ULI Real Estate Economic Forecast

A Survey of Leading Real Estate Economists/Analysts

uli.org/economicforecast

April 2018

ULI Center for Capital Markets and Real Estate

Urban Land Institute

ULI Center for Capital Markets and Real Estate

ULI Real Estate Consensus Forecast

- Three-year forecast ('18-'20) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 48 economists/analysts at 36 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 13th survey; completed March 9 – March 28, 2018.
- A semi-annual survey; next release planned for October 2018.
- Forecasts for:
  - Broad economic indicators
  - Real estate capital markets
  - Property investment returns for four property types
  - Vacancy rates and rents for five property types
  - Housing starts and prices

Overview

- The *ULI Real Estate Economic Forecast* for April 2018 projects continued economic expansion over the three forecast years, with GDP growth averaging 2.4 percent a year; above average employment growth through 2020; relatively high but moderating commercial real estate volumes; continued commercial price appreciation, rent growth, and positive returns but at relatively subdued and decelerating rates; better than long-term average vacancy/occupancy rates for all but retail, but with an upward trend in all sectors; continued strong single family housing starts but remaining at levels below the long-term average.

- In 2018, 14 real estate indicators are projected to be better than their 20-year averages, while 9 are expected to be worse. Also, inflation is expected to be above its long-term average, while the 10-year Treasury rate and the NCRIEF capitalization rate are projected to be lower than their long-term averages.

- In 2020, 9 indicators are expected to be better than their 20-year average, 1 indicator is expected to be right at it's average and 13 are expected to be worse. Similar to the 2018 projections, inflation in 2020 is expected to be above its long-term average, while the 10-year Treasury rate and the cap rate are projected to be lower than their 20-year averages.

Forecasts vs. Long-Term Averages

2018 Forecast

Better than long-term averages	Worse than long-term averages
GDP Growth	
Unemployment Rate Employment Growth	NCREIF Total Returns: Industrial, Apartment, Office, Retail
Transaction Volume	REIT Total Returns
CMBS Issuance	Hotel RevPAR Change
CPPI Growth	Single-family starts
Vacancy/Occupancy: Industrial, Apartment, Office, Hotel	Availability: Retail
Rental Rate Growth: Industrial, Office, and Retail	Rental Rate Growth: Apartment
Home Price Growth	

2020 Forecast

Better than long-term averages	Worse than long-term averages
Unemployment Rate	GDP Growth
Employment Growth	CPPI Growth
Transaction Volume	NCREIF Total Returns: Industrial, Apartment, Office, Retail
CMBS Issuance	REIT Total Returns
Vacancy/Occupancy: Industrial, Apartment, Office, Hotel	Availability: Retail
Rental Rate Growth: Industrial	Rental Rate Growth: Apartment, Office, Retail
Home Price Growth (equal)	Hotel RevPAR Change
	Single-family starts

Key Findings

- Following 6 years of commercial property transaction volume growth that reached a post-recession high of $546 billion in 2015, transaction volume reversed direction with $495 billion in ’16 and $468 billion in ‘17. Annual volume is forecast to further decrease to $450 billion in ‘18 and $408 billion in ‘20. Still, these are among some of the highest annual volumes and remain well above the long-term average.

- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate which had grown consistently since ’09 to $95 billion in 2015, declined in ‘16 to $69 billion, but bounced back to $88 billion in ‘17. Issuance is forecast to remain essentially level in ’18 and ‘19 at $90 billion, before decreasing slightly in ‘20 to $80 billion.

- Commercial real estate prices are projected to grow at subdued and slowing rates relative to recent years, at 5.0% in ‘18, 3.0% in ‘19 and 2.3% in ‘20, all below the long-term average growth rate of 4.4%.

- Institutional real estate assets are expected to provide total returns of 6.0% in ‘18, moderating to 5.0% by ‘20. By property type, 2018 returns are expected to range from 10.0% for industrial to 5.0% for retail. In ‘20, returns are expected to range from 8.0% for industrial to retail’s 4.3%.

- Both industrial availability rates and office vacancy rates are expected to plateau in ’18 from their ‘17 rates, before edging up in both ‘19 and ‘20. And both retail availability rates and apartment vacancy rates are expected to experience an increase in ‘18, and a continued increase in ‘19 and ‘20. The hotel occupancy rate is forecast to increase slightly in ’18, plateau in ‘19, and then decline slightly in ’20.

- Commercial property rent growth is expected to continue in the next three years in all sectors, although at more subdued rates than in recent years. Further, rental rate growth in the industrial, retail and office sectors is forecast to decelerate in ‘19 and ‘20, while rental rate growth in the apartment sector is expected to plateau. In 2018, rent increases will range from 4.6% for industrial to 1.5% for apartments. Rent increases in 2020 will range from 3.0% for industrial to 1.1% for retail. Hotel RevPAR is expected to increase by 2.7% in 2018 and 1.7% in 2020.

- Single-family housing starts are projected to increase from their 2017 level of 848,300 units to 923,000 in ‘18, and 987,500 in ’19. This brings annual starts to just below their long-term average and completes eight-straight years of growth. Starts are then projected to moderate back to 925,000 in ‘20.

Economy

- The economists/analysts expect continued healthy economic expansion over the 3 forecast years as well as slightly lower unemployment rates, though they expect employment growth to slow as the economy approaches full employment.

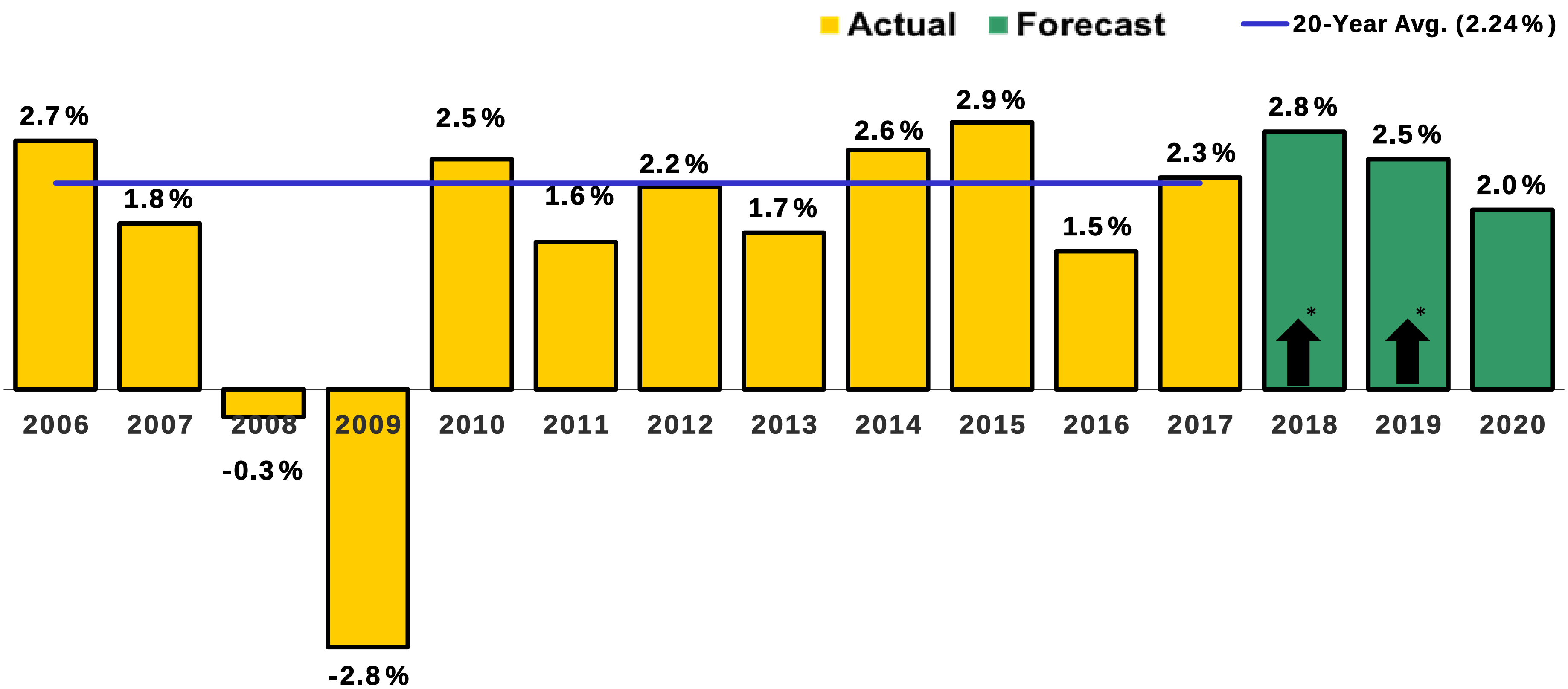
- GDP growth was 2.3% in 2017, up from the 1.5% growth in '16. Growth rates are forecast to increase to 2.8% in '18 before moderating to 2.5% in '19 and 2.0% in '20.

- The unemployment rate is expected to continue its eight-year decline, reaching 3.9% by the end of 2018 and 3.8% in '19, before ticking back up to 4.1% by the end of '20.

- Employment growth is expected to continue in 2018 at 2.20 million jobs, slightly higher than the 2.17 million jobs added in 2017. Employment growth is expected to moderate to 1.89 million jobs in '19 and 1.38 million jobs in '20.

- Compared to forecasts of 6 months ago, the forecasts for GDP, the unemployment rate, and employment growth are all more optimistic for both '18 and '19.

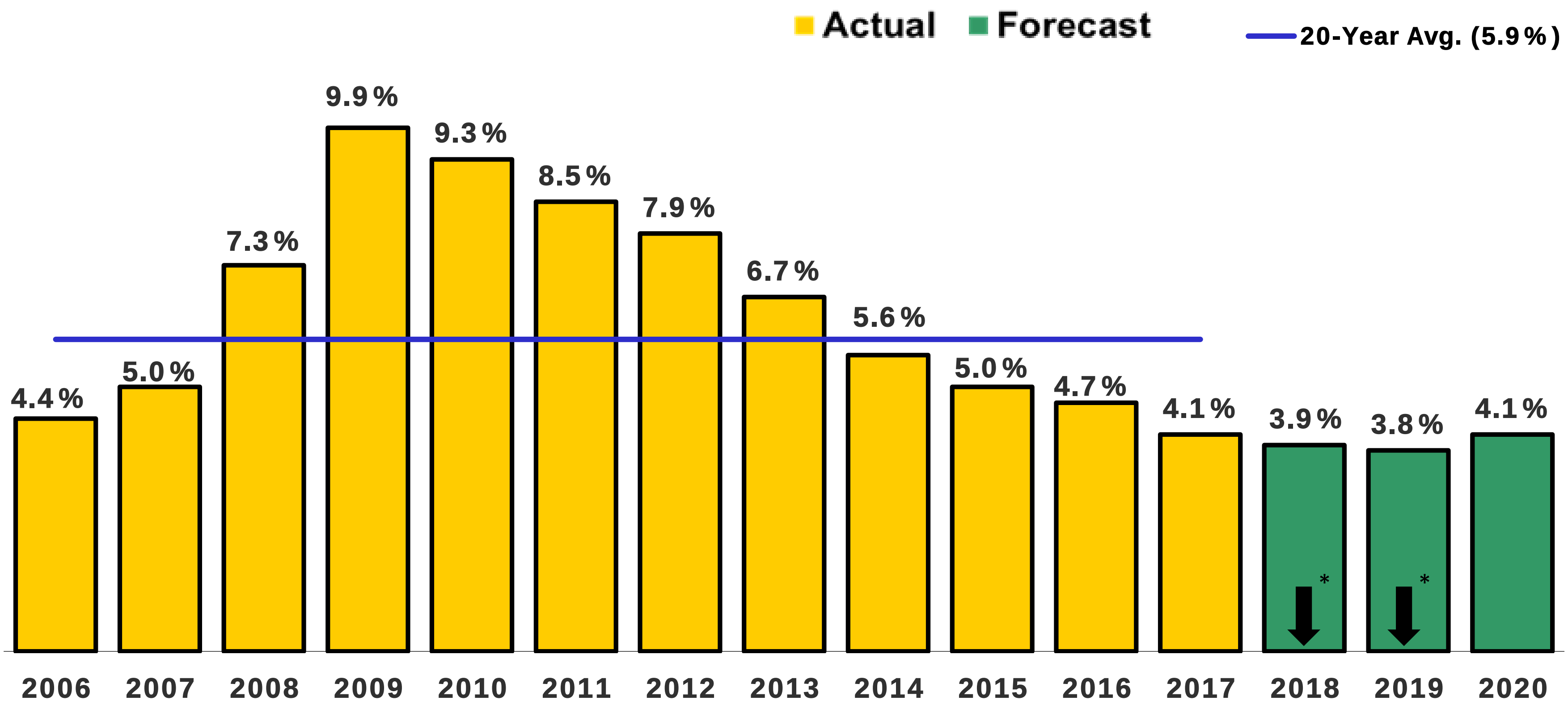
Real GDP Growth



Sources: 1998-2017, Bureau of Economic Analysis; 2018-2020, ULI Real Estate Economic Forecast.

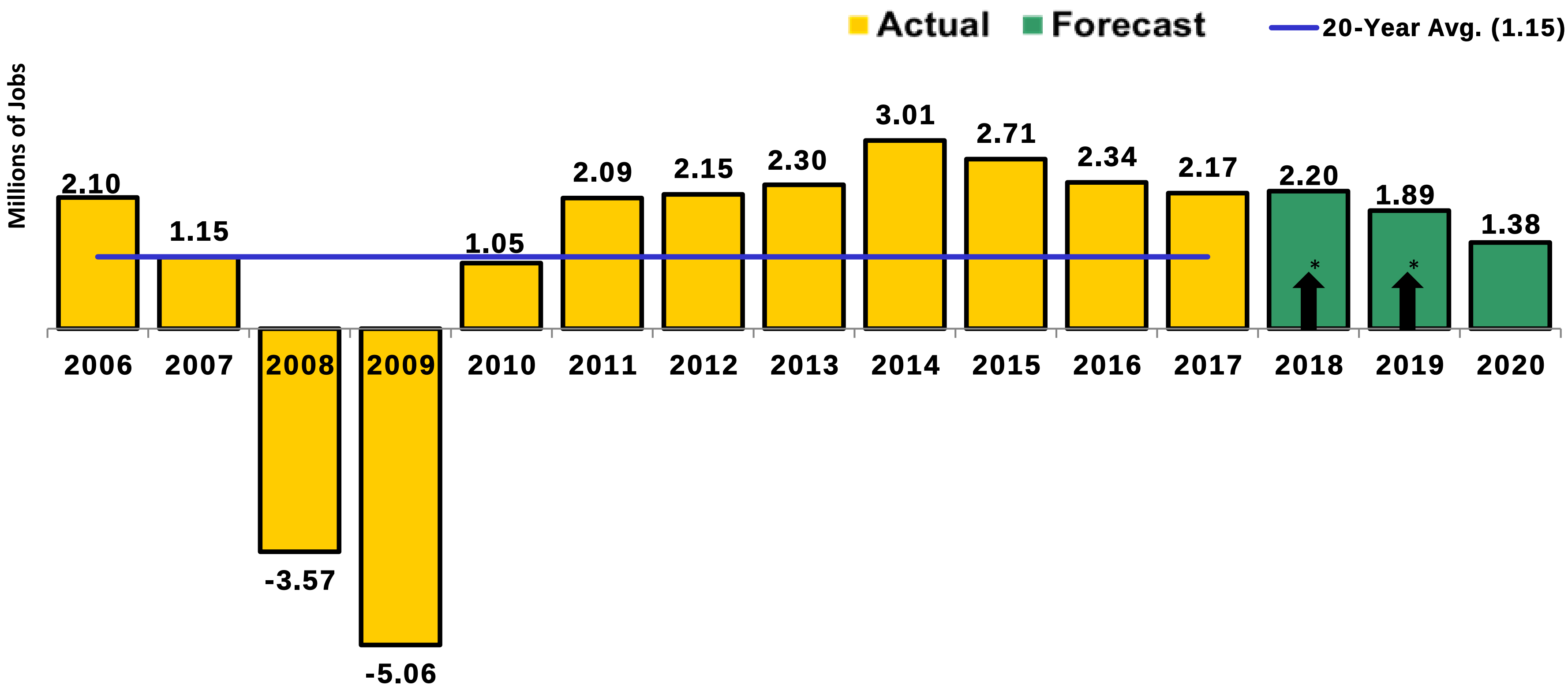
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 2.4% and 2.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

Unemployment Rate



Sources: 1998-2017, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2018-2020 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 4.2% and 4.4%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

Employment Growth



Sources: 1998-2017, Bureau of Labor Statistics; 2018-2020 ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 1.79 and 1.50, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

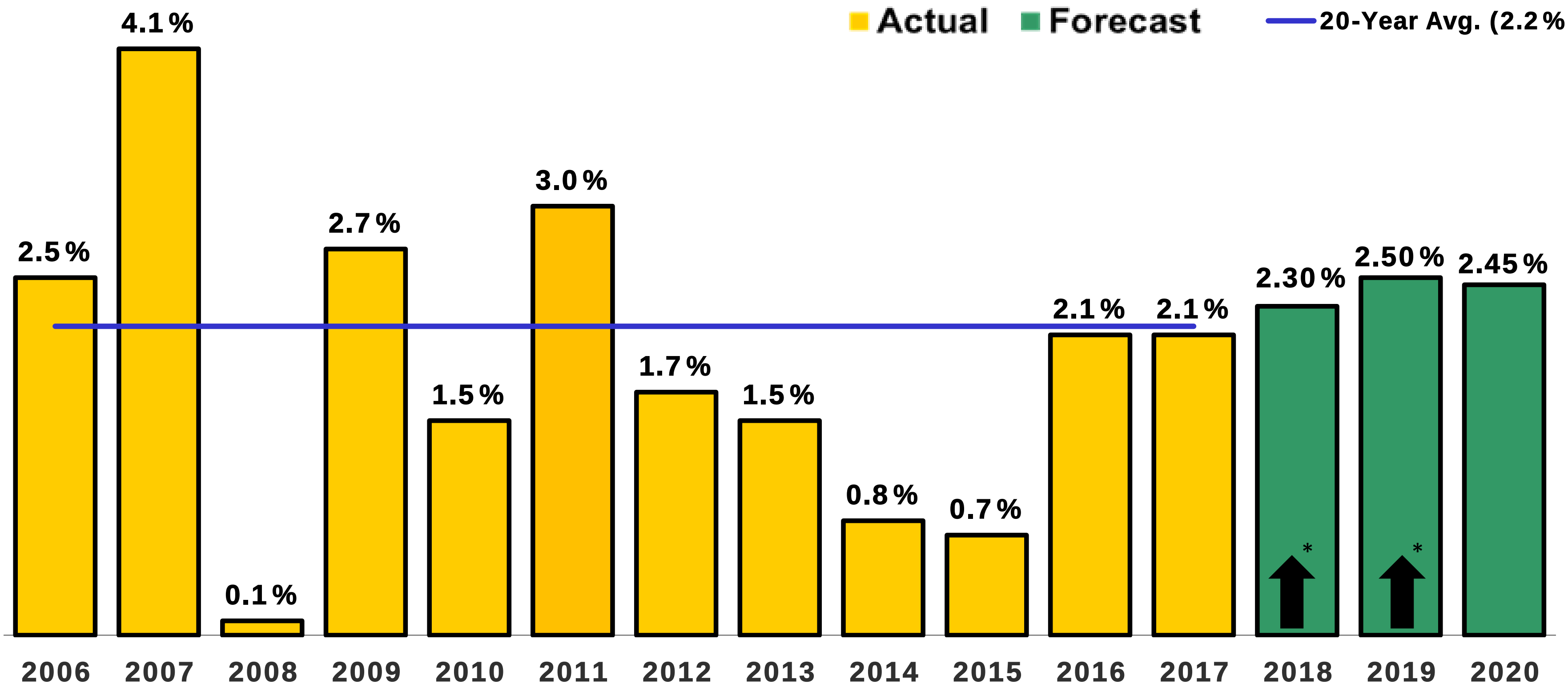
Inflation, Interest Rates, and Cap Rates

- The CPI inflation rate has remained under the 20-year average of 2.2% for the past 6 years, though it reached 2.1% in 2016 and remained there in ‘17. The CPI is projected to be above the long-term average during all three forecast years, at 2.30% in 2018, 2.50%, in ‘19, and 2.45% in ‘20.

- Ten-year treasury rates have remained steady over the past 4 years, with rates at 2.4% at year-end 2017. However, rates are projected to jump to 3.1% in ‘18 and 3.4% in ’19, and remaining unchanged in ‘20. These rates remain below the 20-year average of 3.6%.

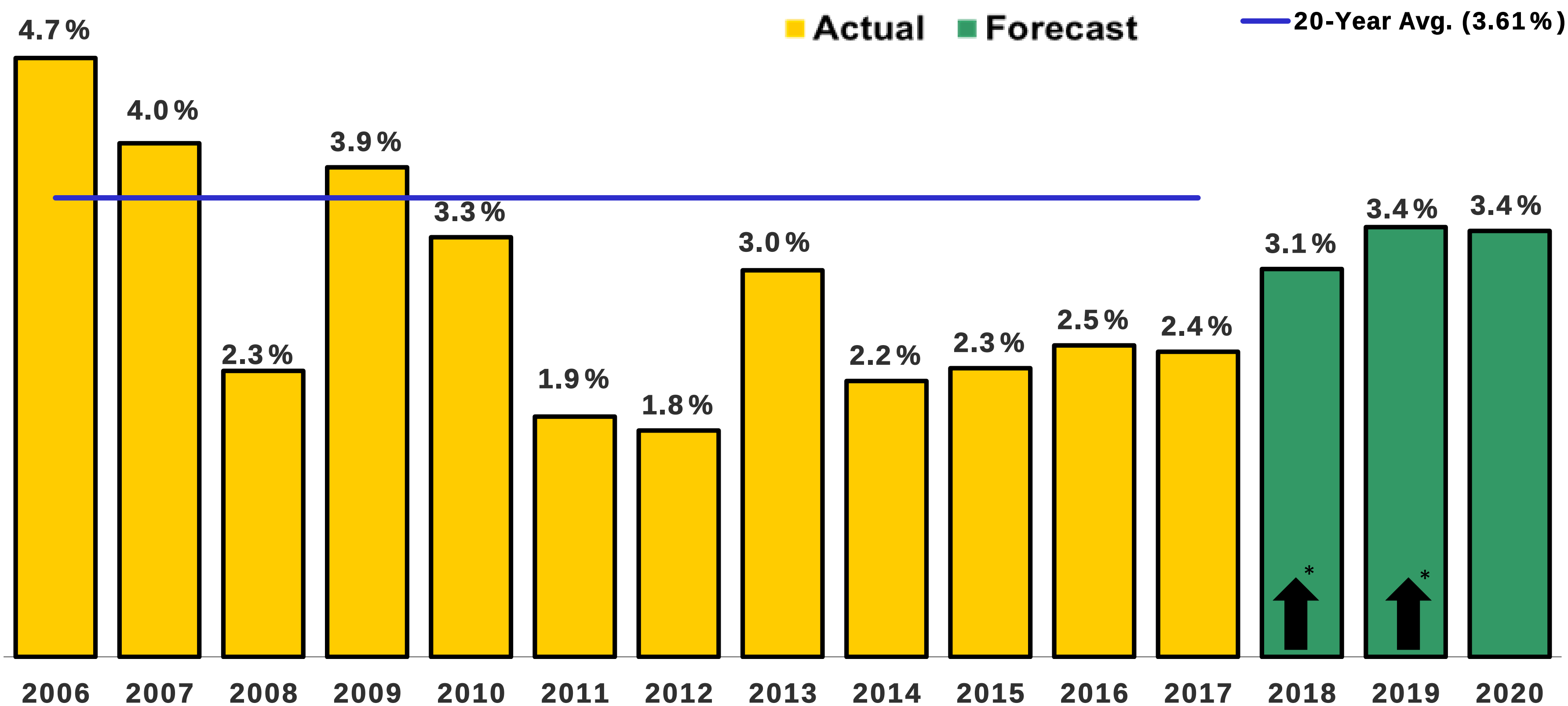
- Capitalization rates for institutional-quality investments (NCREIF cap rates) declined for the 8th straight year in 2017, ending the year at 4.98%. They are expected to reverse this decline over the forecast period, increasing to 5.1% in ‘18, 5.2% in ‘19, and 5.3% in ‘20 .

Consumer Price Index Inflation Rate



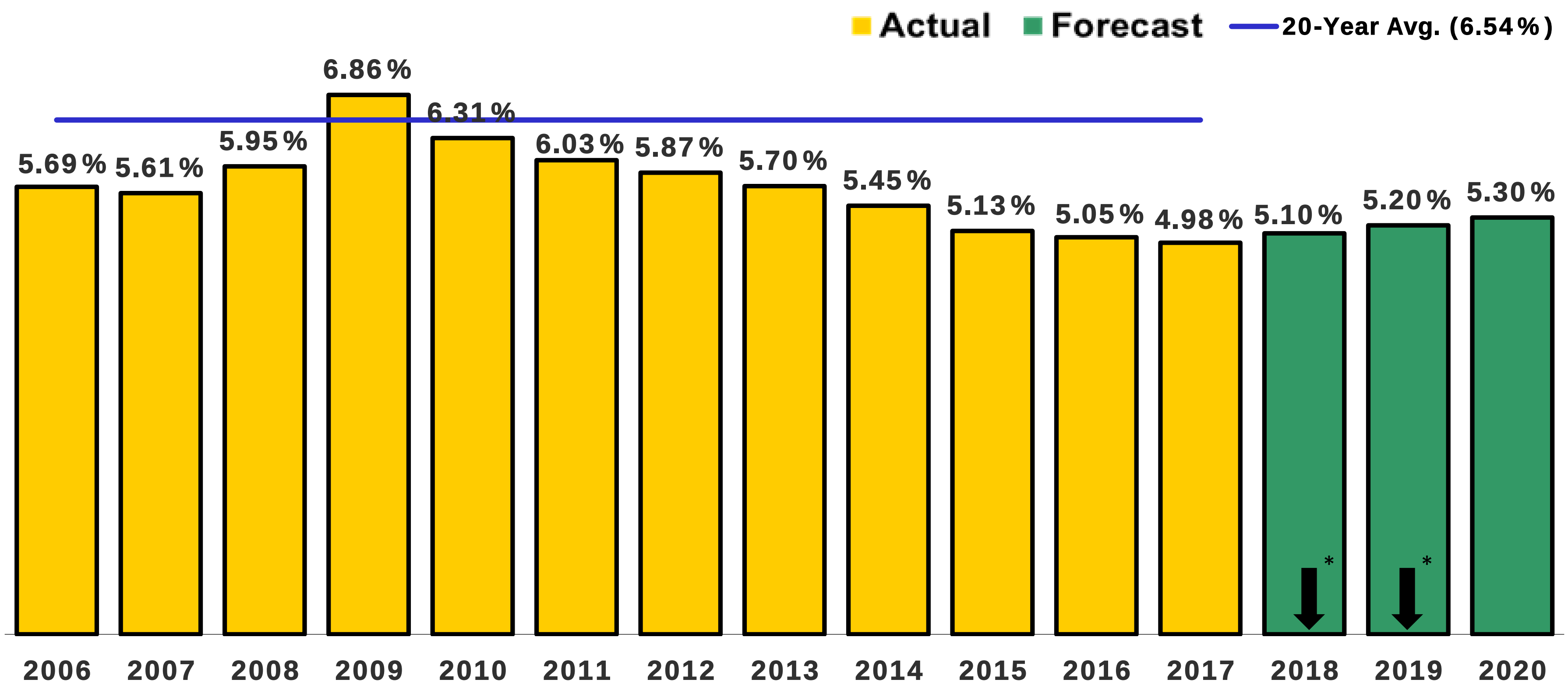
Sources: 1998-2017, (12-month change, as of December), Bureau of Labor Statistics; 2018-2020 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 2.1% and 2.1%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Ten-Year Treasury Rate



Sources: 1998-2017 (YE), U.S. Federal Reserve; 2018-2020 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 2.7% and 3.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

NCREIF Capitalization Rate



Sources: 1998-2017, (Q4), National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 5.2% and 5.3%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

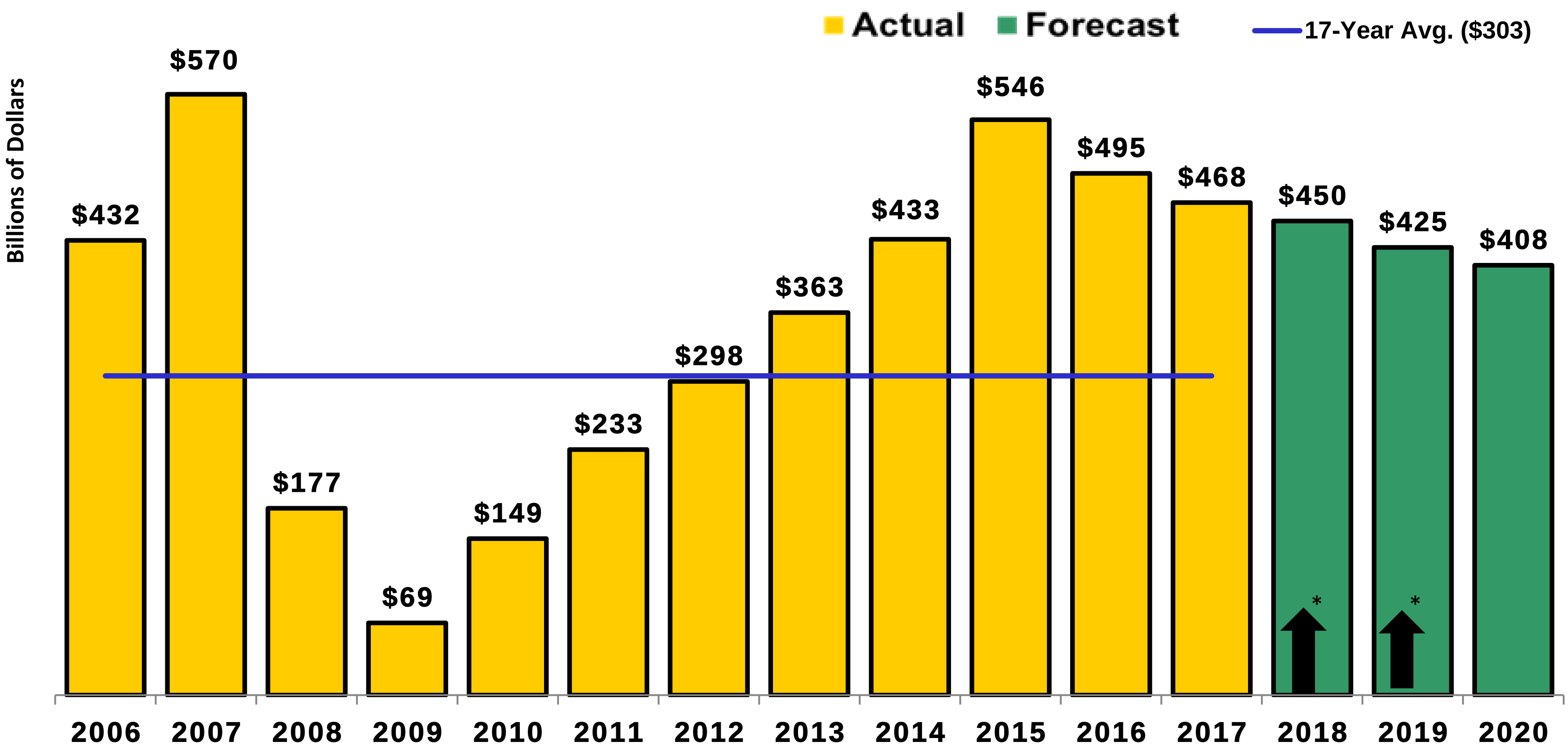
Real Estate Capital Markets

- Commercial real estate transaction volume had consistently increased for 6 years through 2015 to a post-recession peak of $546 billion; volume declined in ‘16 to $495 billion and again in ‘17 to $468 billion but remained among the highest annual volumes. Volume is expected to further decline in the forecast years to $450 billion in ‘18, $425 billion in ‘19, and $408 billion in ‘20. Despite these projected declines, volumes remain substantially above the 17-year annual average of $303 billion.

- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate that had rebounded consistently since ‘09, declined in 2016 to $69 billion from $95 billion in 2015. CMBS issuance bounced back to $88 billion in ‘17 and is expected to remain near there over the next three years, at $90 billion in ‘18 and ‘19, and $80 billion in ‘20.

- Compared to the forecasts of 6 months ago, the current forecasts for transaction volumes and CMBS issuance are both expected to be higher in ’18 and ’19.

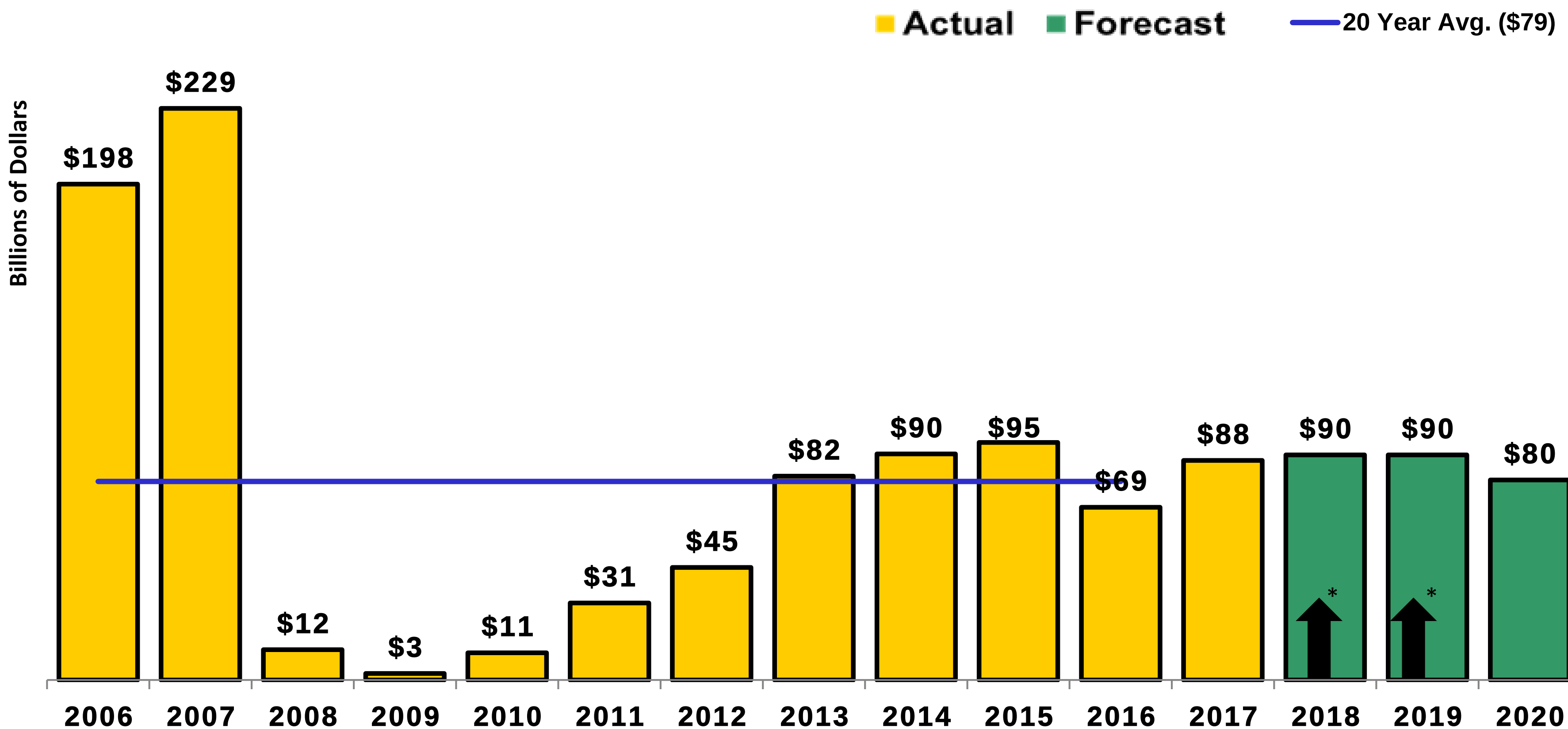
Commercial Real Estate Transaction Volume



Sources: 2001-2017, Real Capital Analytics; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were $427 and $414, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

Commercial Mortgage-Backed Securities (CMBS) Issuance



Sources: 1998-2017, Commercial Mortgage Alert; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were $80 and $80, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Real Estate Returns and Prices

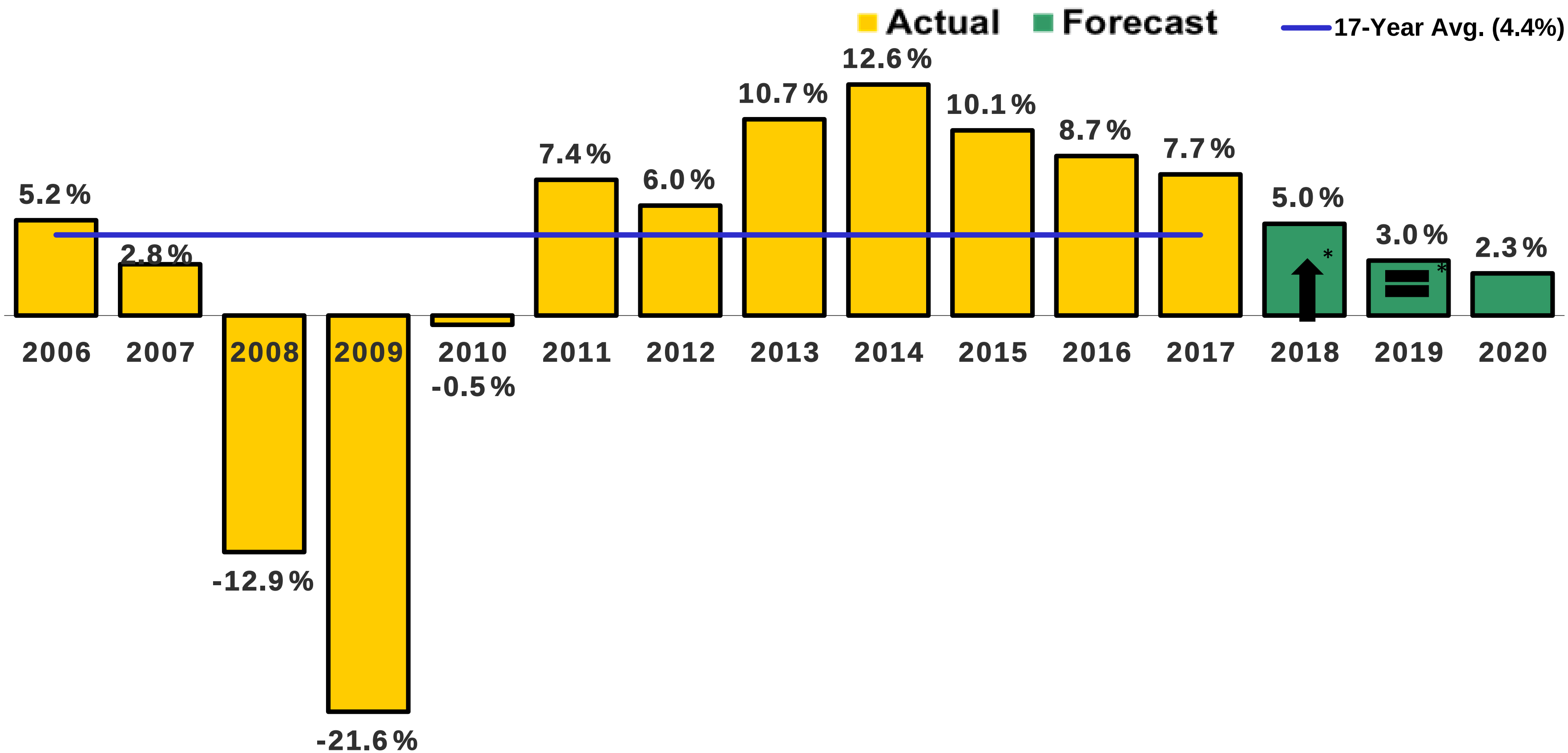
- The RCA Commercial Property Price Index (CPPI) has had some recent high growth years. Prices are expected to continue to grow, although at relatively subdued and slowing rates in the next three years, at 5.0% in 2018, 3.0% in ’19, and 2.3% in ’20.

- Equity REIT total returns, according to NAREIT, were positive for the ninth straight year in 2017 at 5.2%, but below the 20-year average of 10.8%. Future returns are expected to remain positive yet remain below the long-term average, at 4.4% in ‘18, 5.5% in ‘19, and 6.5% in ‘20.

- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index, dipped to 8.0% and 7.0% in ‘16 and ’17, respectively, after six years of above long-term average returns. This moderation is expected to continue over the forecast period, to 6.0% in ‘18, 5.1% in ’19, and 5.0% in ‘20.

- Compared to the forecasts of 6 months ago, the forecasts for CPPI growth are more optimistic for ‘18 but unchanged for ‘19. The REIT returns forecasts are less optimistic for both ‘18 and ’19, and NCREIF total returns forecasts are unchanged for ‘18, but less optimistic for ‘19.

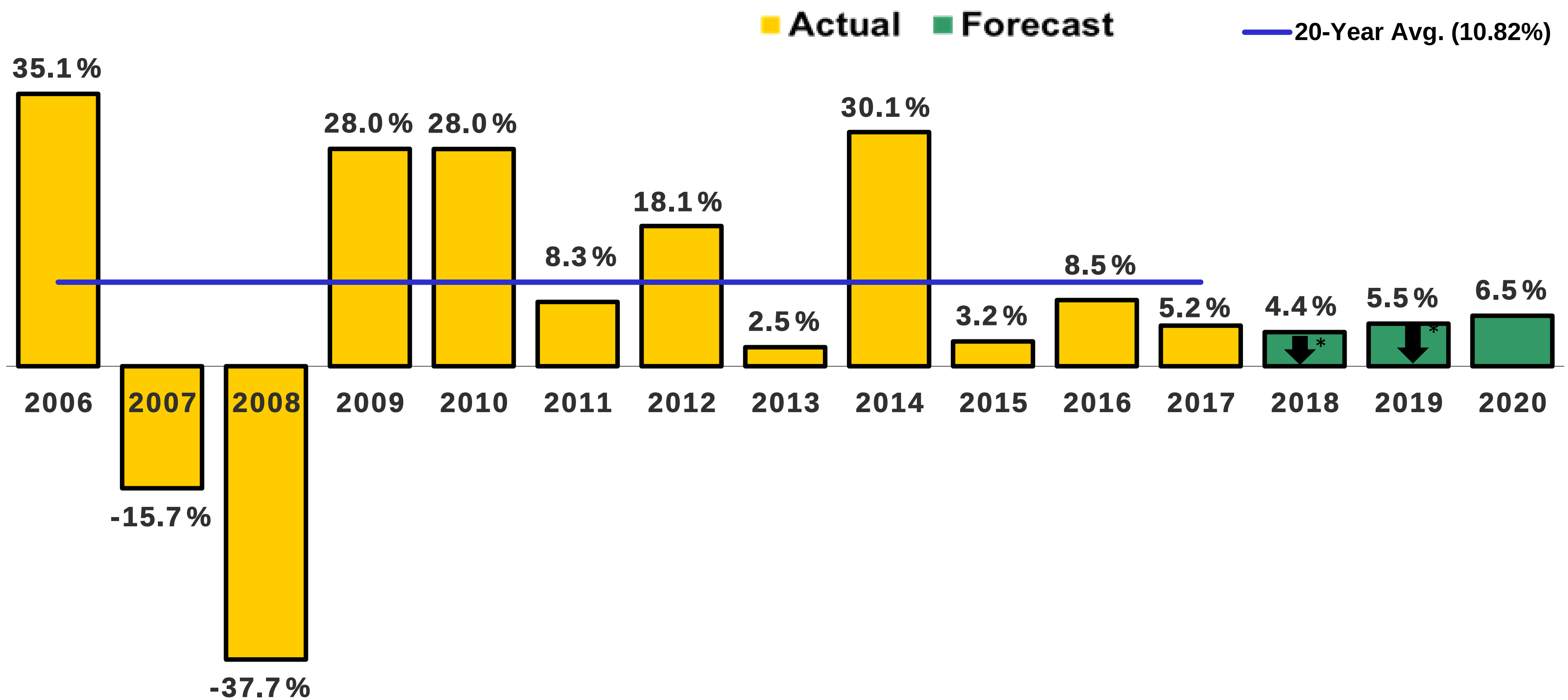
RCA Commercial Property Price Index (annual change)



Sources: 2001-2017, Real Capital Analytics; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 4.1% and 3.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

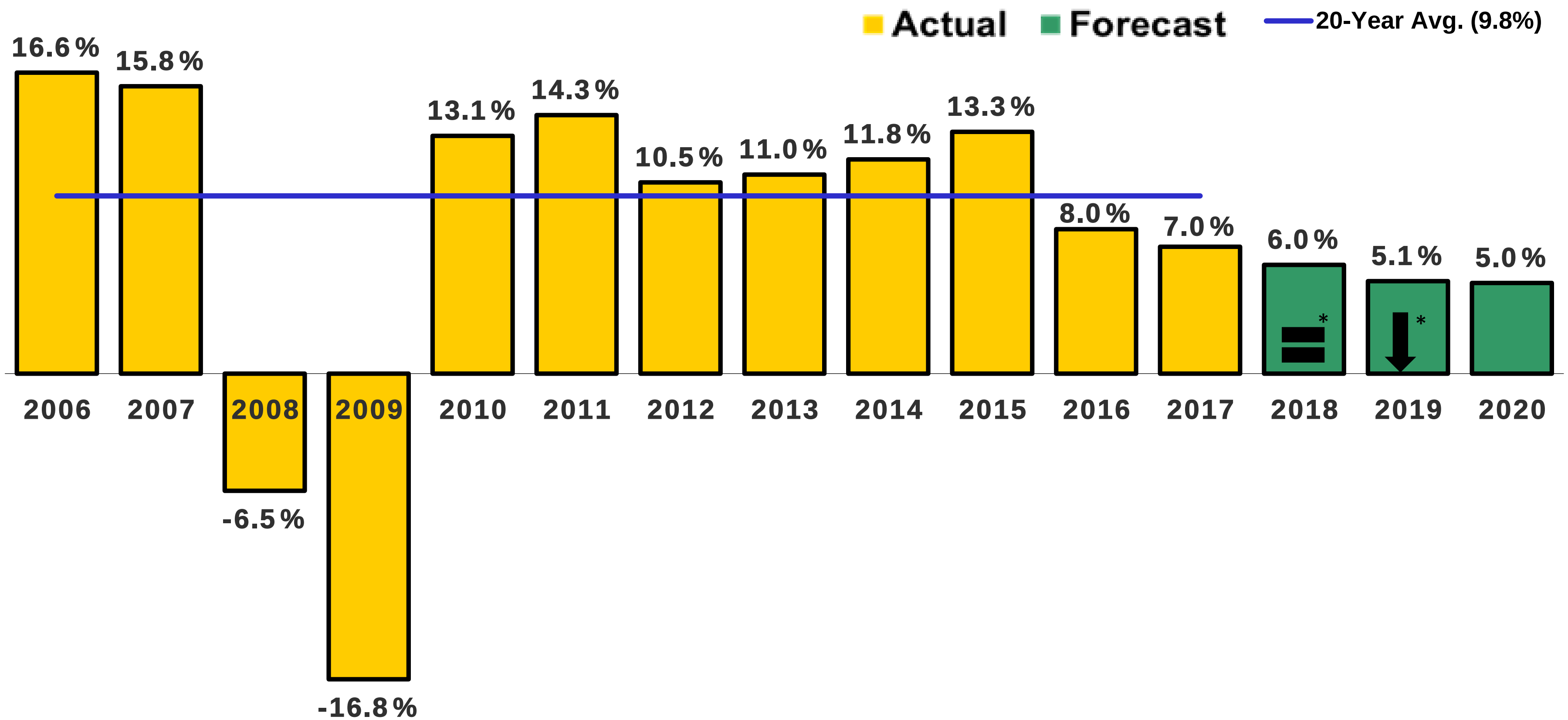
Equity REIT Total Annual Returns



Sources: 1998-2017, National Association of Real Estate Investment Trusts; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 6.0% and 6.5%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

NCREIF Total Annual Returns



Sources: 1998-2017 National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 6.0% and 5.8%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

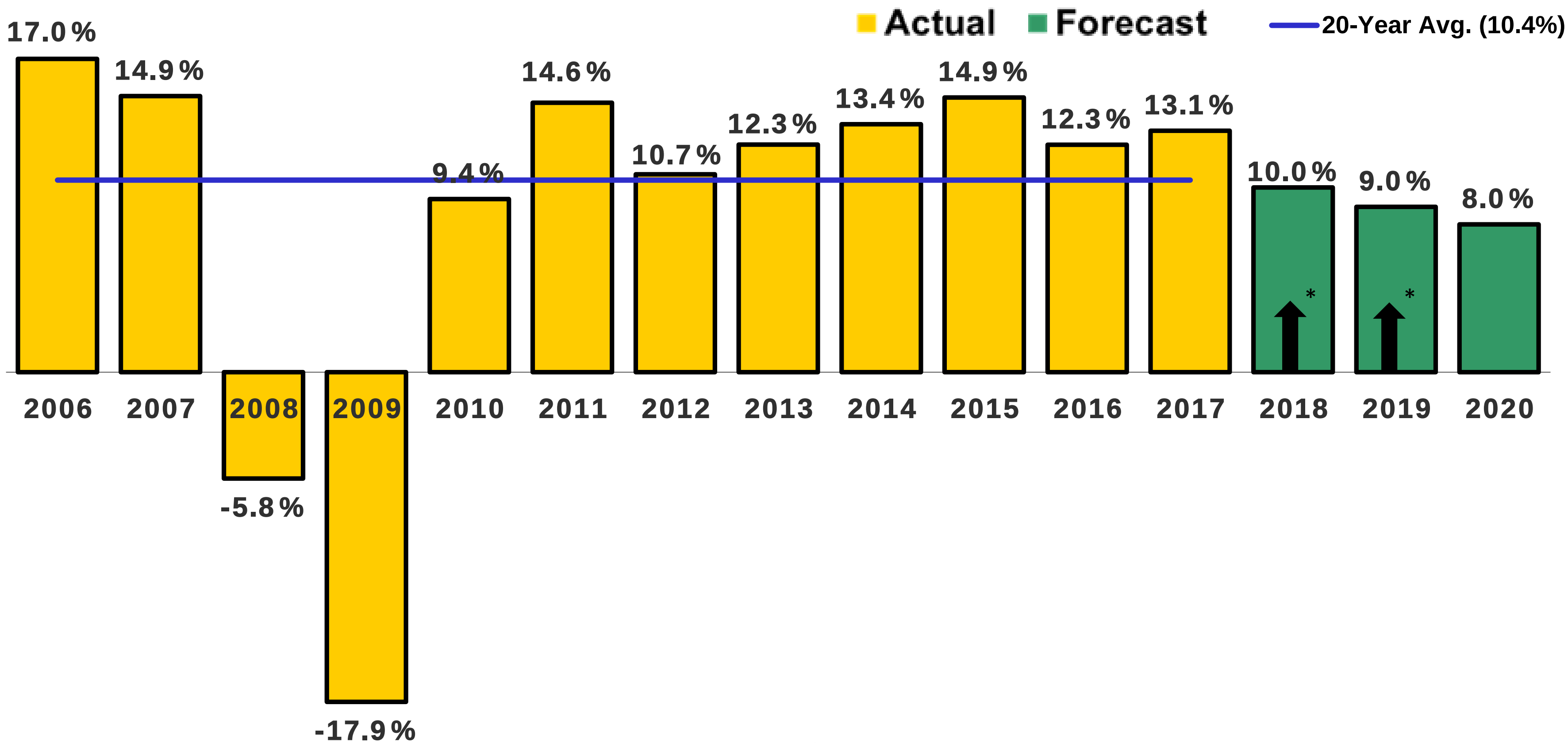
NCREIF Returns by Property Type

- NCREIF total returns in 2018 for the industrial sector are expected to moderate relative to that sector's strong performance through 2017. Total returns for the office, apartment and retail sectors are expected to continue the moderating trend already seen in 2016 and 2017. By property type, returns for the industrial sector are forecast at 10.0%, followed by office returns and apartment returns both at 5.4%, and retail returns at 5.0%.

- By 2020, all sector returns are expected to further moderate, with industrial returns forecast at 8.0%, apartment and office returns at 4.5%, and retail returns at 4.3%.

- Compared to 6 months ago, forecasts for '18 are more optimistic for the industrial sector and less optimistic for the apartment, retail and office sectors. Forecasts for '19 are also more optimistic for the industrial sector, while they are unchanged for office and less optimistic for the apartment and retail sectors.

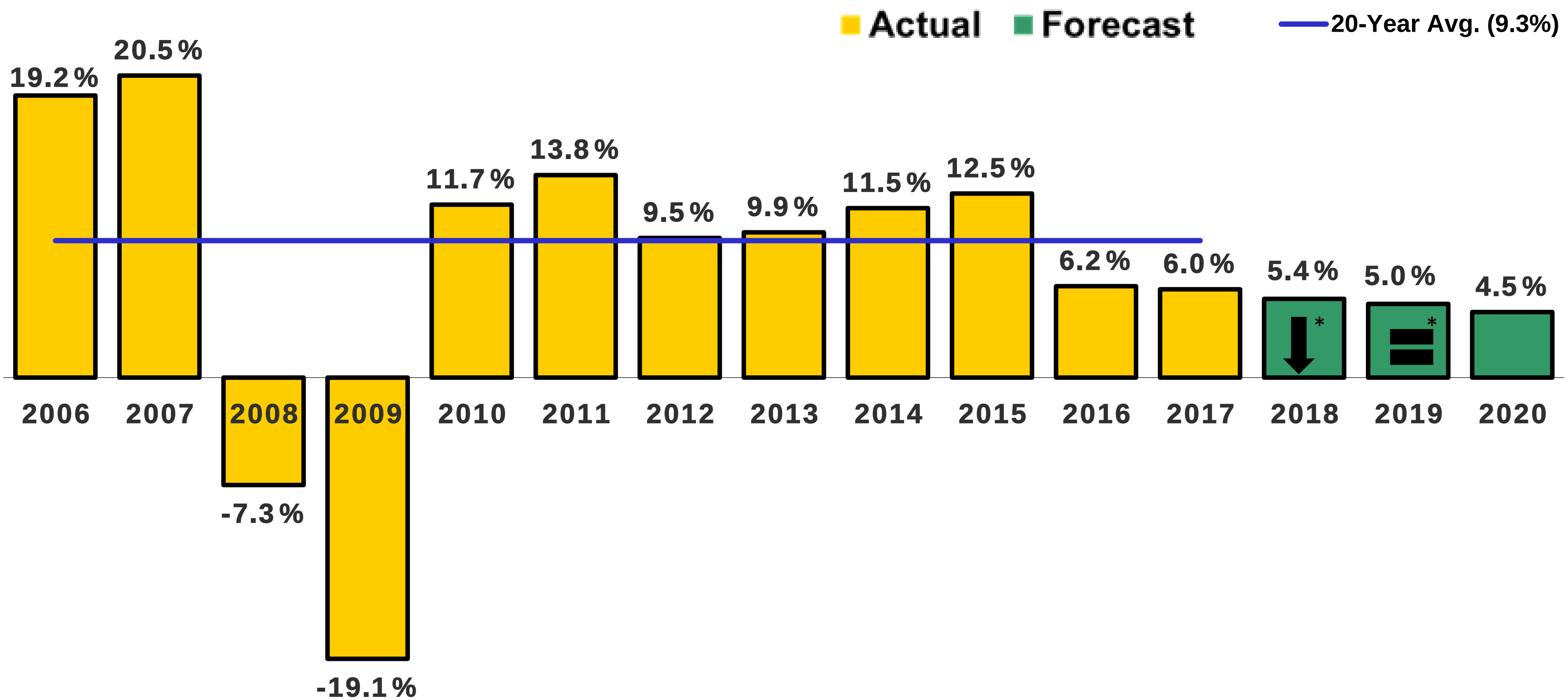
NCREIF Industrial Total Annual Returns



Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 8.4% and 7.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

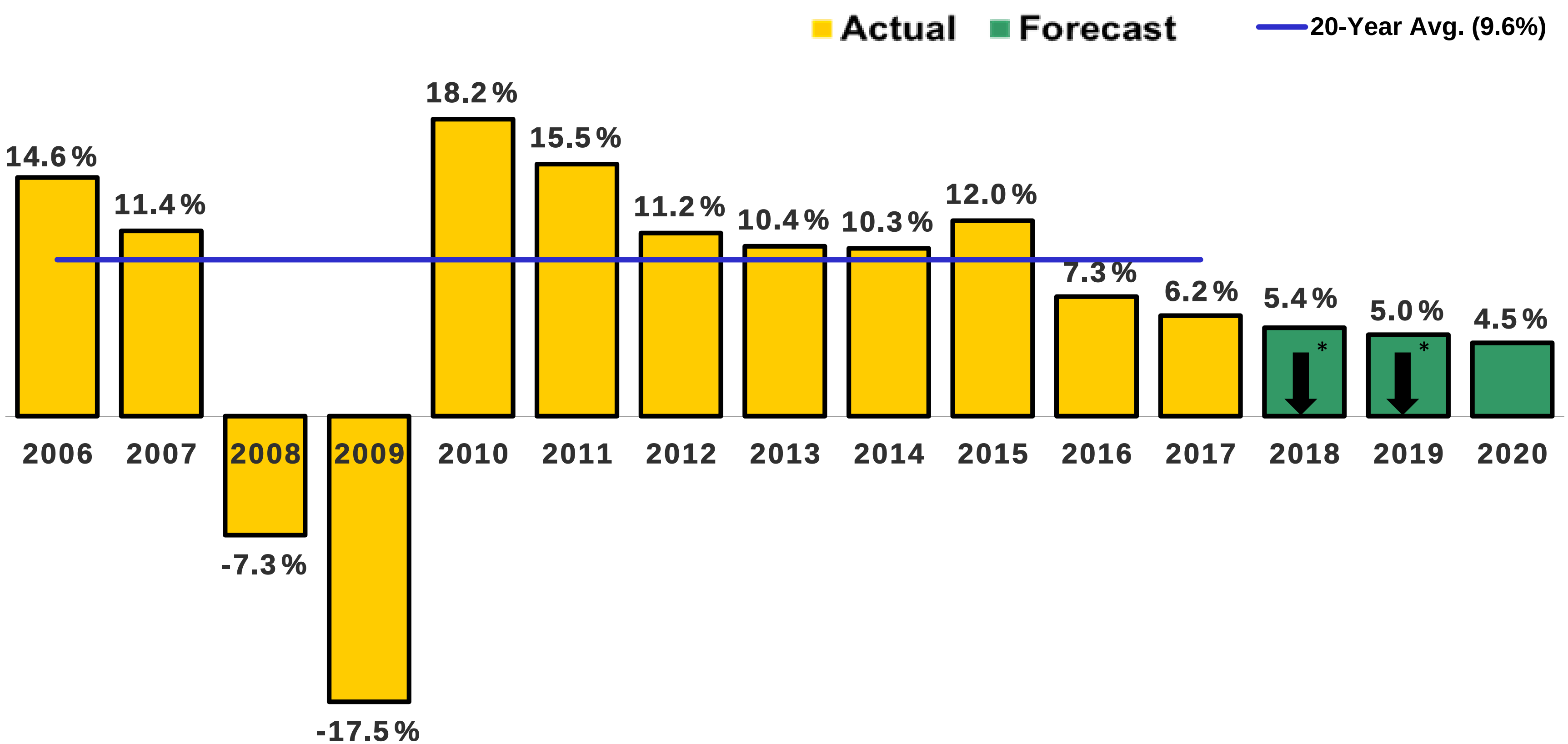
NCREIF Office Total Annual Returns



Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.

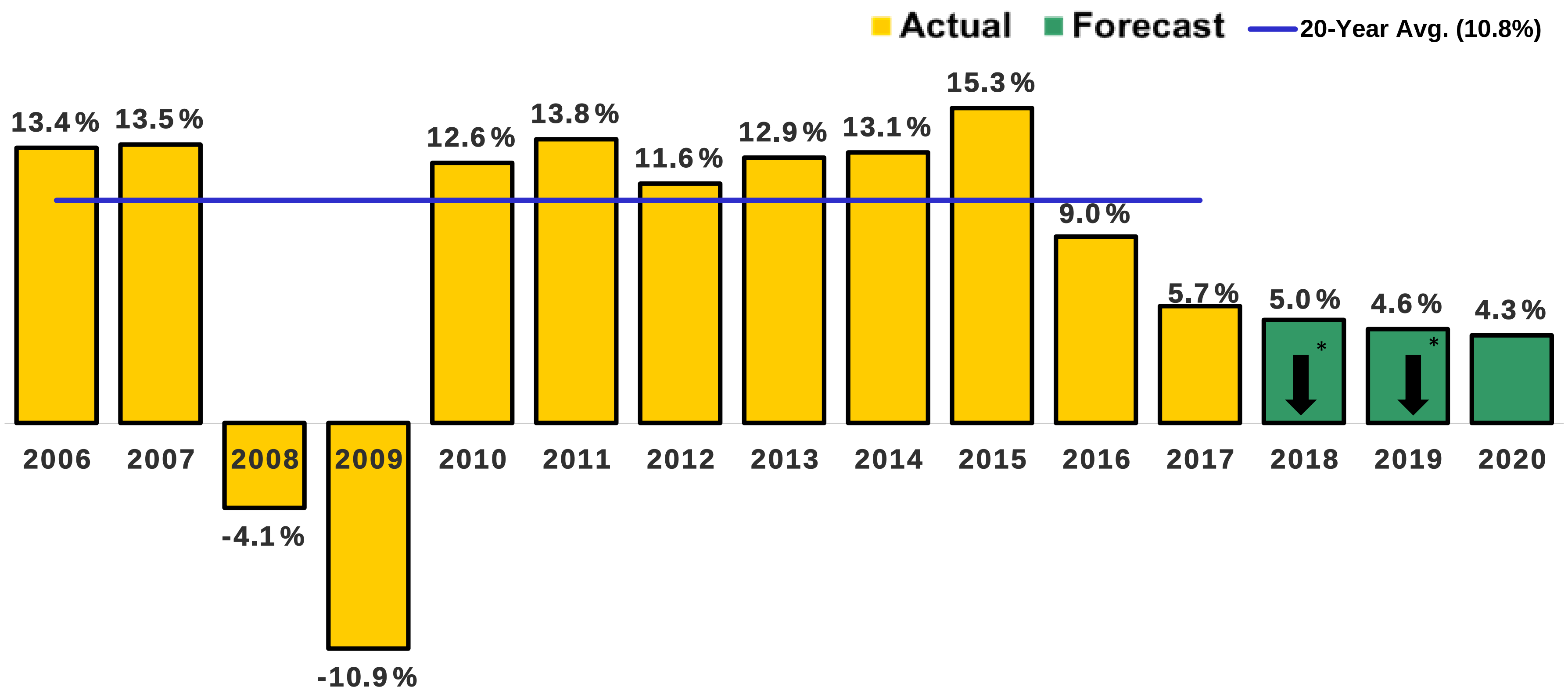
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 5.7% and 5.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

NCREIF Apartment Total Annual Returns



Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 5.5% and 5.5%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

NCREIF Retail Total Annual Returns



Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 5.5% and 5.1%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

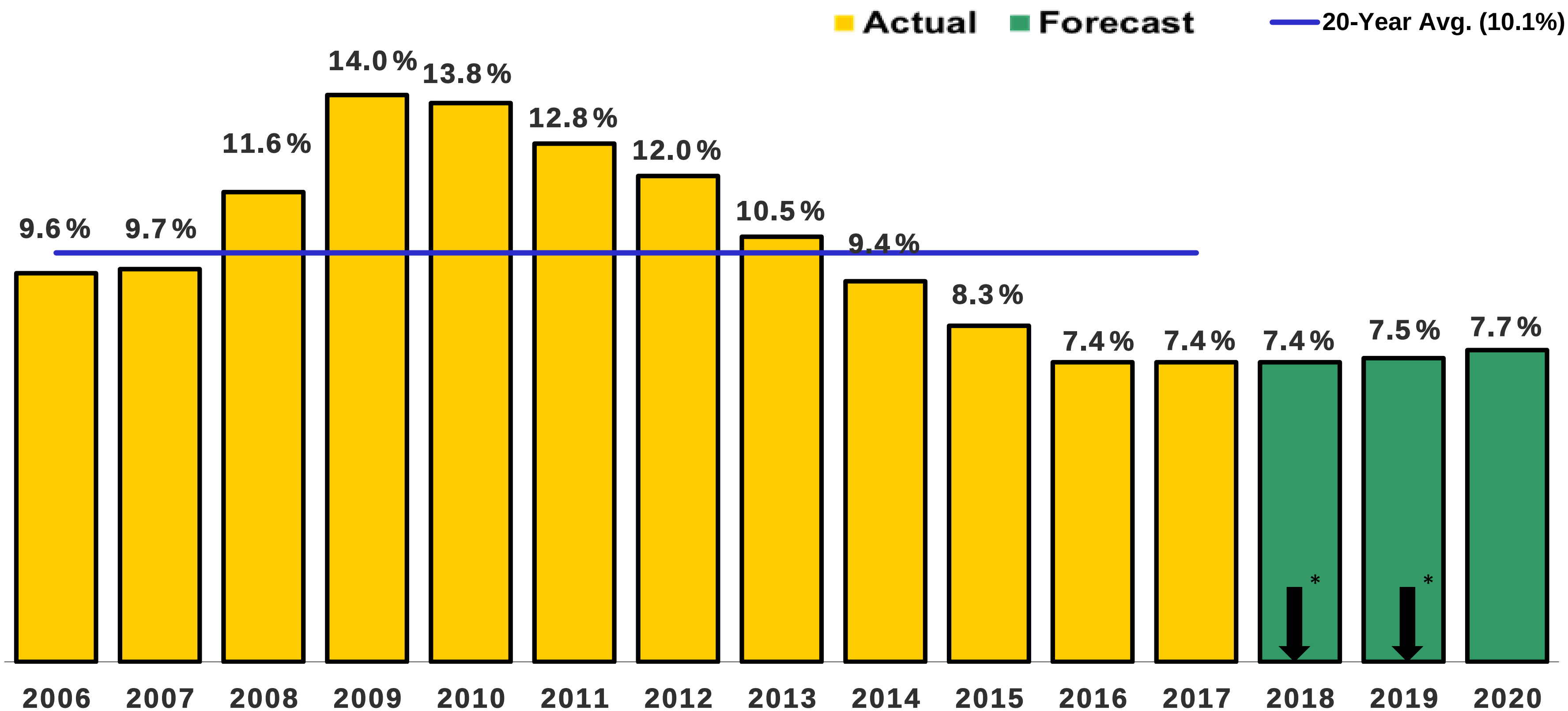
Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector ended a seven-year decline in 2017, plateauing at 7.4%. Availability rates are expected to remain there again in 2018, before ticking up to 7.7% by ‘20. Rates in all three forecast years are projected to remain well below the 20-year average.

- Warehouse rental rates have shown positive growth for the past six years, with growth in the last five years substantially above the long-term average. Forecasts are for healthy but moderating rental rate growth with increases of 4.6% in 2018, 3.8% in 2019, and 3.0% in 2020, still remaining above the 20-year average growth rate.

- The forecasts for both industrial/warehouse availability rates and rental rate growth in ‘18 and ‘19 are more optimistic than the forecast from six months ago.

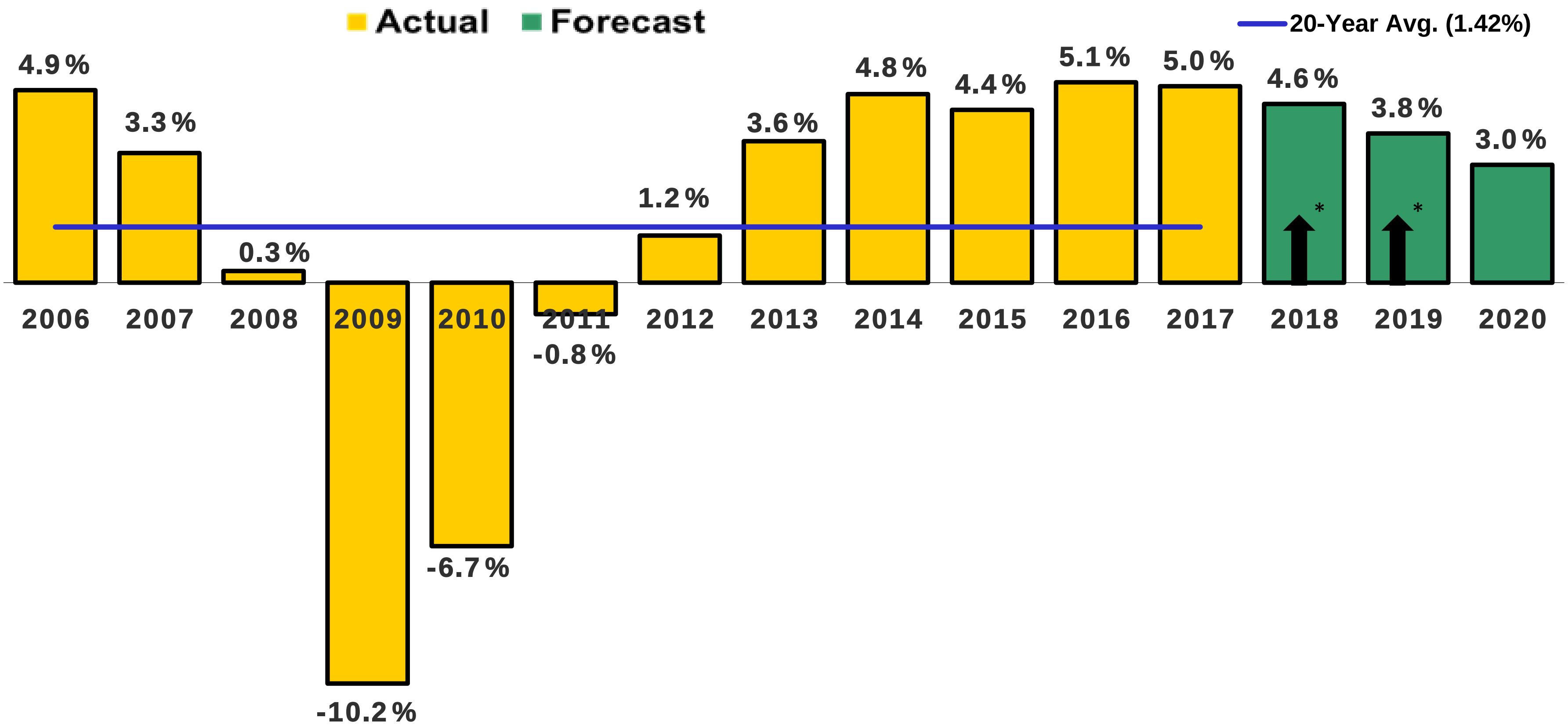
Industrial/Warehouse Availability Rates



Sources: 1998-2017 (Q4), CBRE; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 7.7% and 7.9%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

Industrial/Warehouse Rental Rate Change



Sources: 1998-2017, CBRE; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 3.5% and 3.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

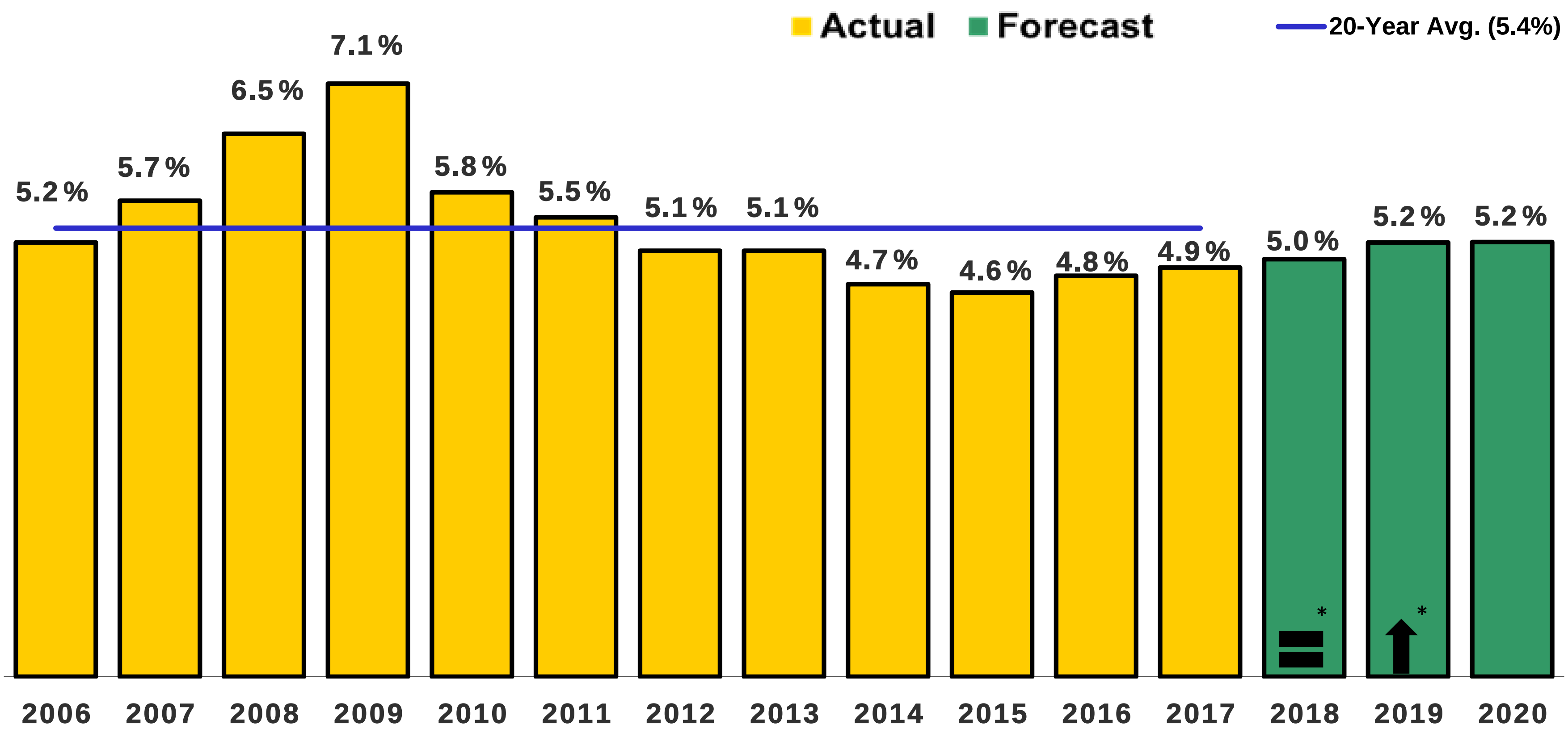
Apartment Sector Fundamentals

- Even with continued strong construction activity, the apartment sector has performed very well the past several years. Vacancy rates decreased from 7.1% in 2009 to 4.6% in 2015, before a slight uptick to 4.8% in 2016 and 4.9% in 2017, still remaining below the 20-year average. Vacancy rates are expected to continue gradually increasing to 5.0% in 2018 and 5.2% in 2019, stabilizing at that rate in ‘20.

- Apartment rental rate growth was negative in 2017 for the first time since 2009, with rates decreasing by 0.3%. Rental rate growth is expected to be positive but moderate in the forecast years, at 1.5% in ’18 and 2.0% in ’19 and ‘20.

- Compared to 6 months ago, the forecast for vacancy rates is unchanged for ‘18, but less optimistic for ‘19. The rental rate growth forecast is less optimistic for both ‘18 and ‘19.

Apartment Vacancy Rates



Sources: 1998-2017 (Q4), CBRE; 2018-2020 (Q4), ULI Real Estate Economic Forecast.

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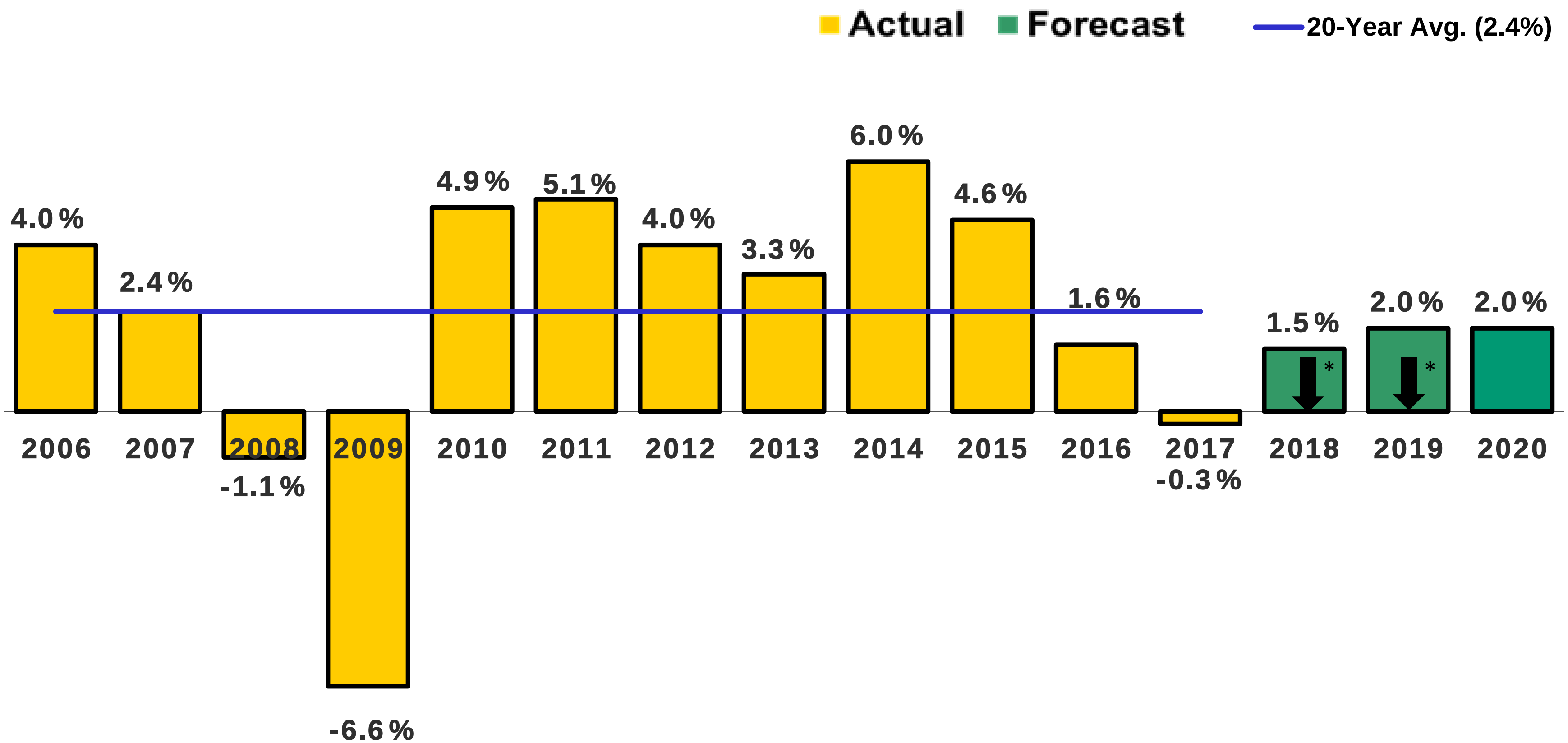
Apartment Rental Rate Change



Sources: 1998-2017, CBRE; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 2.1% and 2.2%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

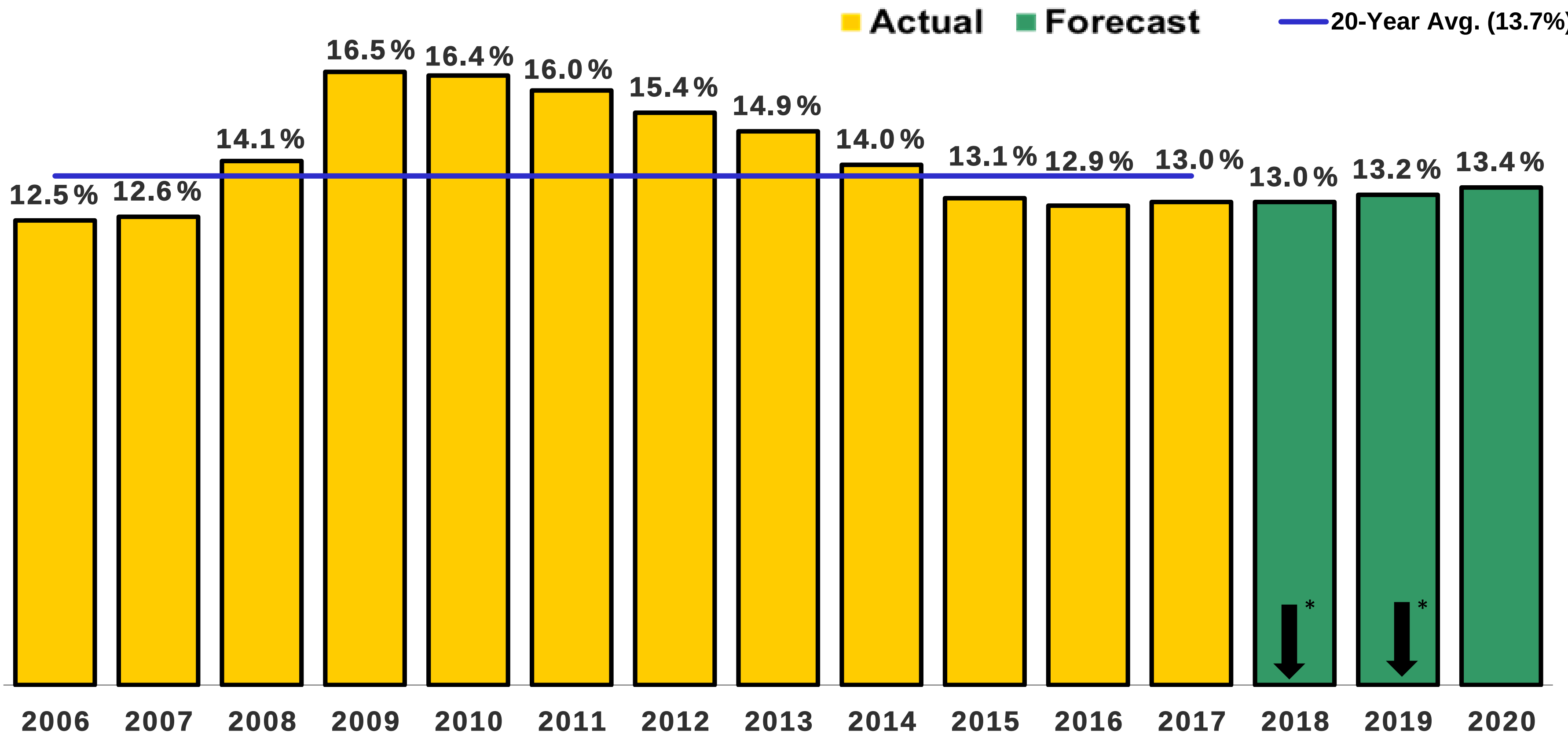
Office Sector Fundamentals

- Office vacancy rates reversed a seven-year decline in 2017, ticking up to 13.0%. Rates are forecast to remain at 13.0% in 2018 and then move up to 13.2% in 2019 and 13.4% in 2020. All of these rates remain below the 20-year average.

- Office rental rates increased 2.0% in 2017, just above the 20-year average of 1.9%. Rental rate growth is expected to increase to 2.5% in 2018, before edging back down to 2.0% in '19 and 1.5% in '20.

- Compared to 6 months ago, the forecasts for both office vacancy rates and office rental rate growth are more optimistic for '18 and '19.

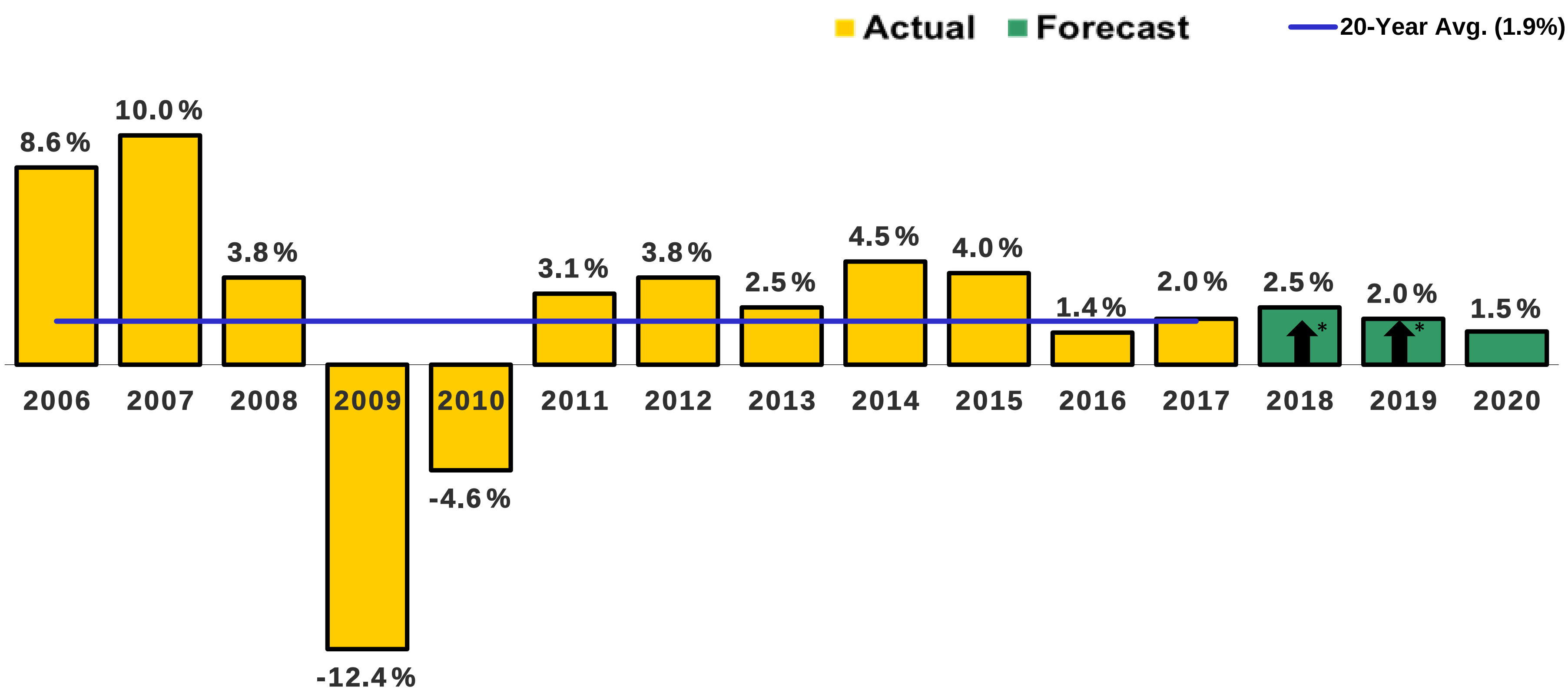
Office Vacancy Rates



Sources: 1998-2017 (Q4), CBRE; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 13.1% and 13.4%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

Office Rental Rate Change



Sources: 1998-2017, CBRE; 2018-2020, ULI Real Estate Economic Forecast.

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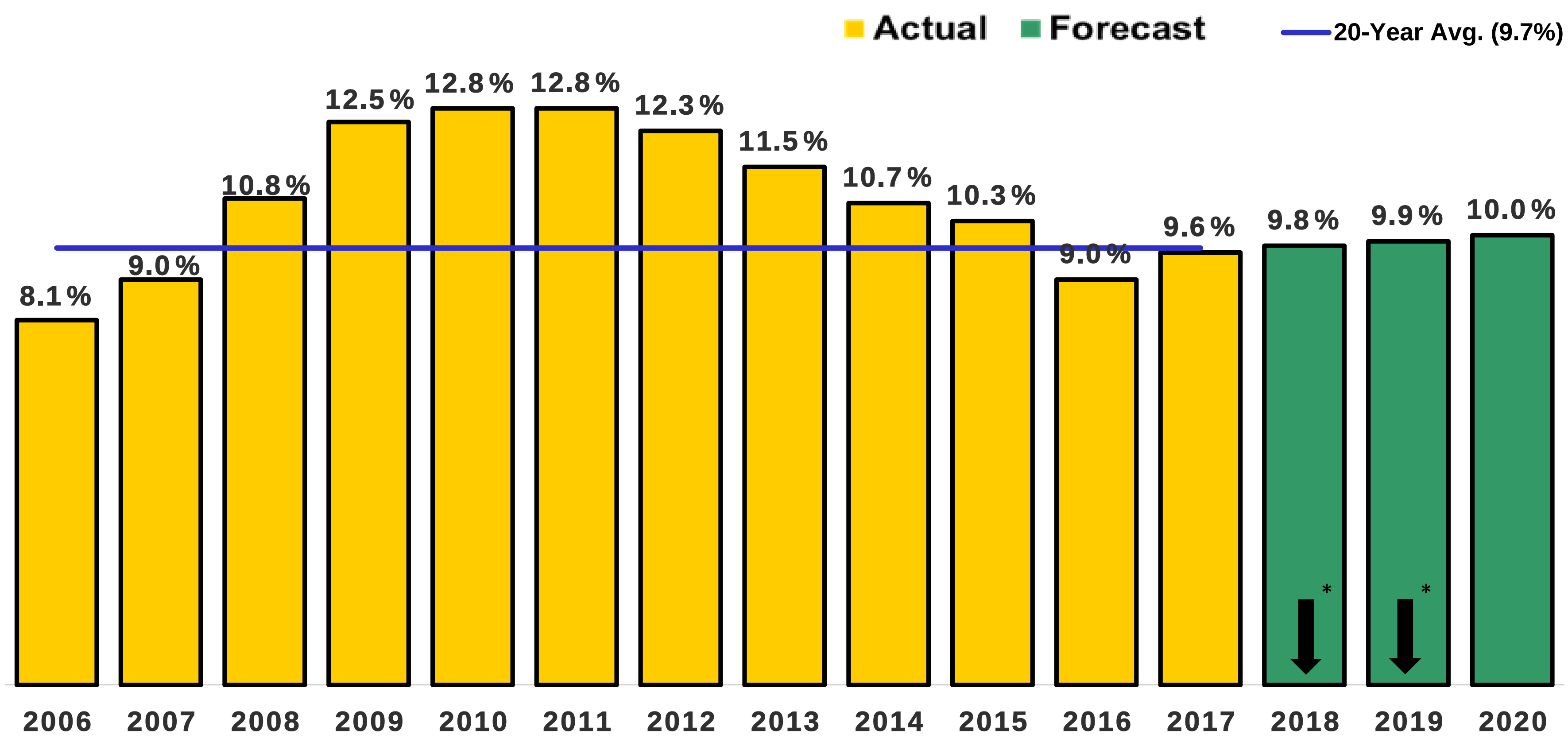
Retail Sector Fundamentals

- Retail availability rates steadily declined from a peak of 12.8% in 2011 to 9.0% in 2016, before reversing direction in 2017 and moving up to 9.6%. The forecast anticipates continued slight increases over the forecast period, edging up to 10.0% by ‘20. Rates in all three forecast years are above the 20-year average.

- Retail rental rate growth was positive for the first time in seven years in 2014 and has steadily increased since then, reaching 3.1% in 2017. The forecast expects growth to steadily moderate from this post-recession peak to 2.0% in ‘18, 1.8% in ‘19, and 1.1% in ‘20.

- Compared to 6 months ago, the forecasts for retail availability rates and retail rental rate growth are both more optimistic for ‘18 and ‘19.

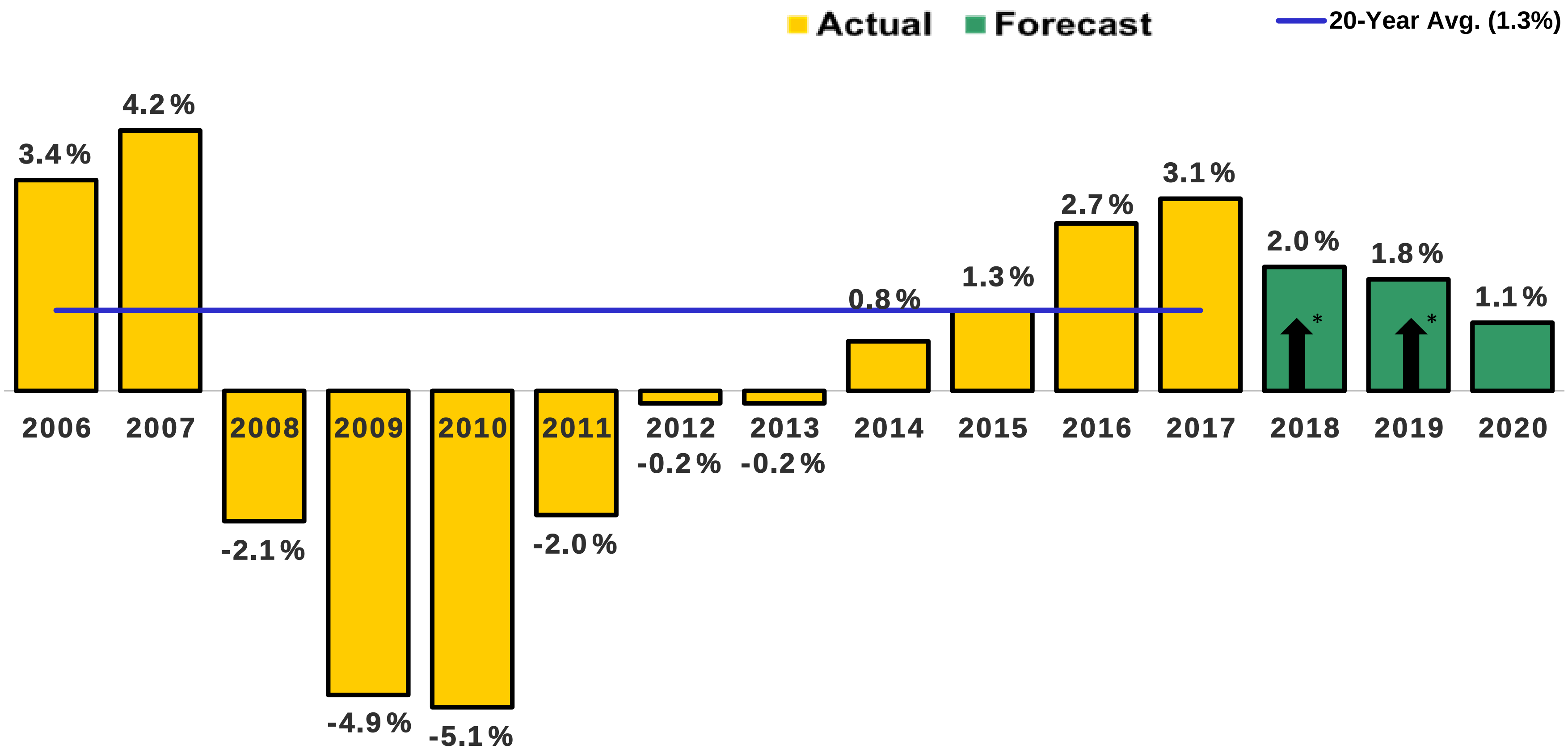
Retail Availability Rates



Sources: 1998-2017 (Q4), CBRE; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 10.2% and 10.3%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Retail Rental Rate Change



Sources: 1998-2017, CBRE; 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 1.8% and 1.5%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

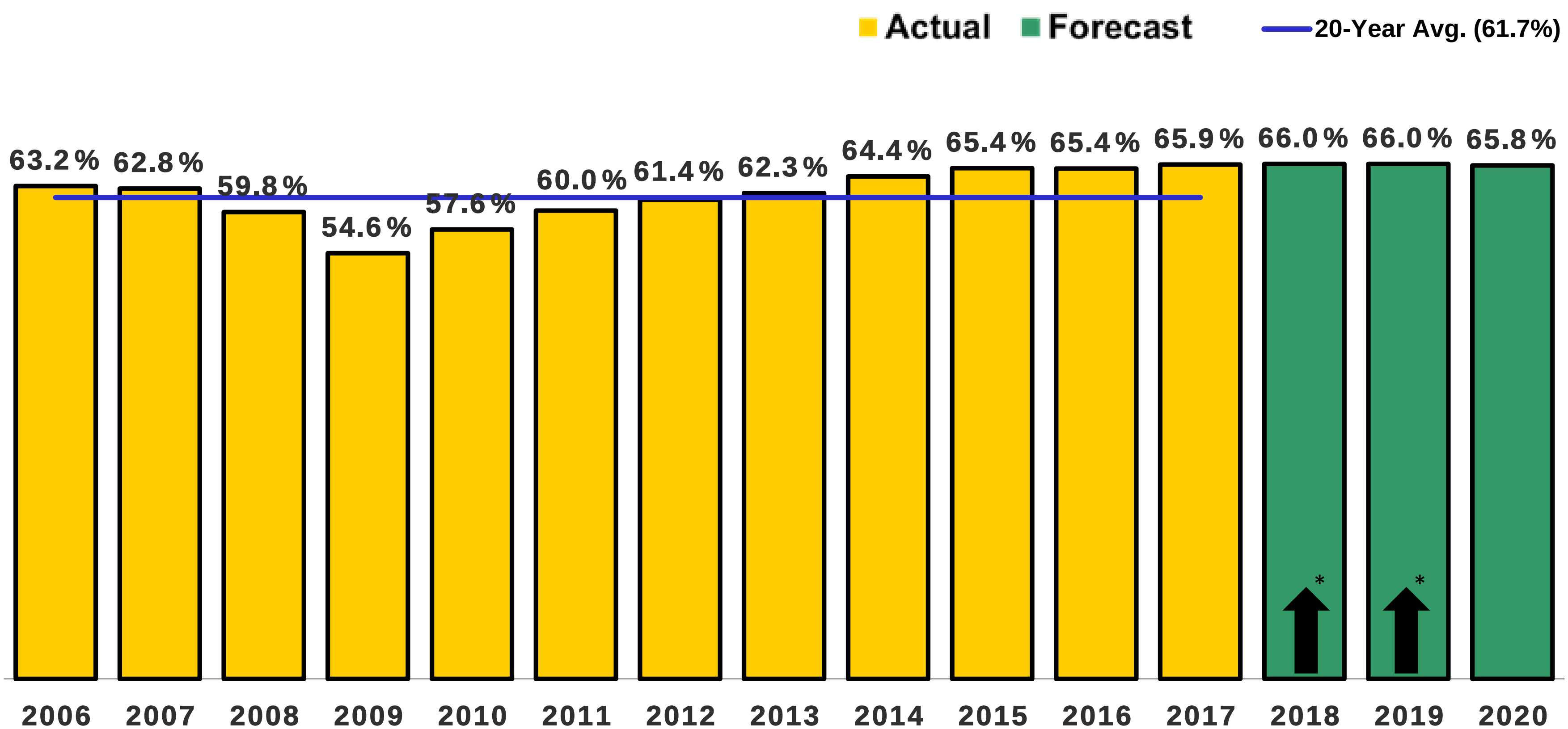
Hotel Sector Fundamentals

- Hotel occupancy rates, according to STR, have been steadily improving since reaching a recession low of 54.6% in 2009. Occupancy rates surpassed the twenty-year average in 2013 at 62.3% and came in at 65.9% in 2017. Rates are forecast to remain strong over the forecast years, at 66.0% in ’18 and‘19 and 65.8% in ‘20.

- Following six years of above-average hotel revenue per available room (RevPAR), RevPAR growth began to moderate in 2016 and ’17. It is expected to continue moderating during the forecast period, dipping to 2.7% growth in 2018, and decreasing further to 2.4% in 2019 and 1.7% in 2020.

- Compared to the forecast of 6 months ago, the current forecasts for occupancy rates are more optimistic for both ‘18 and ’19, while the forecasts for RevPAR growth in ‘18 and ’19 are both unchanged.

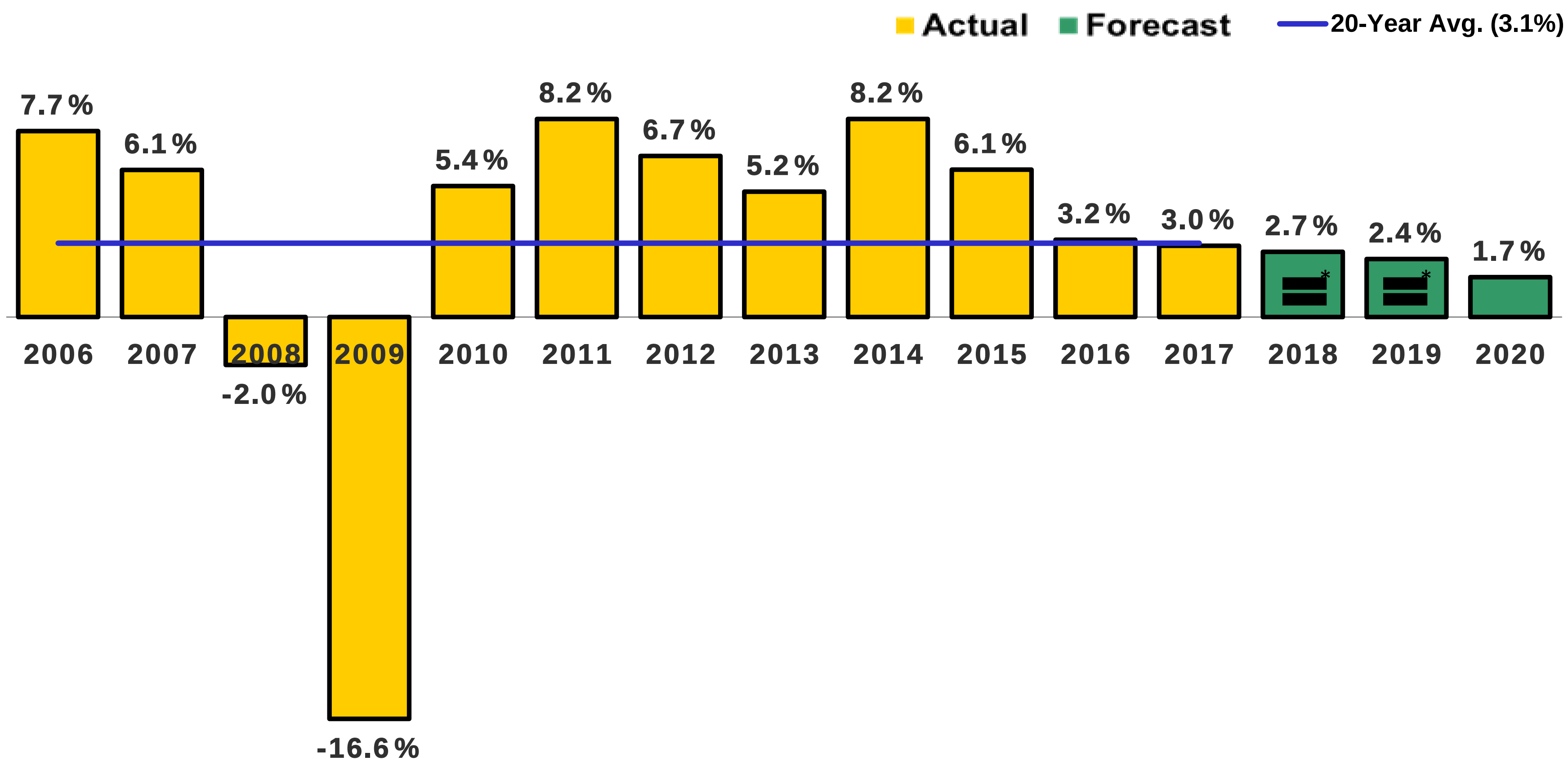
Hotel Occupancy Rates



Sources: 1998-2017, (December, 12-month rolling average), STR; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 65.4% and 65.1%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Hotel Revenue per Available Room (RevPAR) Change



Sources: 1998-2017, (December, 12-month rolling average), STR; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 2.7% and 2.4%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for '18 and '19).

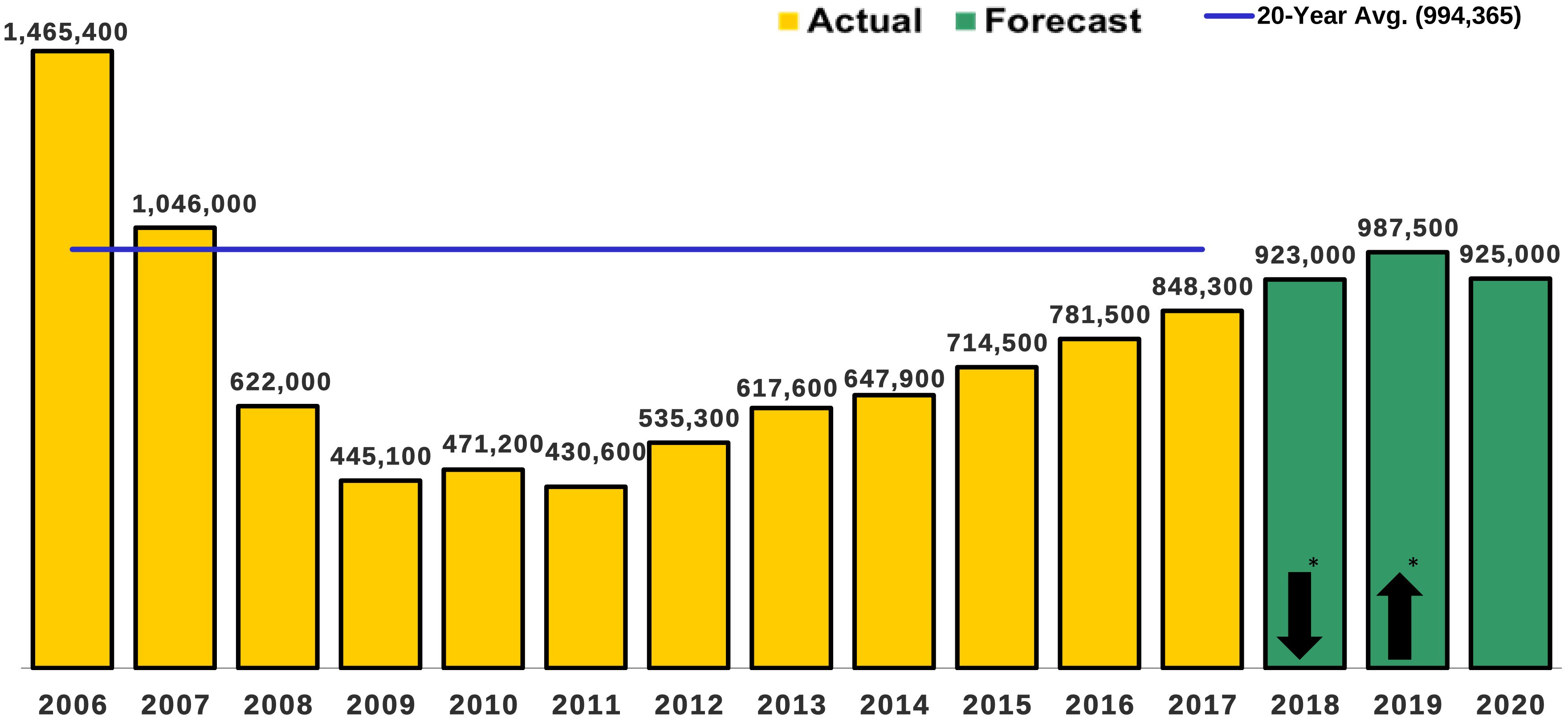
Housing Sector

- The single-family housing sector experienced positive growth in starts for the sixth straight year in 2017. Growth is expected to continue, increasing to 923,000 in ’18 and 987,500 in ’19 (within 1% of the 20-year average) but moderating back down to 925,000 in ’20.

- According to the FHFA, growth in existing home prices increased on average by 6.5% in 2017, the sixth consecutive year of strong price growth. Price growth is expected to be more moderate during the forecast period: 5.3% in ‘18, 4.3% in ‘19, and 4.0% in ‘20.

- Compared to six months ago, forecasts for housing starts are less optimistic for ‘18 and more optimistic for ‘19, while existing house price growth is slightly more optimistic for both ‘18 and ‘19.

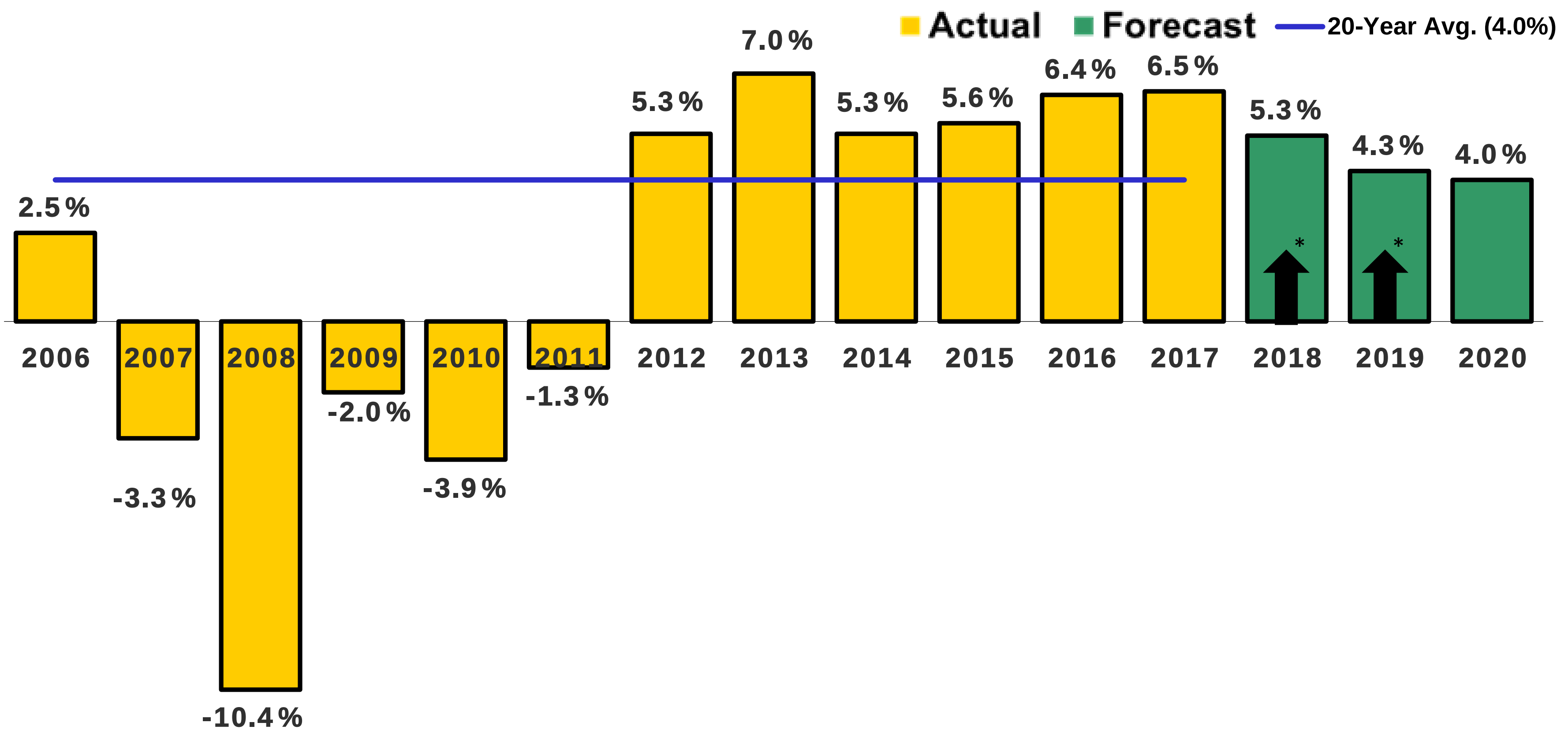
Single-Family Housing Starts



Sources: 1998-2017, (Structures w/ 1 Unit), U.S. Census; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 937,500 and 960,000, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Average Home Price Change



Sources: 1998-2017, (Seasonally Adjusted, December Y/Y), Federal Housing Finance Agency; 2018-2020, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2017. Previous projections were 5.0% and 4.0%, respectively, for 2018 and 2019. (Given the previous forecast period of 2017-2019, and the current forecast period of 2018-2020, comparisons are available for ’18 and ’19).

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Aberdeen Standard Investments	Donald Hall	Head of Americas Investment Research, Real Estate
Alvarez & Marsal	Steven Laposa	Senior Advisor
Barclays	Ross Smotrich	Managing Director
Barings	Mike Gately	Head of Real Estate Research
	Ryan Ma	Managing Director
	TJ Parker	Associate Director
Bentall Kennedy	Douglas Poutasse	Head of Strategy and Research
Berkshire Group	Gleb Nechayev	SVP, Head of Research
CBRE	Richard Barkham	Global Chief Economist
CCIM Institute	Kiernan C. Conway	CCIM Chief Economist
Clarion Partners	Tim Wang	Managing Director & Head of Investment Research
CoreLogic, Inc.	Frank E. Nothaft	Chief Economist
CoStar Portfolio Strategy	Hans Nordby	Managing Director
	Shaw Lupton	Senior Managing Consultant
Cushman & Wakefield	Revathi Greenwood	Head of Americas Research
	Rebecca Rockey	Economist, Head of Forecasting
Deutsche Asset & Wealth Management	Kevin White	Head of Americas Investment Strategy, Alternatives
DWS	Mark Roberts	Head of Research & Strategy, Alternatives

continued…….

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Everest Healthcare and Everhealth, Division of Fosun	David J. Lynn	CEO, President and Founder
Green Street Advisors	Andrew McCulloch	Managing Director
	Peter Rothemund	Senior Analyst
Harrison Street Real Estate Capital	Thomas Errath	Director
Hines	Josh Scoville	Senior Managing Director
JLL	Ryan Severino	Chief Economist, Americas Research
	Josh Gelormini	Vice President, Americas Research
LaSalle Investment Management	William Maher	Director, North America Research & Strategy
	Richard Kleinman	Managing Director, Research & Strateegy
Linneman Associates	Peter Linneman	Principal
MetLife Investment Management	Adam Ruggiero	Head of Real Estate Research
NAREIT	Calvin Schnure	Senior Vice President, Research & Economic Analysis
National Association of REALTORS	Lawrence Yun	Chief Economist
Oxford Economics	Matthew Mowell	Senior Economist
	Aran Ryan	Tourism Economics, Director of Lodging Analytics
	Aedan McCotter	Lead Economist

continued……

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Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
PGIM Real Estate	Lee Menifee	Managing Director, Head Of Americas Investment Research
PNC Financial Services Group	Stuart Hoffman	Senior Economic Advisor
PwC, LLP	Andrew Warren	Director, Real Estate Research
RCLCO	Gadi Kaufmann	Managing Director/CEO
	Taylor Mammen	Managing Director
Reis	Dr. Victor Calanog	Chief Economist & Senior Vice President of Research
	Cody Bond	Economic Analyst
Rosen Consulting Group	Kenneth T. Rosen	Chairman
	Randall Sakamoto	Executive Vice President
Situs RERC	Ken Riggs	President
Stockbridge Associates, LLC	George Casey	CEO
TH Real Estate	Melissa Reagen	Managing Director, Head of Americas Real Estate Research
Trepp, LLC	Matthew Anderson	Managing Director
Whitegate Real Estate Advisors, LLC	Paige Mueller	CEO

Urban Land Institute

About the Urban Land Institute

The Urban Land Institute is a nonprofit education and research institute supported by its members. Its mission is to provide leadership in the responsible use of land and in sustaining and creating thriving communities worldwide. Established in 1936, the Institute has more than 40,000 members representing all aspects of land use and development disciplines. For more information, please visit www.uli.org.

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ULI Real Estate Economic Forecast

A Survey of Leading Real Estate Economists/Analysts

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ULI Center for Capital Markets and Real Estate

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