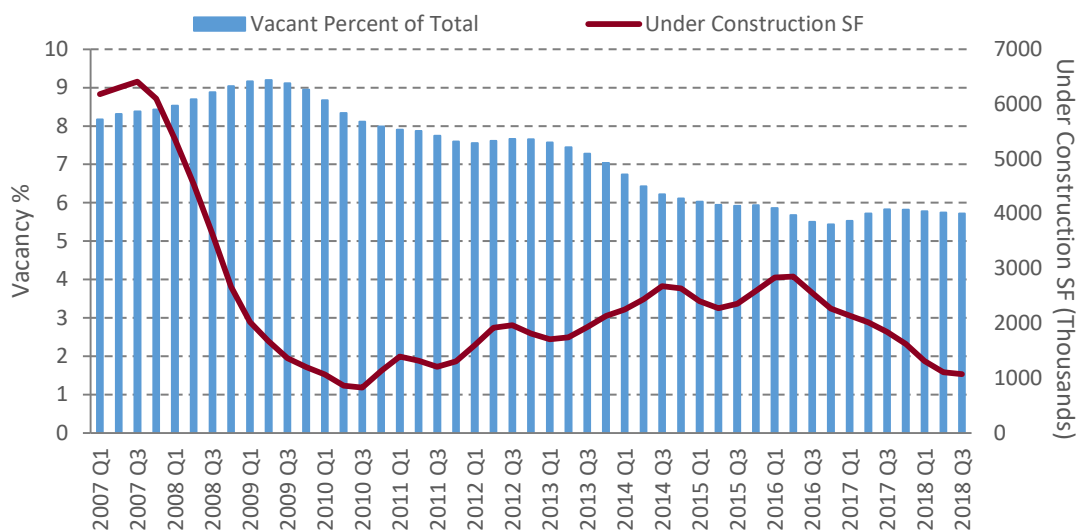
Figure 42. Houston Retail Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

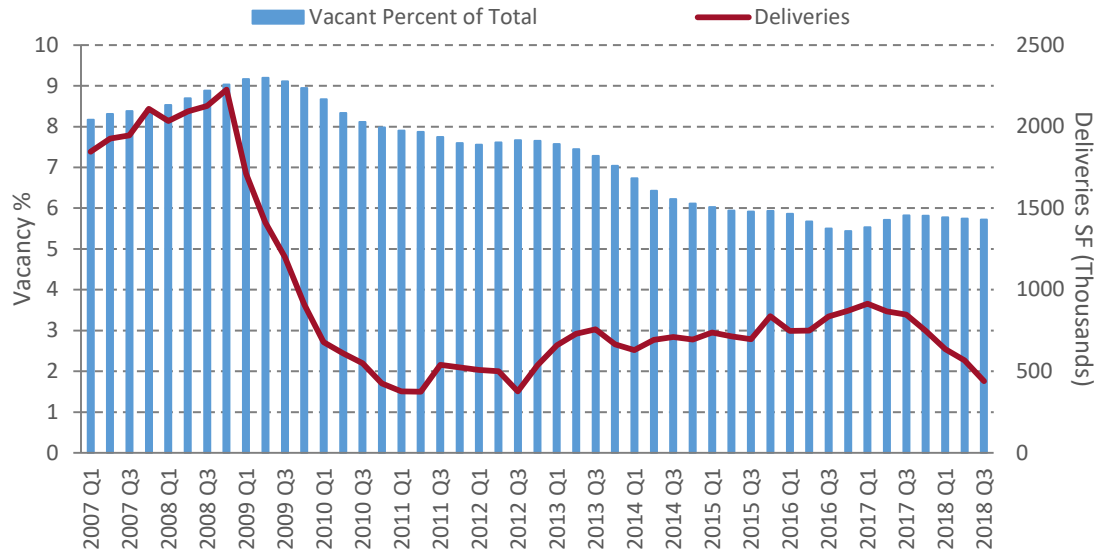
Figure 43. Houston Retail Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

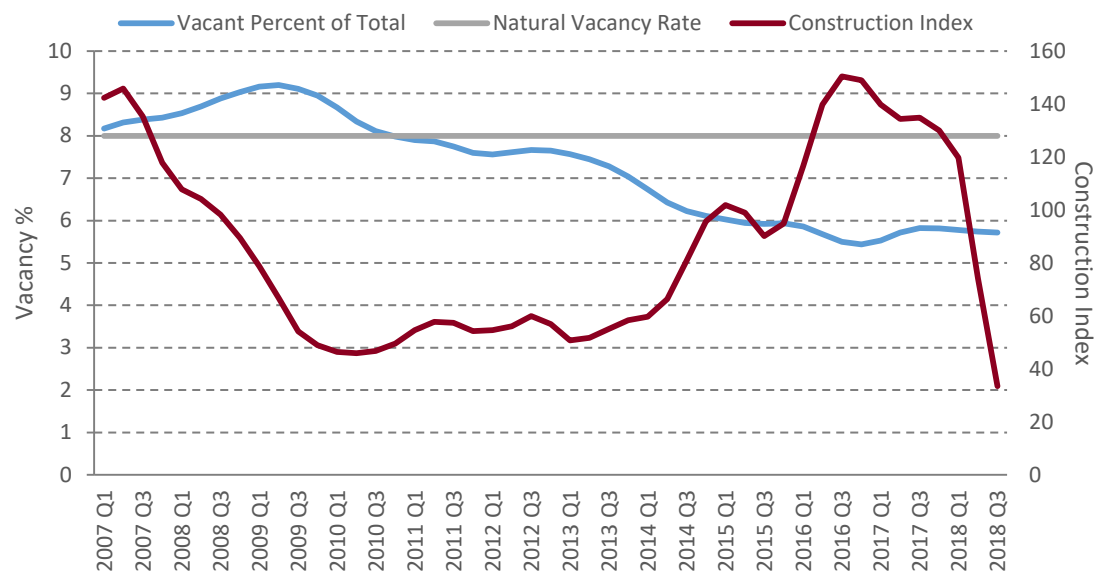
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 44. Houston Retail Vacancy and Deliveries



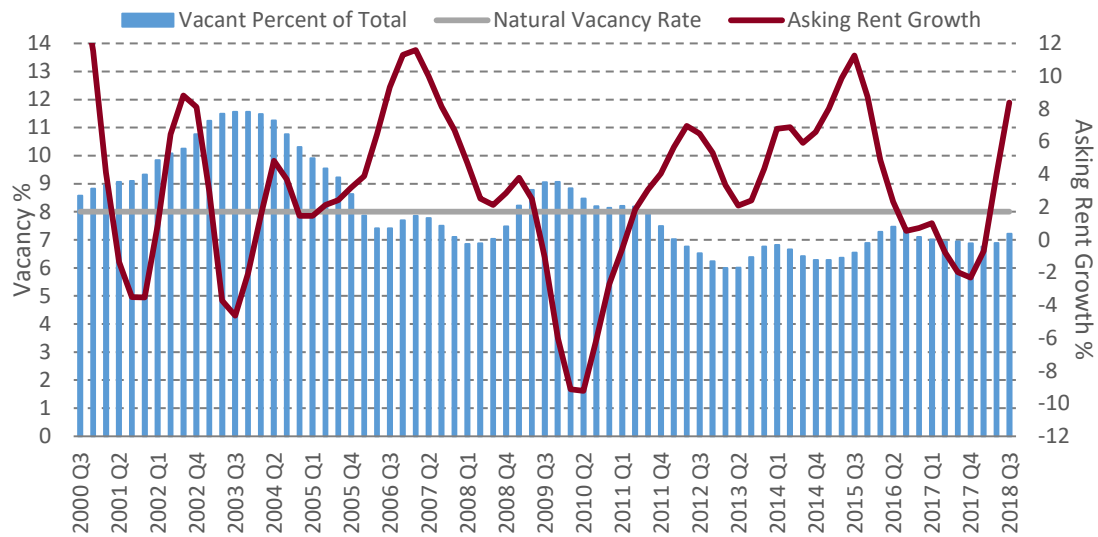
Note: Four-quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

**Figure 45. Houston Retail Vacancy and Construction Index
(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

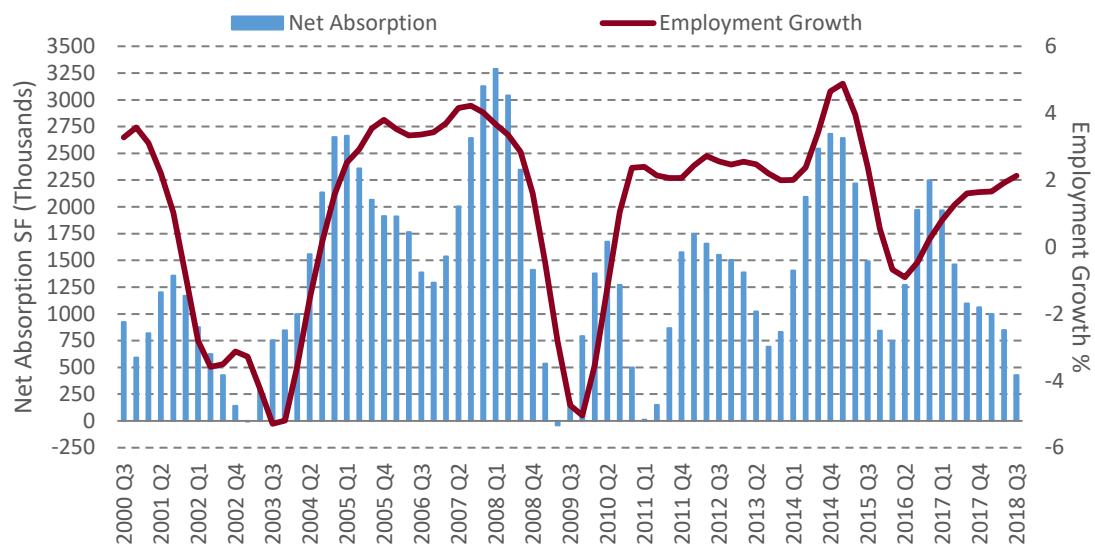
Figure 46. Houston Warehouse Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

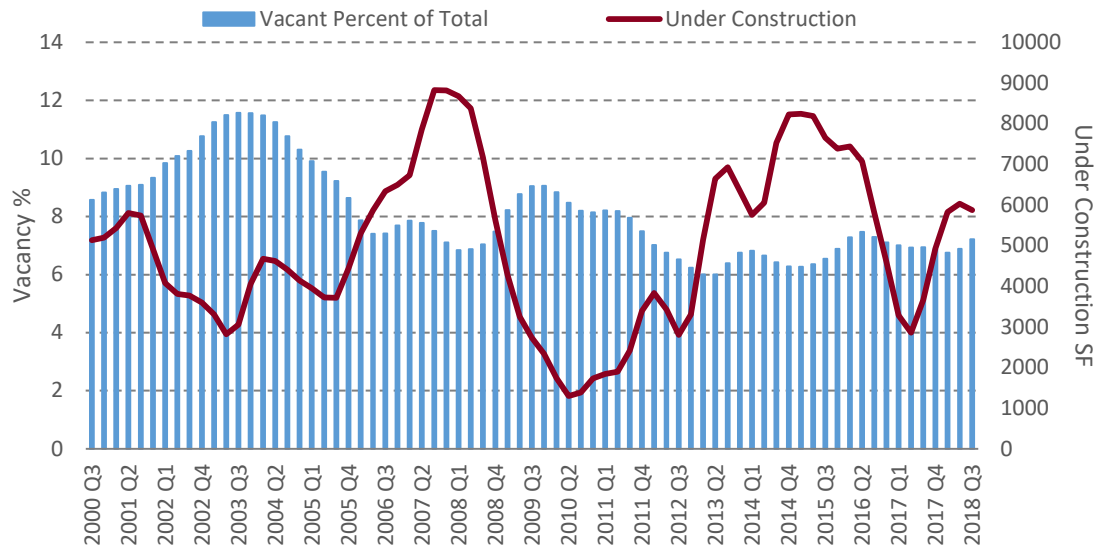
Figure 47. Houston Warehouse Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

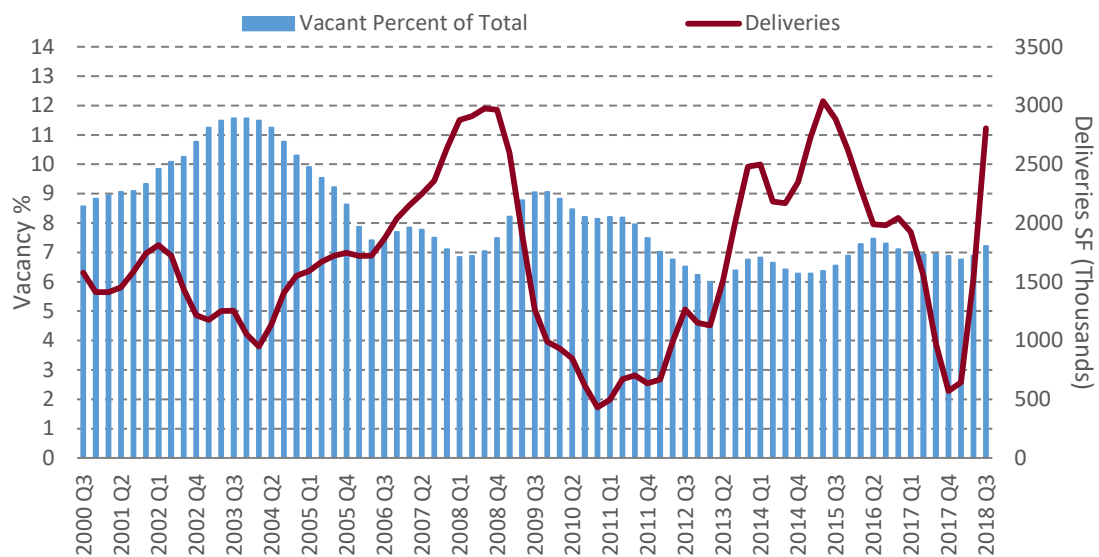
Figure 48. Houston Warehouse Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

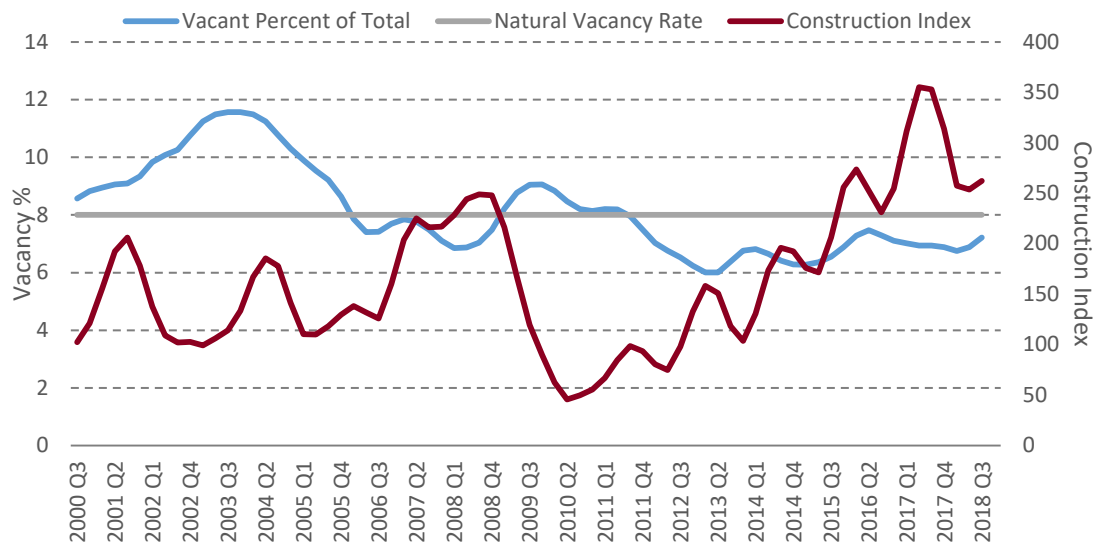
Figure 49. Houston Warehouse Vacancy and Deliveries



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

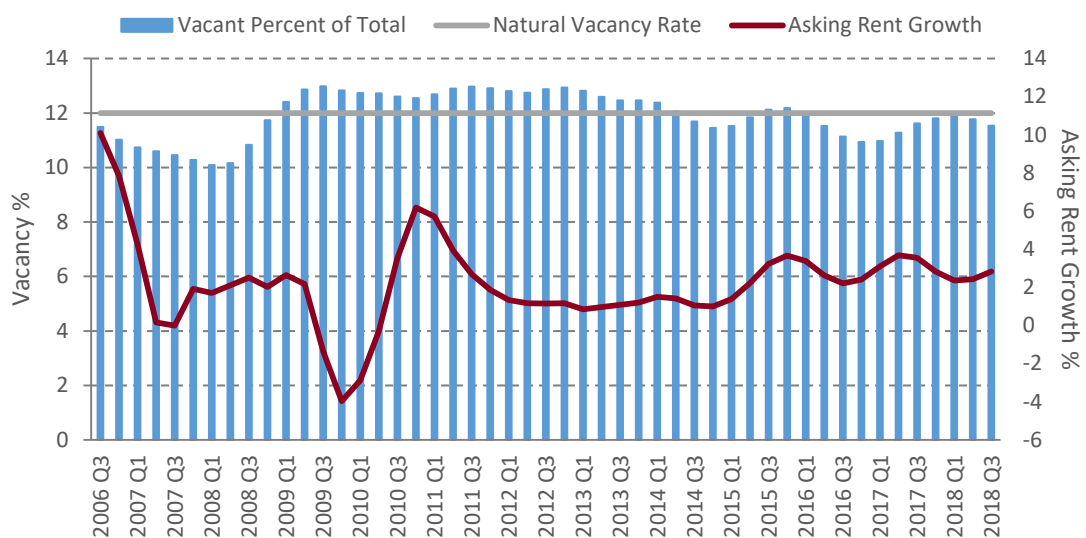
Figure 50. Houston Warehouse Vacancy and Construction Index
(Index 1999 Q1 = 100)



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

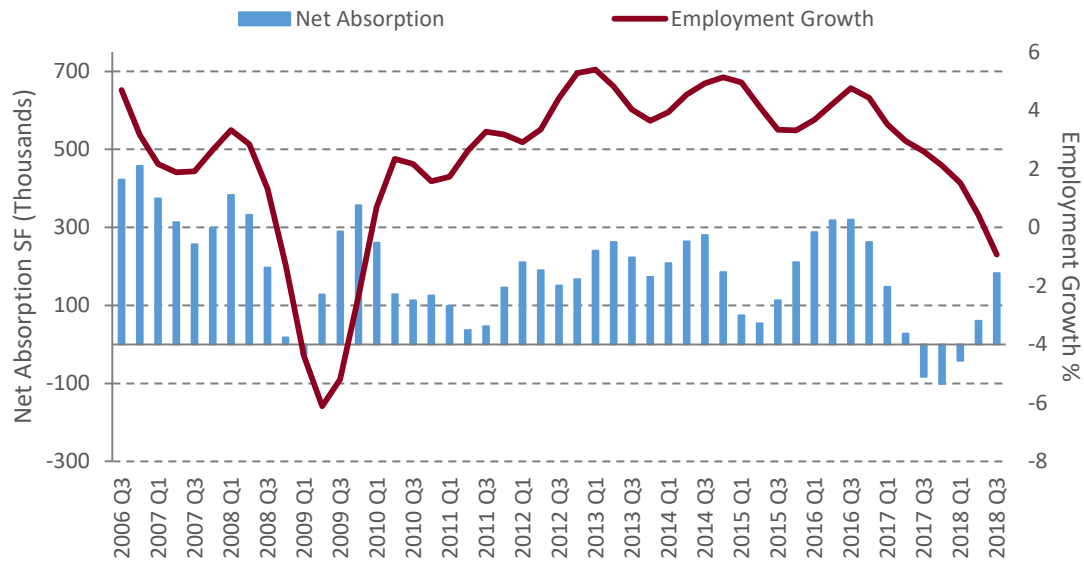
San Antonio

Figure 51. San Antonio Office Vacancy and Asking Rent Growth



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

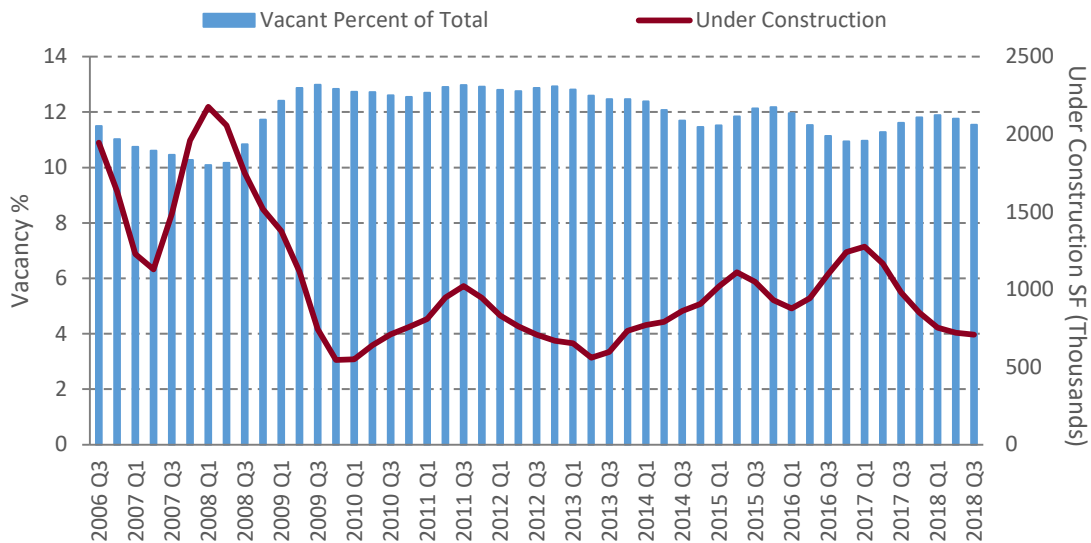
Figure 52. San Antonio Office Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

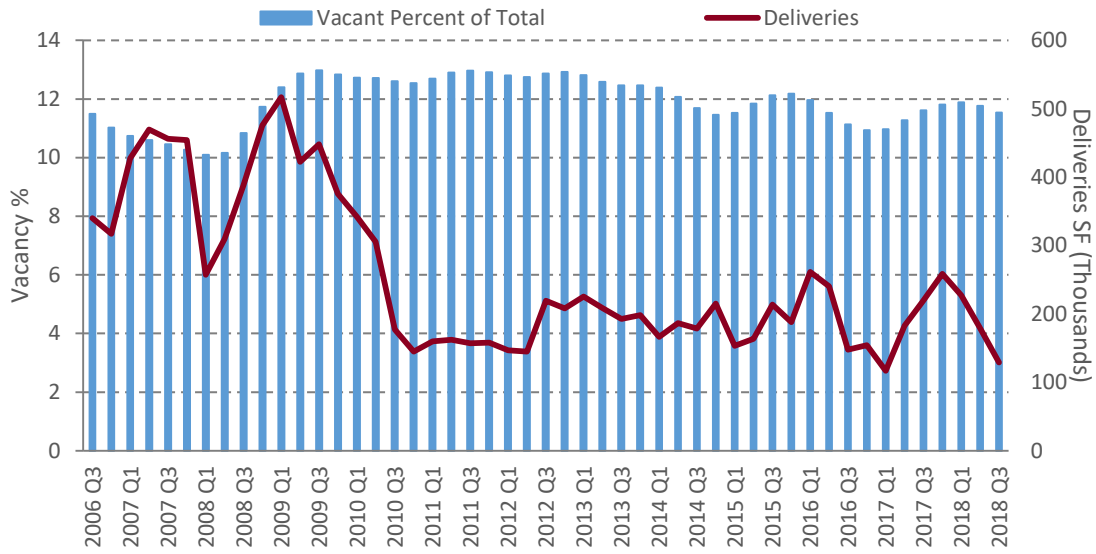
Figure 53. San Antonio Office Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

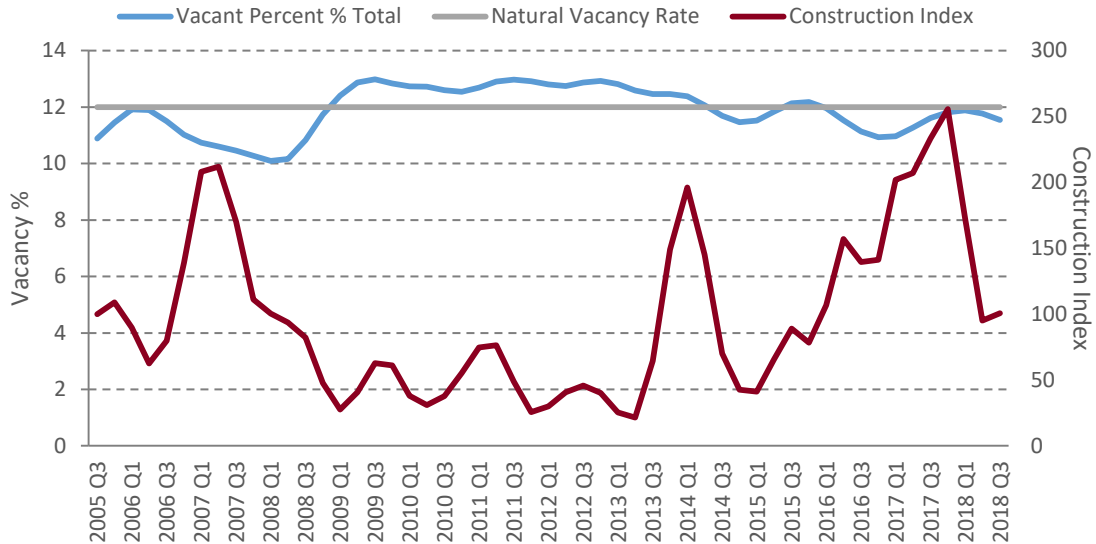
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 54. San Antonio Office Vacancy and Deliveries



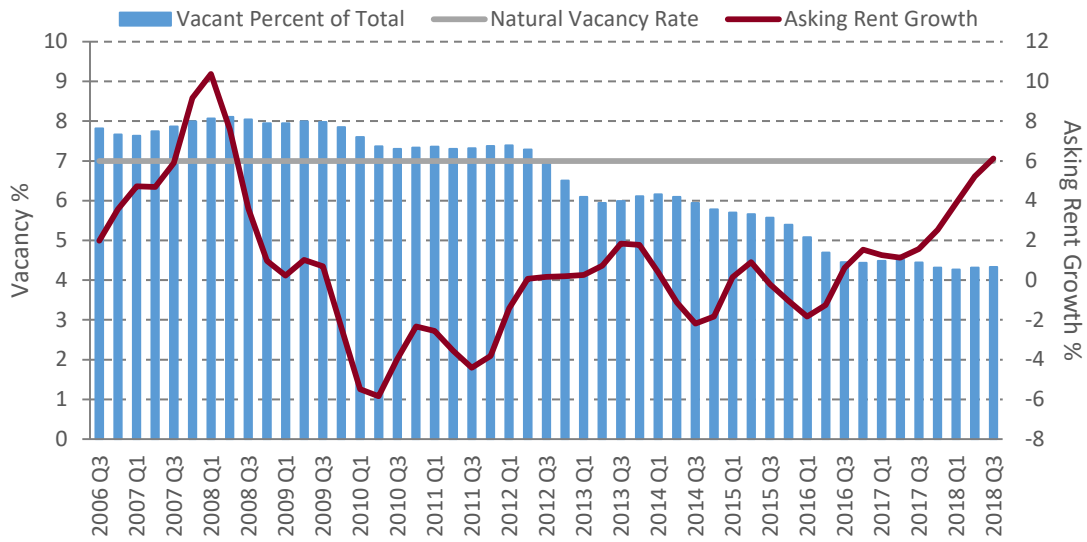
Note: Four-quarter moving average used for deliveries, seasonal adjustment and trend cycling used for vacant percent of total.
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 55. San Antonio Office Vacancy and Construction Index
(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

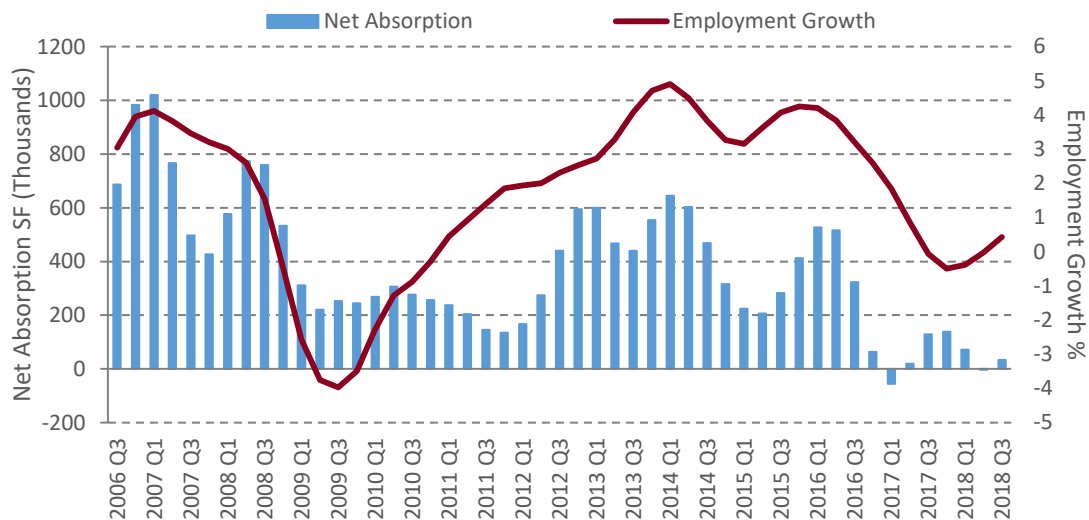
Figure 56. San Antonio Retail Vacancy and Asking Rent Growth



Note: Seasonally adjusted and trend-cycle component.

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

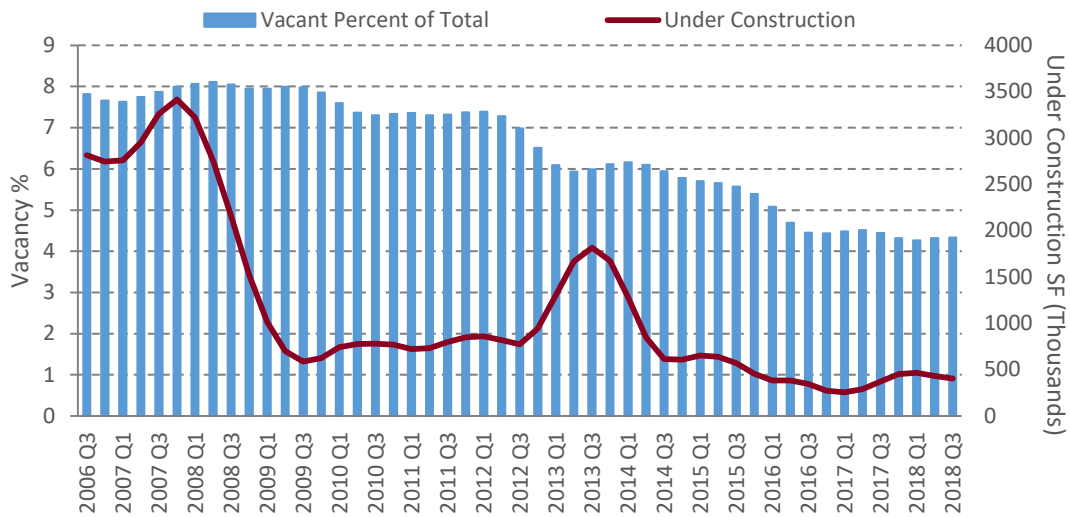
Figure 57. San Antonio Retail Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

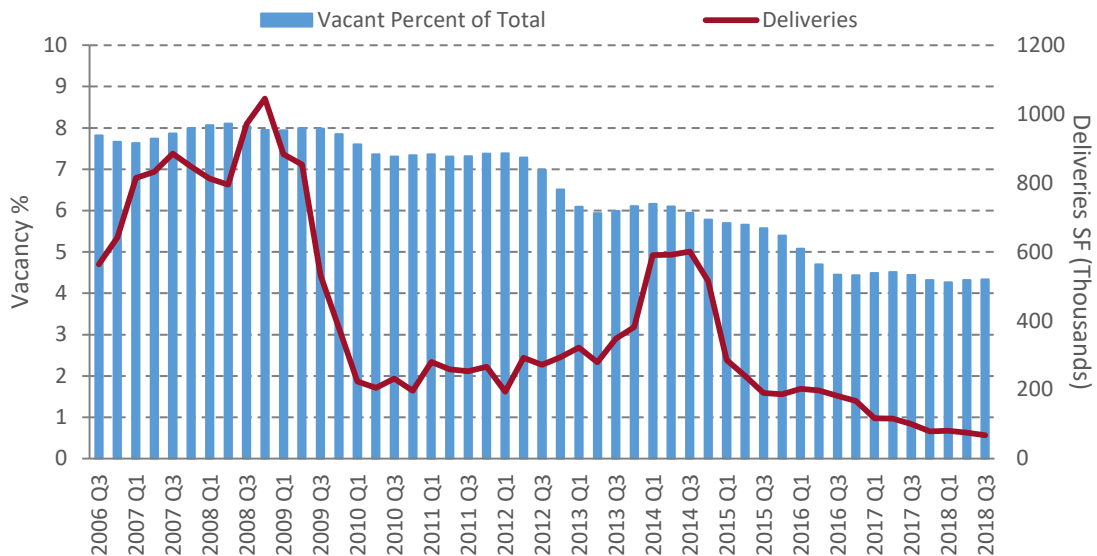
Figure 58. San Antonio Retail Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

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

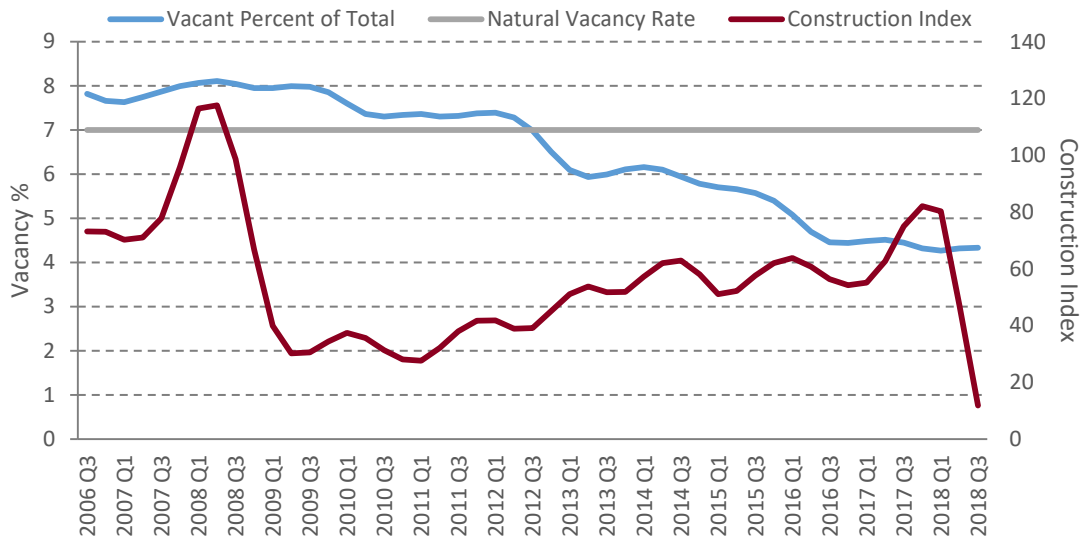
Figure 59. San Antonio Retail Vacancy and Deliveries



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

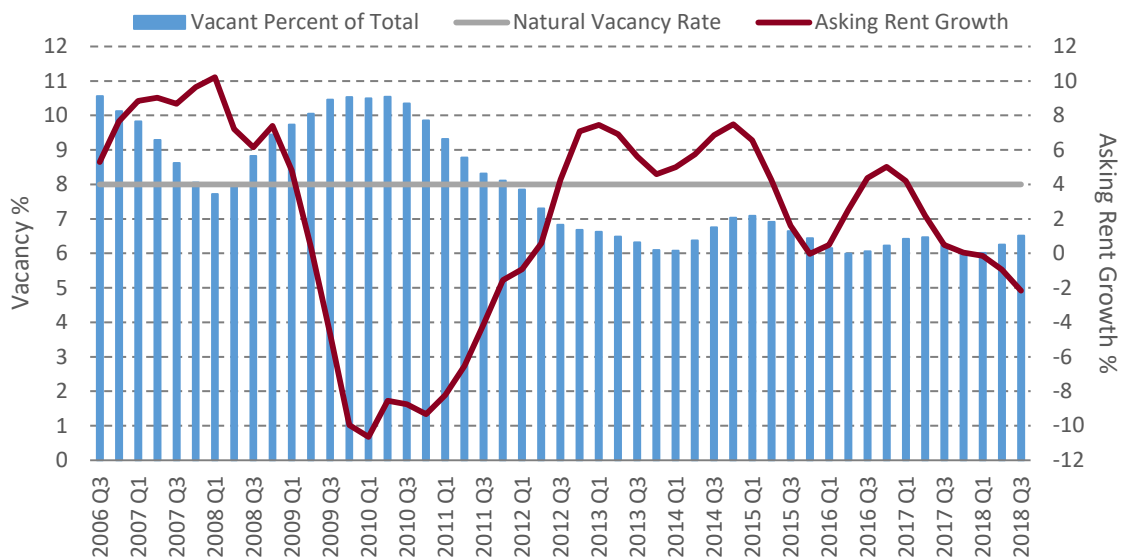
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 60. San Antonio Retail Vacancy and Construction Index
(Index 2005 Q3 = 100)



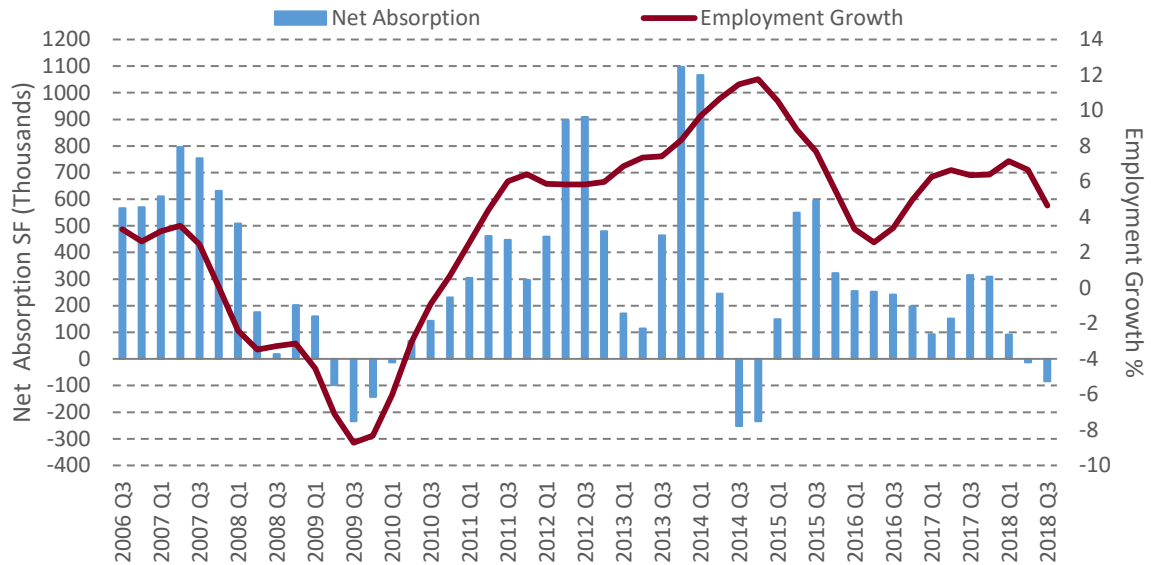
Note: Inflation adjusted, seasonally adjusted, and trend-cycle component.
Sources: CoStar, Dodge Analytics, and Real Estate Center at Texas A&M University

Figure 61. San Antonio Warehouse Vacancy and Asking Rent Growth



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

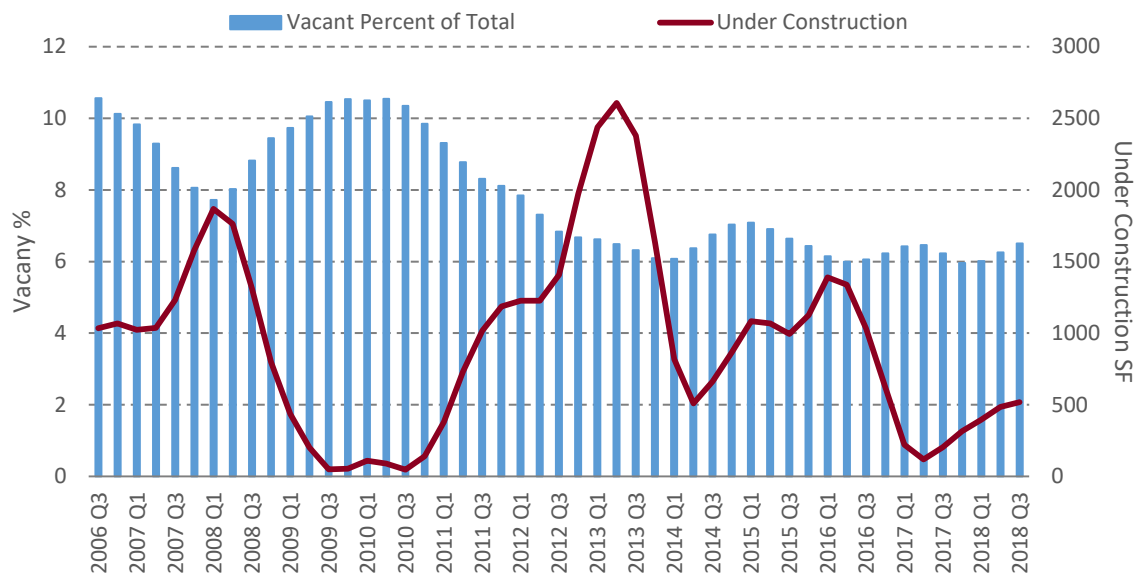
Figure 62. San Antonio Warehouse Net Absorption and Employment Growth



Note: Seasonally adjusted and trend-cycle component.

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

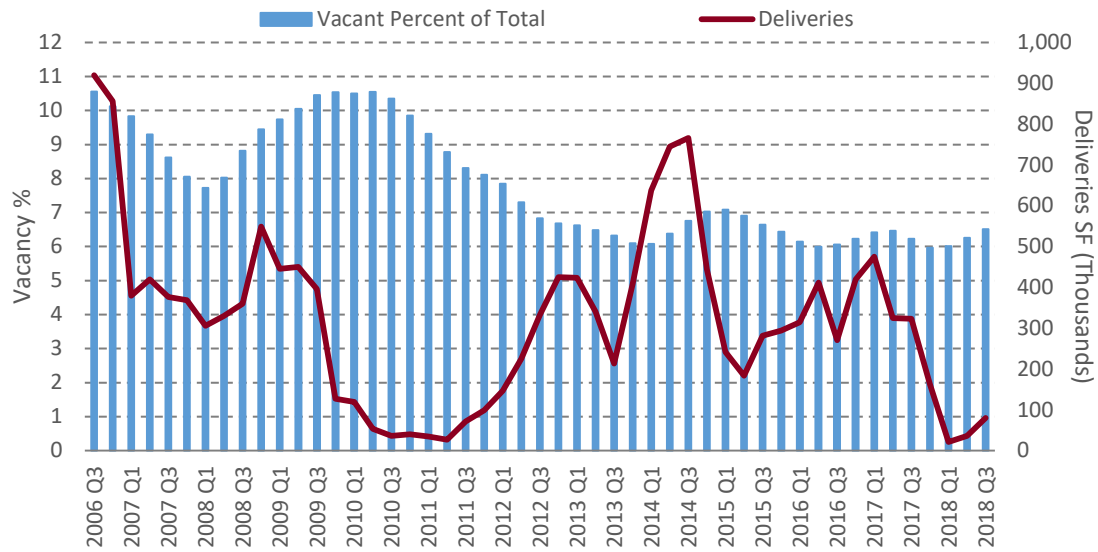
Figure 63. San Antonio Warehouse Vacancy and Under Construction



Note: Seasonally adjusted and trend-cycle component.

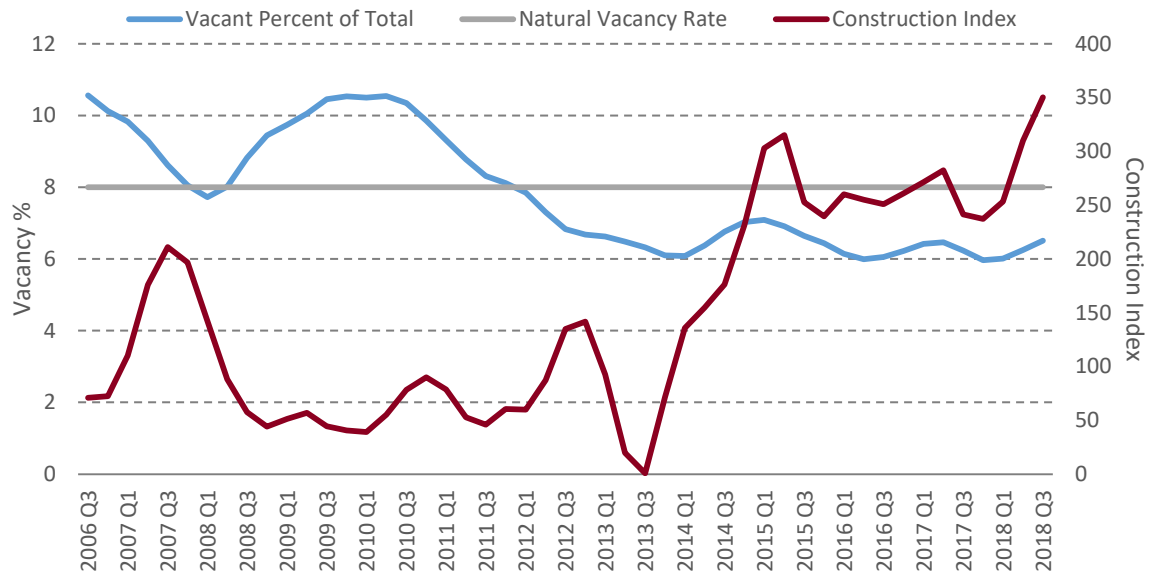
Sources: CoStar and Real Estate Center at Texas A&M University

Figure 64. San Antonio Warehouse Vacancy 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 65. San Antonio Warehouse Vacancy and Construction Index
(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



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