ULI Real Estate Economic Forecast

A Survey of Leading Real Estate Economists/Analysts

uli.org/economicforecast

April 2019

ULI Center for Capital Markets and Real Estate

Urban Land Institute
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ULI Real Estate Economic Forecast

- Three-year forecast (‘19-’21) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 45 economists/analysts at 33 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 15th survey; completed March 18 – April 10, 2019.
- A semi-annual survey; next release planned for September 2019.
- 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* indicates the following:

- Continued economic expansion over the three forecast years, with growth moderating over that period. For example, GDP growth is forecast at 2.3% in ’19, above the long-term average, but is expected to fall below the long-term average by ’20, at 1.8%. Employment growth is forecast to remain above the long term average throughout the forecast period, but moderate to 1.20 million by 2021, the lowest employment gain in 11 years.

- Relatively high but moderating commercial real estate transaction volumes; continued but moderating commercial price appreciation; continued but moderating rent growth; moderating returns, with the exception of retail returns which improve by ‘21; better than long-term average vacancy/occupancy rates, but with a slight retreat from the tightest recent rates; continued strong single family housing starts but remaining at levels below the long-term average and moderating by ’21.

- Altogether, 15 real estate indicators projected to be better than their 20-year averages in 2019 while 6 are expected to be worse. By 2021, 9 indicators expected to be better than their 20-year average and 14 are expected to be worse. Also, inflation, the 10-year Treasury rate and the NCRIEF capitalization rate are projected to be below their long-term averages in both ‘19 and ‘21.

Forecasts vs. Long-Term Averages

2019 Forecast

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

2021 Forecast

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

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Key Findings

- Transaction volume reached $562 billion in 2018, nearing the post-recession high of $570 billion in 2015. Annual volume is forecast to moderate during the forecast period to $535 billion in ’19, $500 billion in ‘20, and $480 billion in ‘21. Still, these are among 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, has rebounded since a low in ‘09 but to a much lower level than pre-recession. Issuance is forecast to slightly decline throughout the forecast period at $80 billion in ‘19, $75 billion in ‘20, and $70 billion in ‘21.

- Commercial real estate prices are projected to grow at slowing rates relative to recent years, at 5.0% in ‘19, 3.7% in ’20, and 2.8% in ‘21, with the latter two years falling below the long-term average growth rate of 4.4% for the first time since 2011.

- Institutional real estate assets are expected to provide total returns of 6.0% in ‘19, moderating to 5.0% in both ‘20 and ‘21. By property type, 2019 returns are forecast to range from industrial’s 10.3% to retail’s 2.9%. In ‘21, returns are forecast to range from industrial’s 7.0% to retail’s 3.8%.

- Both industrial and office vacancy rates are expected to slightly decrease in 2019 from their ‘18 rates, before edging up in both ‘20 and ‘21. Both apartment and retail availability rates are expected to see slight increases throughout the forecast period. The hotel occupancy rate is forecast to plateau in ’19, before edging down in ’20 and ‘21.

- Commercial property rent growth is expected to continue in the next three years in all sectors, although at decelerating rates. In 2019, rent increases will range from 3.8% for industrial to 1.5% for retail. Rent increases in 2021 will range from 2.4% for industrial to 1.0% for retail. Hotel RevPAR is expected to increase by 2.5% in 2019 and by 1.0% in 2020.

- Single-family housing starts are projected to increase from their 2018 level of 870,600 units to 900,000 in ’19 which would complete eight straight years of growth, bringing annual starts to their highest level since 2007. Starts are then projected to moderate somewhat to 888,000 in ’20 and 850,000 in ‘21.

Economy

- The economists/analysts expect continued strong economic expansion in 2019, although at a slower rate than 2018's post-recession high (also reached in 2015), with further moderated growth in '20 and '21. Employment growth, expected to be strong in '19 although lower than in the previous seven years, is projected to further slow over the following two years; still, the unemployment rate remains well below the long-term average during the forecast period.

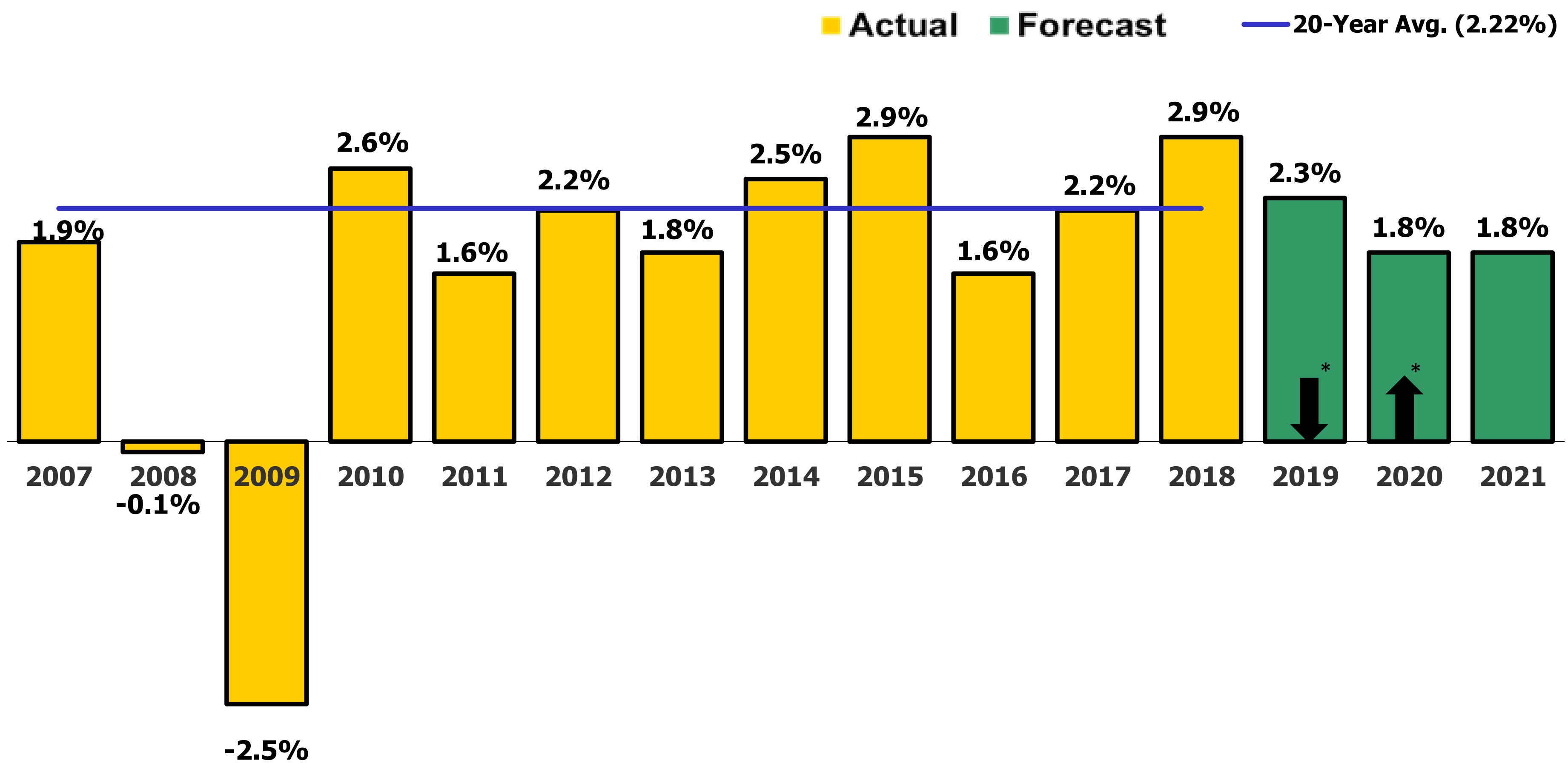
- GDP growth strengthened to 2.9% in 2018, up from the 2.2% growth in '17. Growth rates are forecast to moderate to 2.3% in '19 and plateau at 1.8% in '20, and '21.

- Employment growth is expected to moderate from the 2.67 million jobs added in 2018 to 2.10 million jobs in '19, 1.42 million in '20, and 1.20 million in '21.

- The unemployment rate is expected to continue its nine-year decline in 2019, reaching 3.7% by the end of that year before reversing and ticking up to 3.9% in '20 and 4.3% in '21.

- Compared to forecasts of 6 months ago, the forecast for GDP is less optimistic for '19, but more optimistic for '20. The unemployment rate and employment growth forecasts are both more optimistic for both '19 and '20.

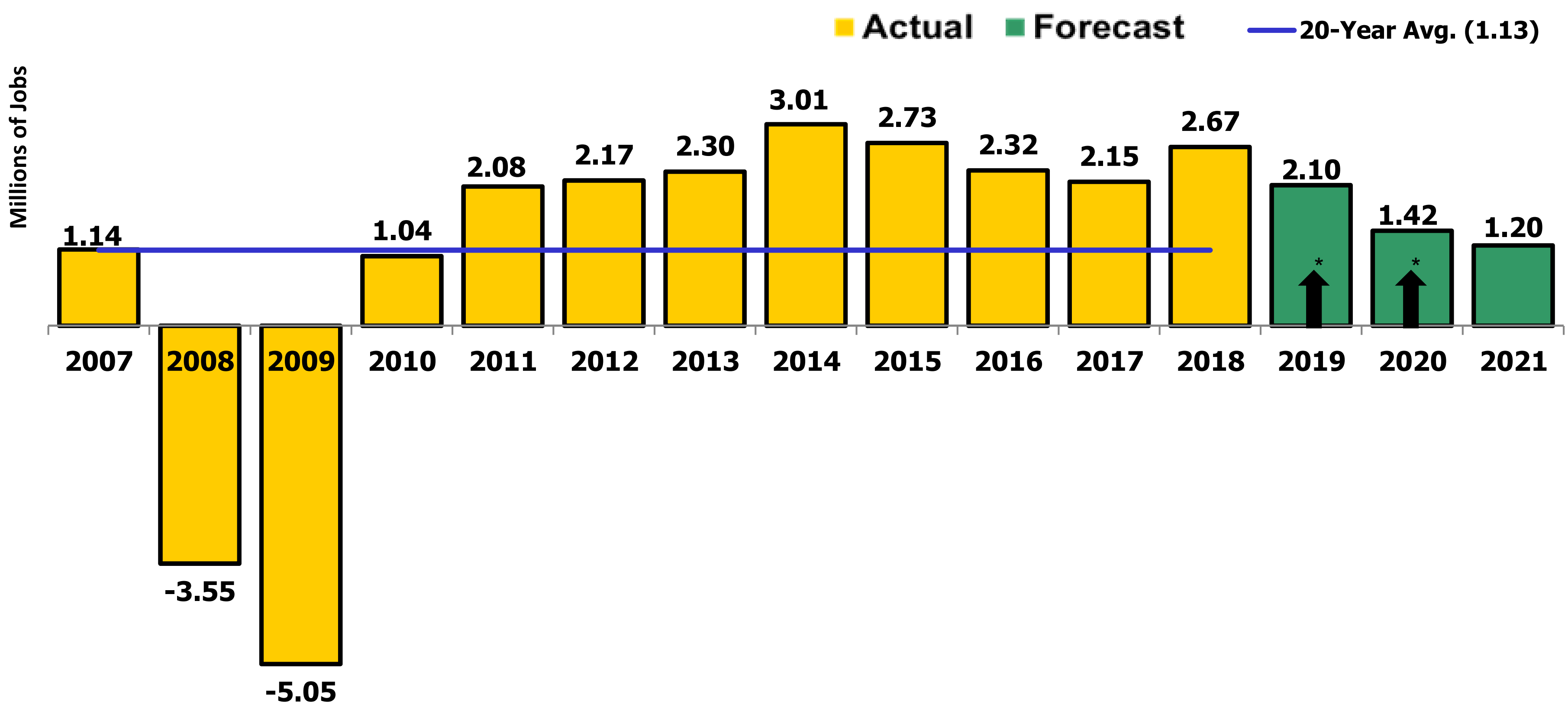
Real GDP Growth



Sources: 1999-2018, Bureau of Economic Analysis; 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 2.5% and 1.7%, respectively, for 2019 and 2020.

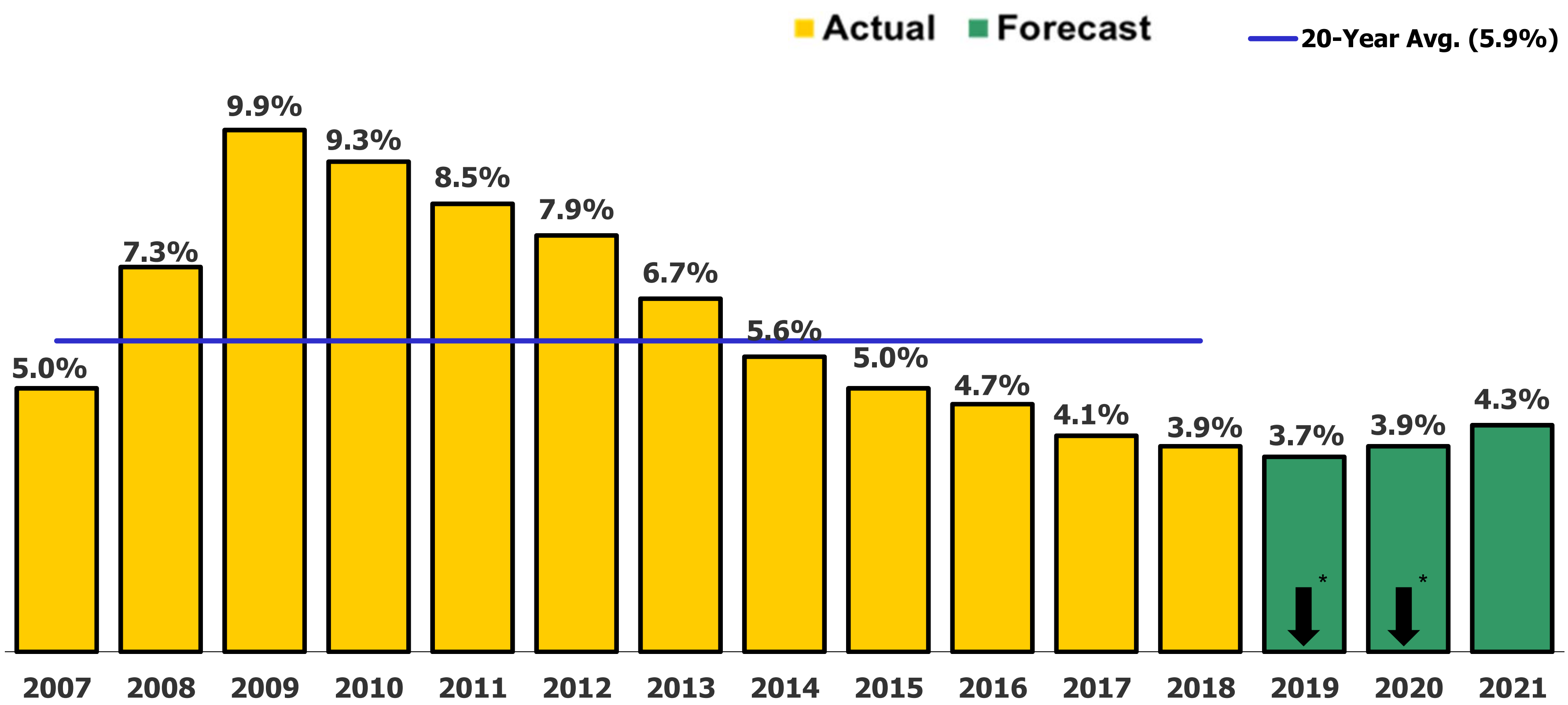
Employment Growth



Sources: 1999-2018, Bureau of Labor Statistics; 2019-2021 ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 1.90 and 1.00, respectively, for 2019 and 2020.

Unemployment Rate



Sources: 1999-2018, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2019-2021 (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, 2018. Previous projections were 3.8% and 4.0%, respectively, for 2019 and 2020.

Inflation, Interest Rates, and Cap Rates

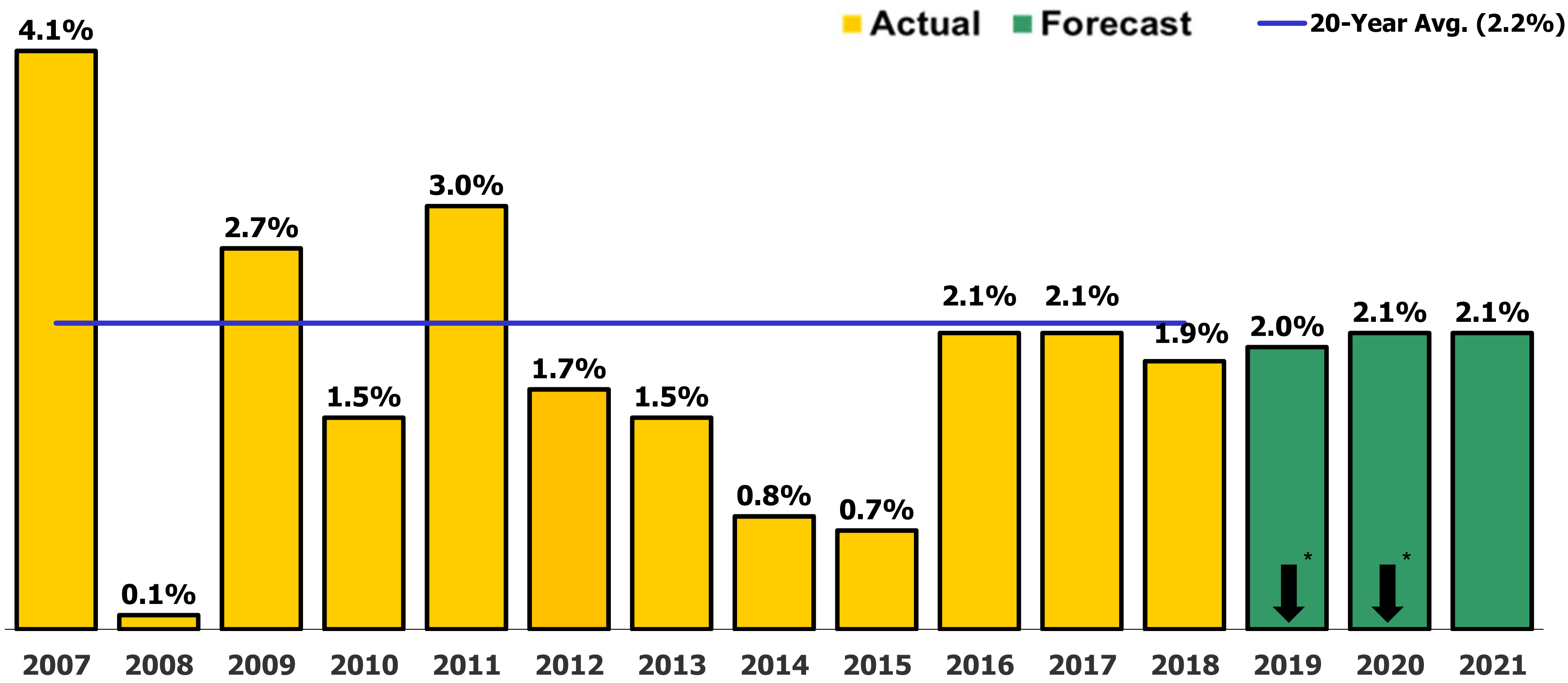
- The CPI inflation rate has remained below the 20-year average of 2.2% for the past 7 years and is expected to remain so over the forecast period. The CPI was 1.9% in 2018; it is projected to tick up to 2.0% in ‘19 and plateau at 2.1% in ‘20 and ‘21.

- The ten-year treasury rate has remained below the 20-year average of 3.5% for 10 years and is also expected to remain so over the forecast period. The ten-year treasury rate was 2.7% year-end ’18; it is expected to increase slightly to 2.8% in ‘19 and plateau at 2.9% in ‘20 and ‘21.

- Capitalization rates for institutional-quality investments (NCREIF cap rates) have steadily declined since 2009, and were at 4.8% in ‘18. They are expected to remain at 4.8% in ’19 before edging up to 5.0% in ‘20 and 5.2% in ‘21.

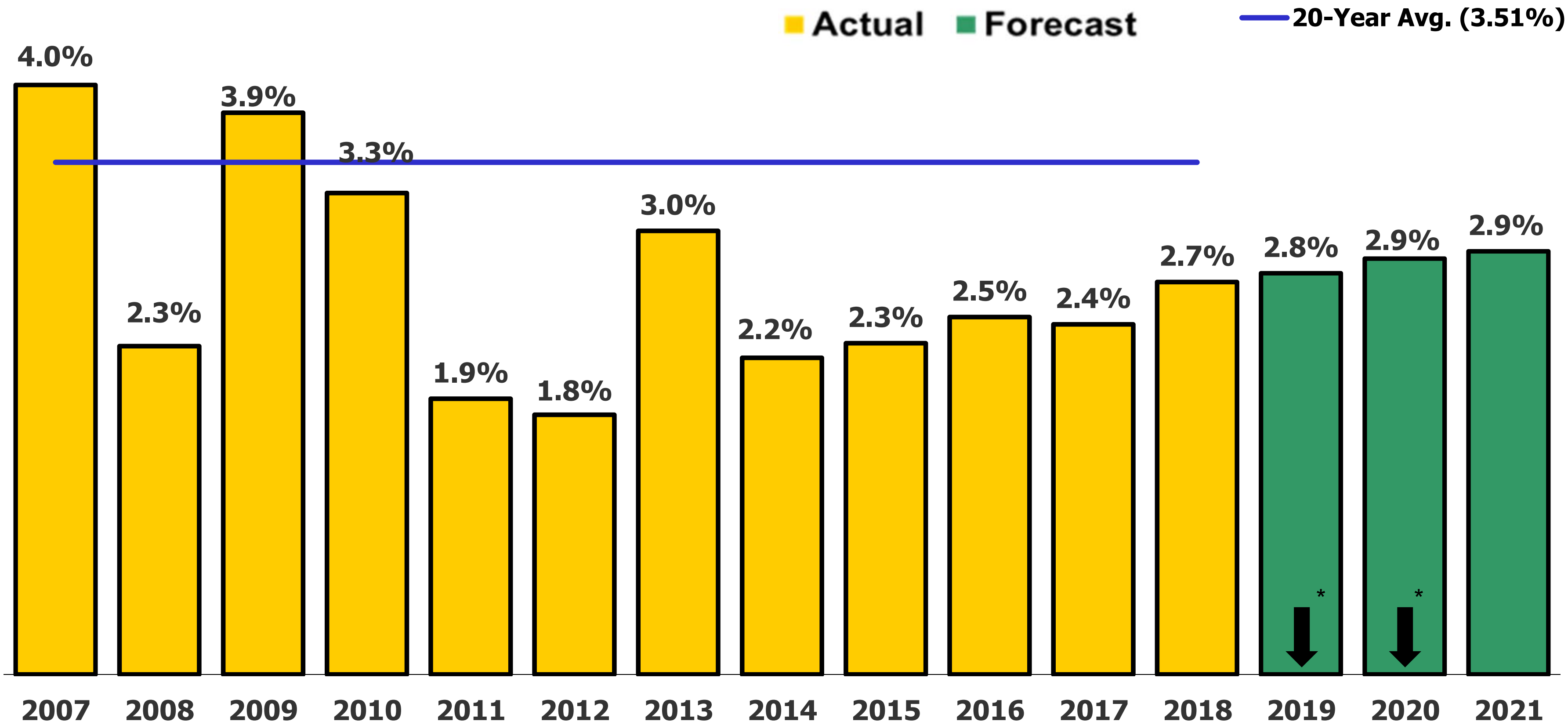
- Compared to the forecast from 6 months ago, the forecasts for the CPI inflation rate, ten-year treasury rate, and NCREIF cap rate are all expected to be lower in both ‘19 and ‘20.

Consumer Price Index Inflation Rate



Sources: 1999-2018, (12-month change, as of December), Bureau of Labor Statistics; 2019-2021 (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, 2018. Previous projections were 2.5% and 2.4%, respectively, for 2019 and 2020.

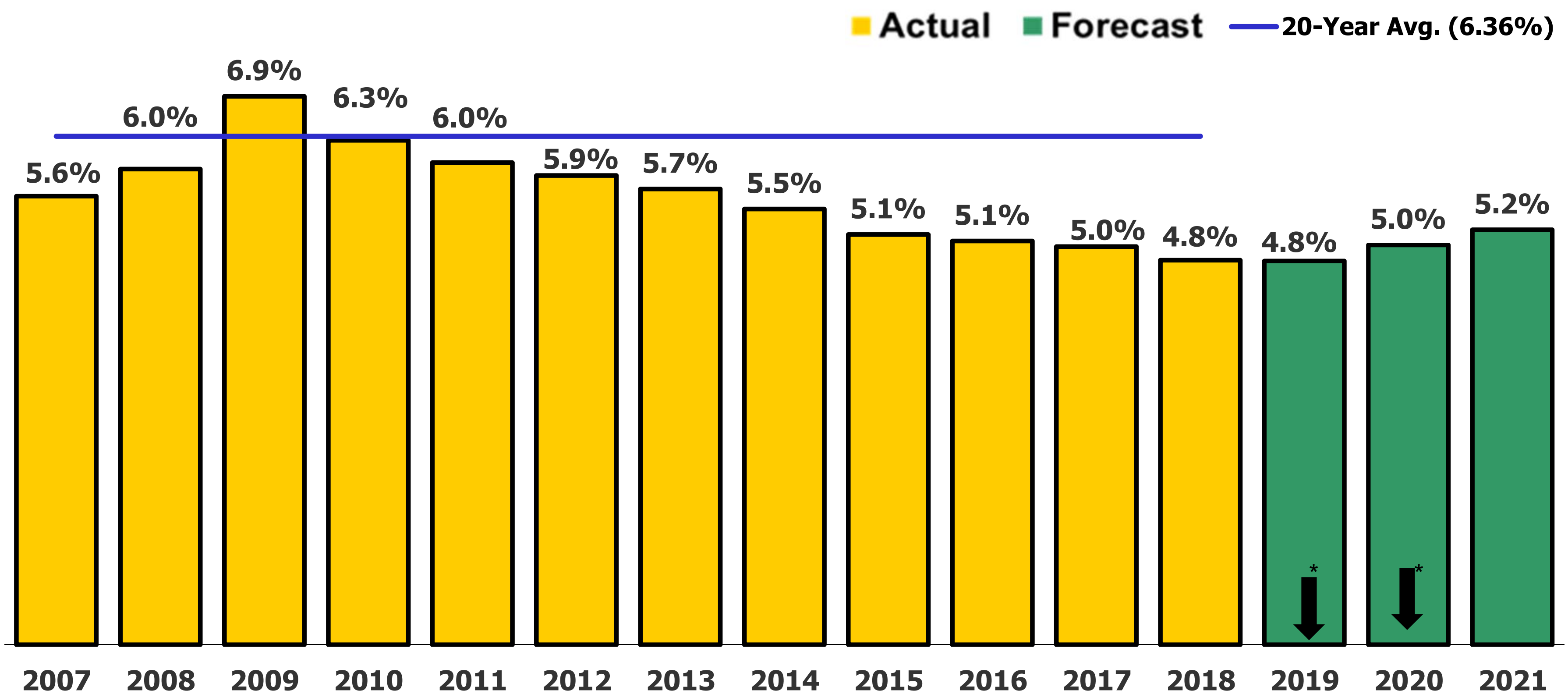
Ten-Year Treasury Rate



Sources: 1999-2018 (YE), U.S. Federal Reserve; 2019-2021 (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, 2018. Previous projections were 3.3% and 3.5%, respectively, for 2019 and 2020.

NCREIF Capitalization Rate



Sources: 1999-2018, (Q4), National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021 (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, 2018. Previous projections were 5.1% and 5.3%, respectively, for 2019 and 2020.

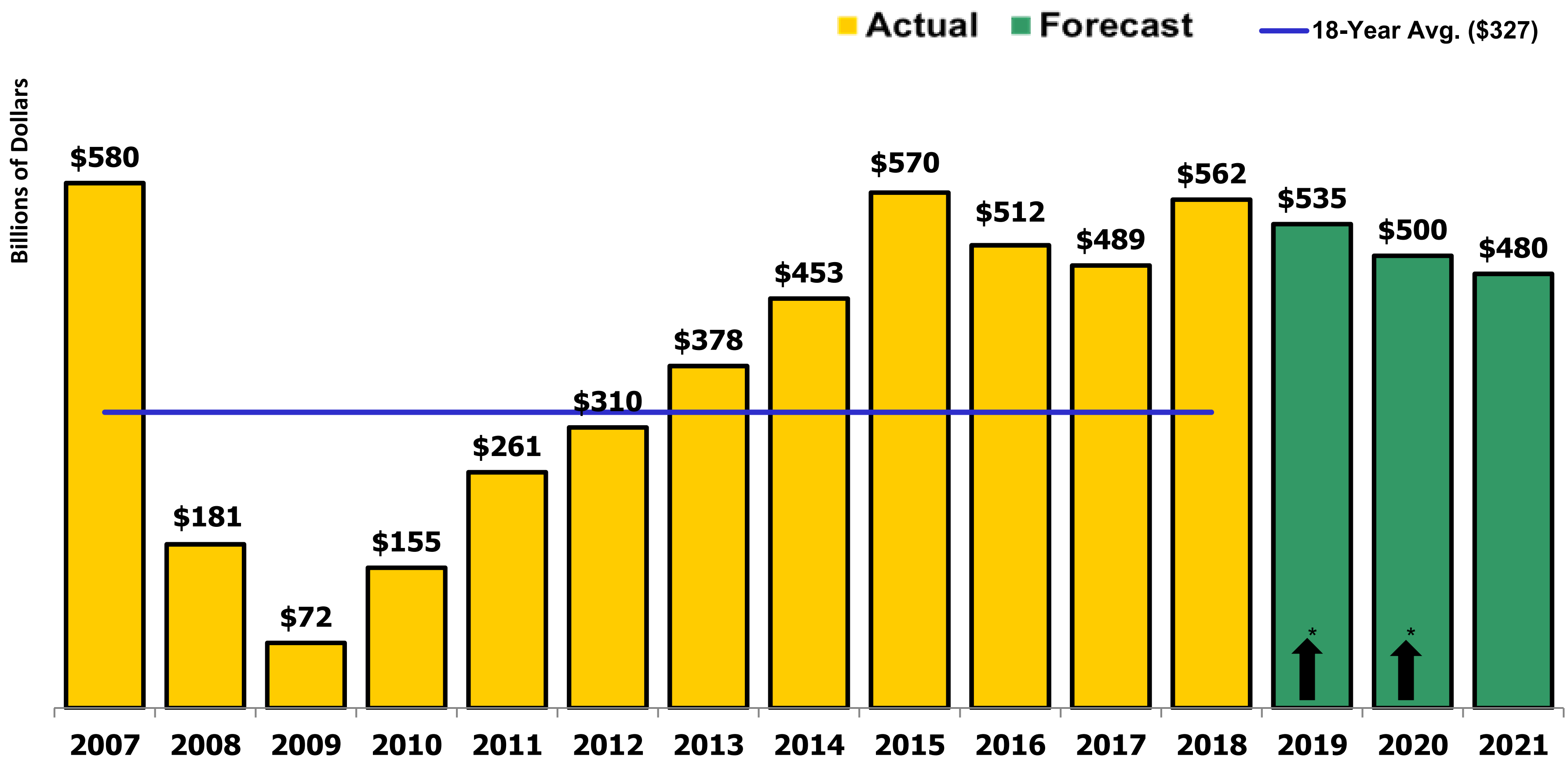
Real Estate Capital Markets

- Commercial real estate transaction volume reached $562 billion in 2018, second only to the post-recession peak of $570 billion in 2015. Volume is expected to moderate in the forecast years to $535 billion in '19, $500 billion in '20, and $480 billion in '21. Despite these projected declines, volumes remain substantially above the 18-year annual average of $327 billion.

- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate, has rebounded since a low in 2009 but at a much lower level than pre-recession levels. CMBS issuance is expected to be $80 billion in '19, $75 billion in '20, and $70 billion in '21.

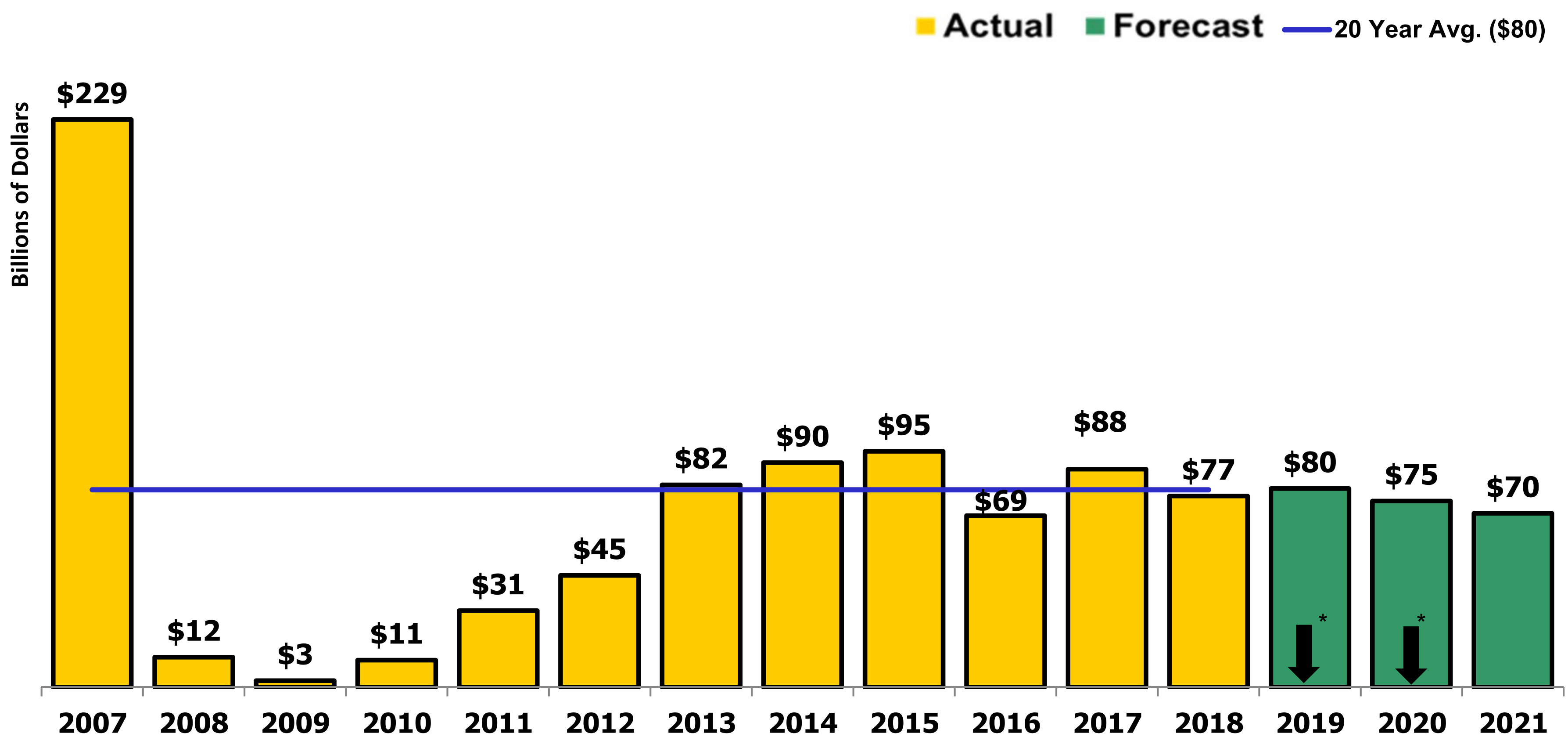
- Compared to the forecasts of 6 months ago for '19 and '20, the current forecast for transaction volume for both years is higher, while the current forecast for CMBS issuance is lower.

Commercial Real Estate Transaction Volume



Sources: 2001-2018, Real Capital Analytics; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were $450 and $415, respectively, for 2019 and 2020.

Commercial Mortgage-Backed Securities (CMBS) Issuance



Sources: 1999-2018, Commercial Mortgage Alert; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were $88 and $80, respectively, for 2019 and 2020.

Real Estate Returns and Prices

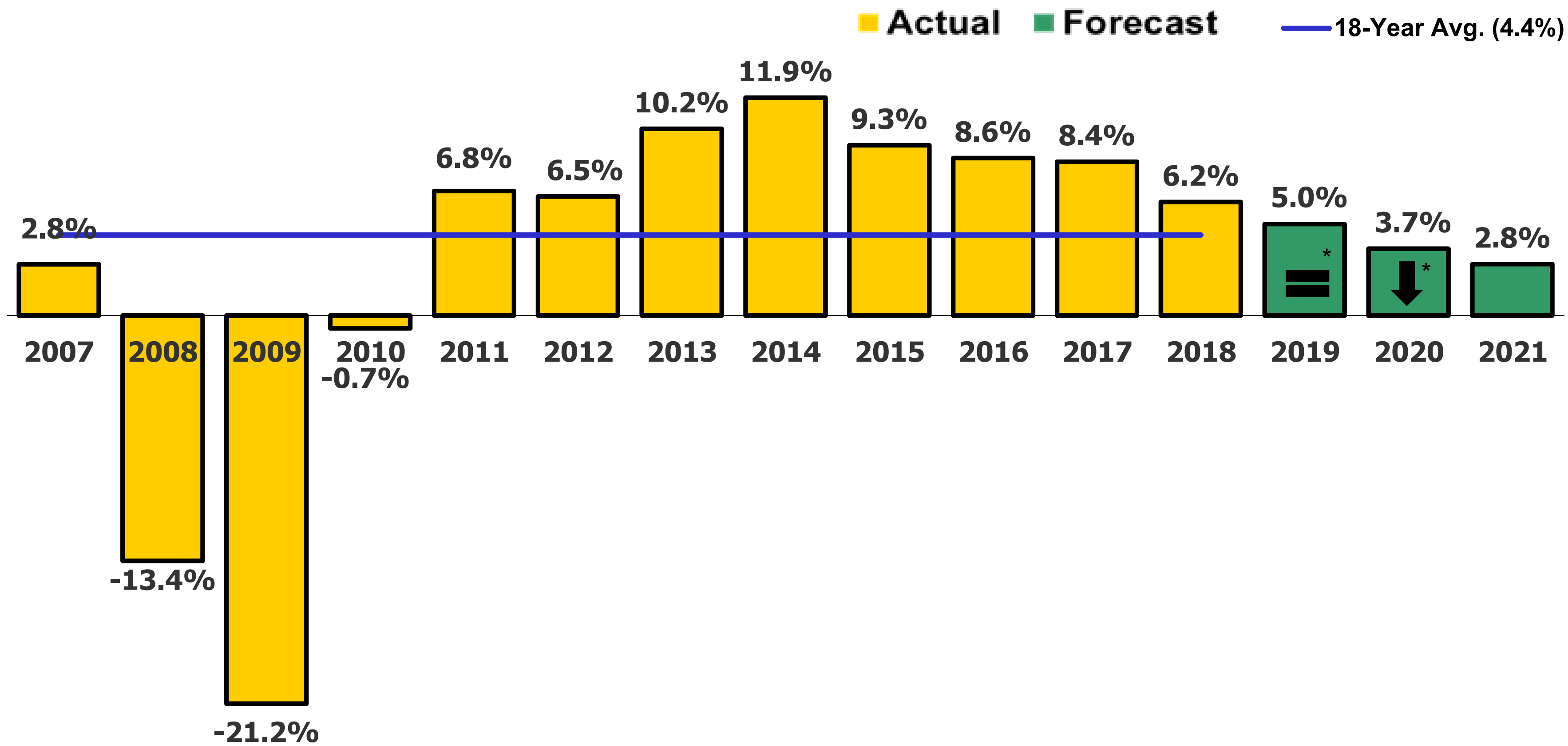
- The RCA Commercial Property Price Index (CPPI) has had some recent high growth years. Prices are expected to continue to grow, although at slowing rates in the next three years, at 5.0% in 2019, 3.7% in ’20, and 2.8% in ’21. The growth rate in 2020 dips below the long-term average of 4.4% for the first time in 10 years.

- Equity REIT total returns in 2018, according to NAREIT, were negative for the first time since 2008 at -4.6%. Future returns are expected to be positive—6.0% in ’19, 5.3% in ‘20, and 5.8% in ’21—but remain below the long-term average of 11.6%.

- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index (NPI), was positive for the ninth straight year in 2018 at 6.7%, though it was below the long-term average of 9.3% for the third straight year. This trend is expected to continue over the forecast period, with further decelerating returns of 6.0% in ‘19, and 5.0% in ’20 and ‘21.

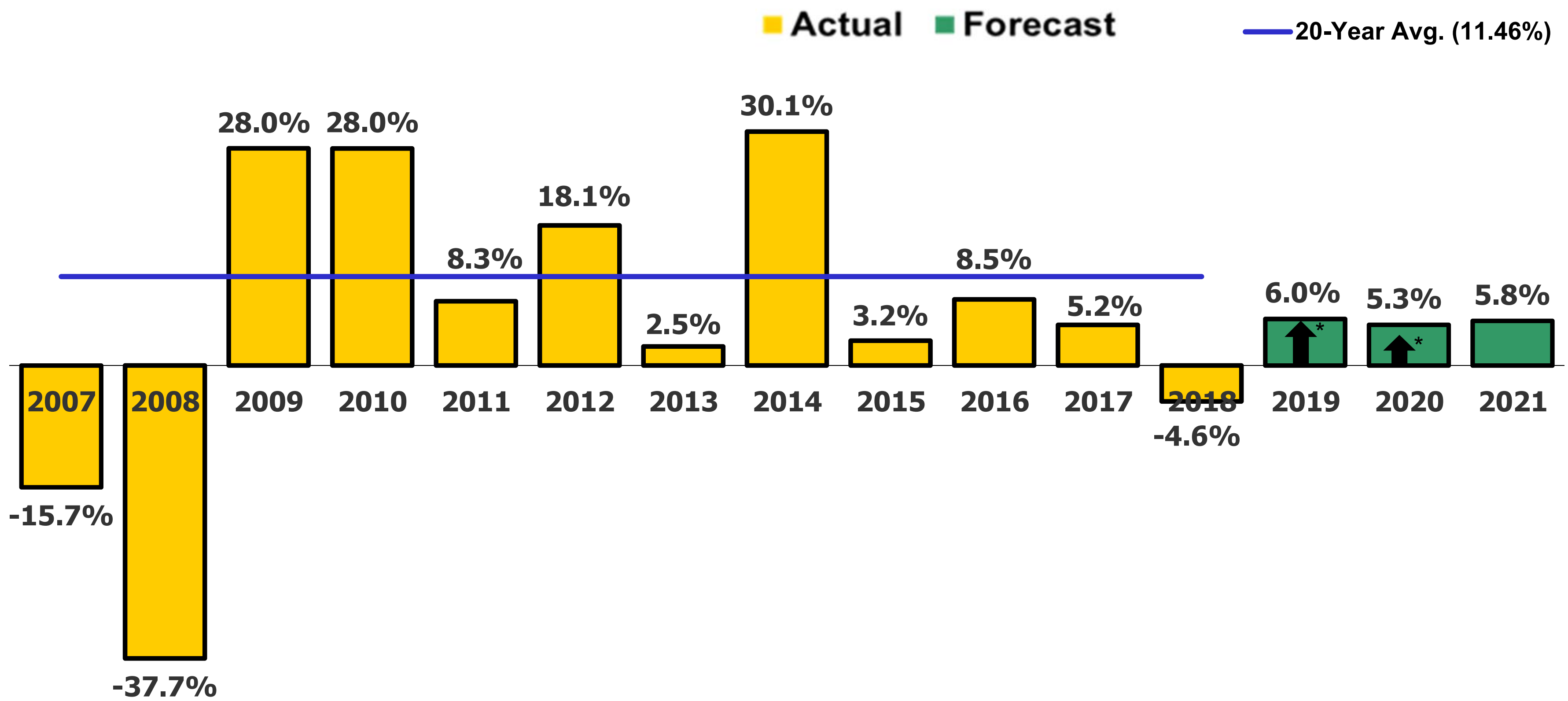
- Compared to the forecasts of 6 months ago, the forecasts for CPPI growth are unchanged for 2019 and less optimistic for ‘20. The REIT returns are more optimistic for all both ‘19 and ‘20, while NCREIF total returns forecasts are unchanged for both ‘19 and ‘20.

RCA Commercial Property Price Index (annual change)



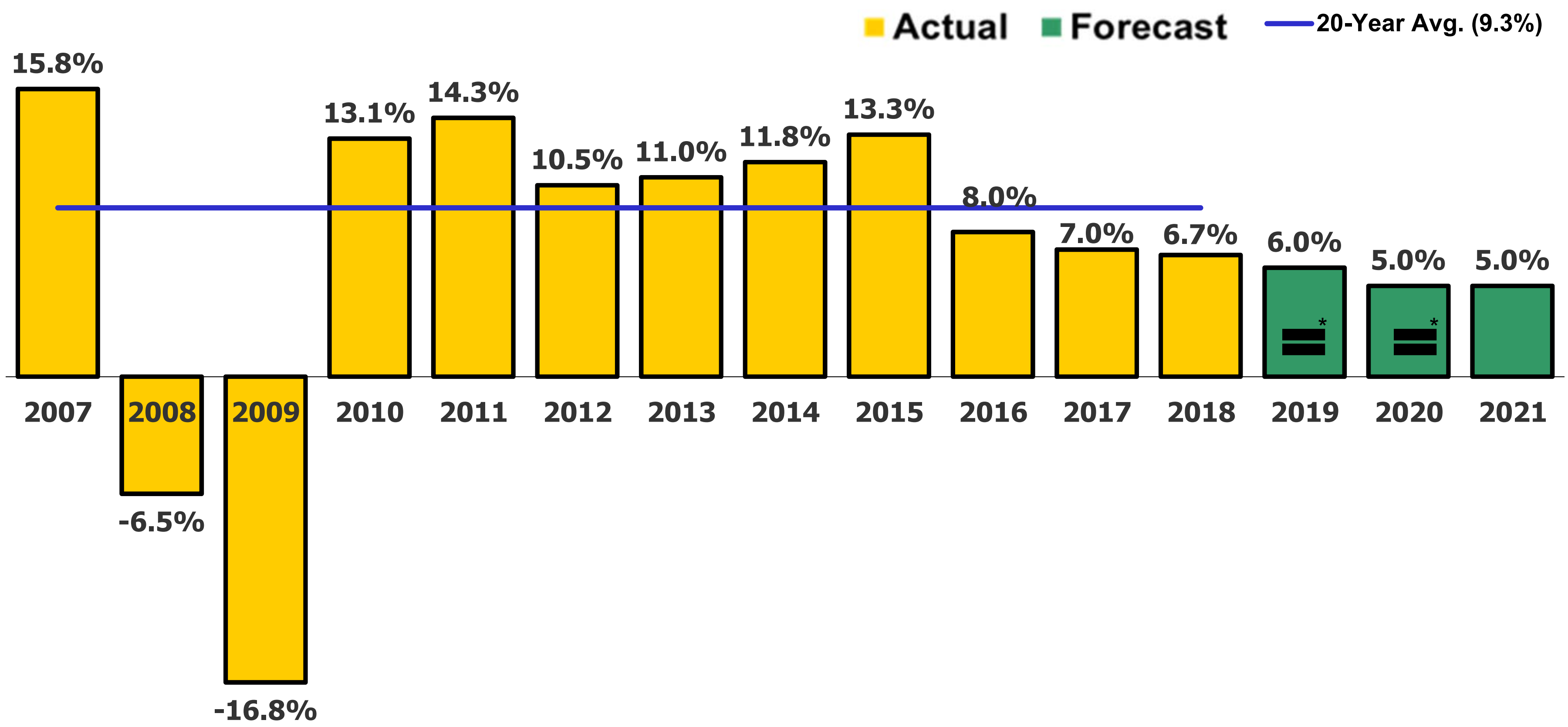
Sources: 2001-2018, Real Capital Analytics; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 5.0% and 4.0%, respectively, for 2019 and 2020.

Equity REIT Total Annual Returns



Sources: 1999-2018, National Association of Real Estate Investment Trusts; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 4.0% and 4.2%, respectively, for 2019 and 2020.

NCREIF Total Annual Returns



Sources: 1999-2018 National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 6.0% and 5.0%, respectively, for 2019 and 2020.

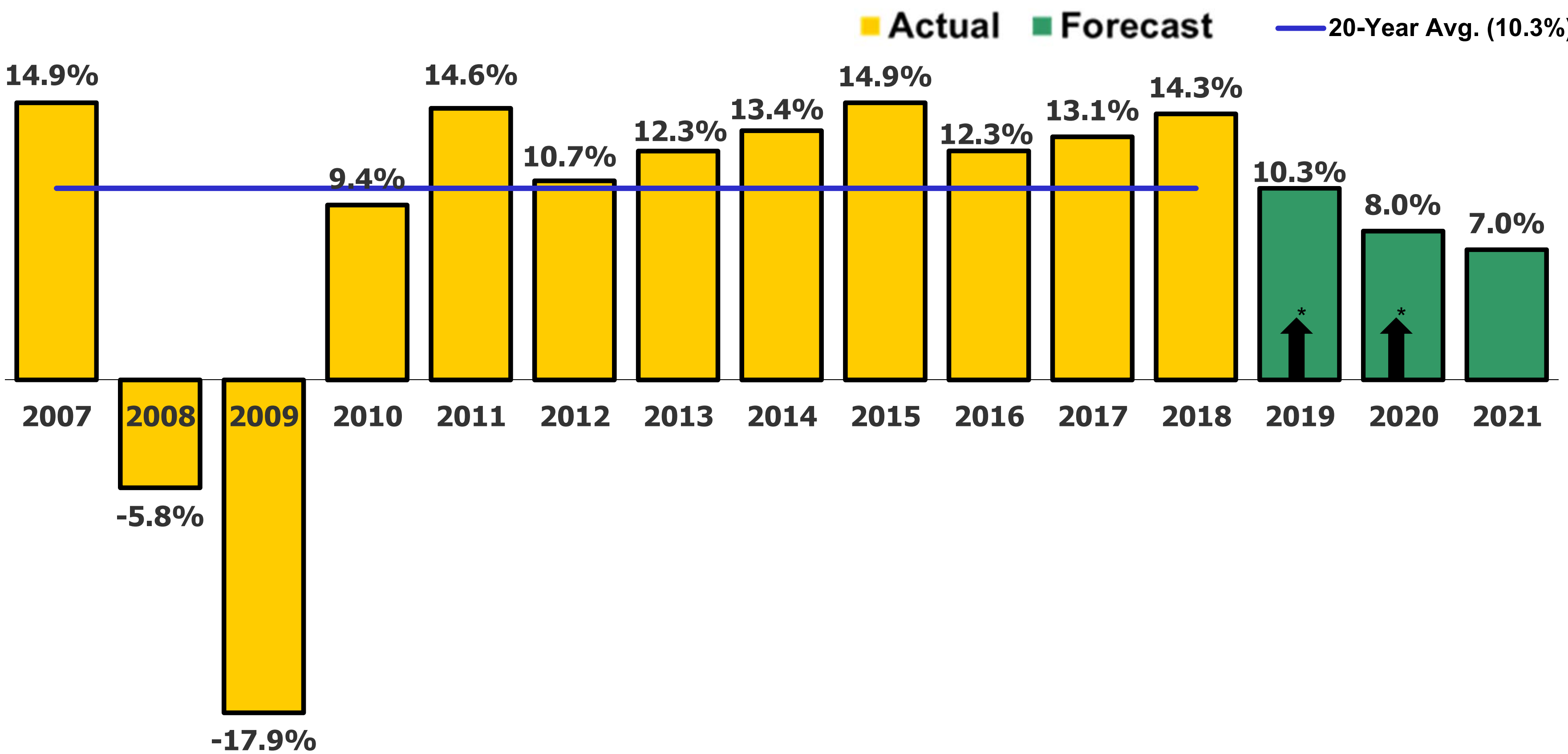
NCREIF Returns by Property Type

- NCREIF total returns in 2019 for the industrial, apartment, and office sectors are expected to moderate relative to returns in '18, while retail is expected to see higher returns in '19. By property type, 2019 returns for the industrial sector are forecast at 10.3%, followed by office returns and apartment returns both at 6.0%, and retail returns at 2.9%.

- By 2021, industrial, apartment, and office returns are expected to further moderate, with industrial returns forecast at 7.0%, apartment returns at 5.4%, and office returns at 4.7%, while retail returns are expected to rise to 3.8%.

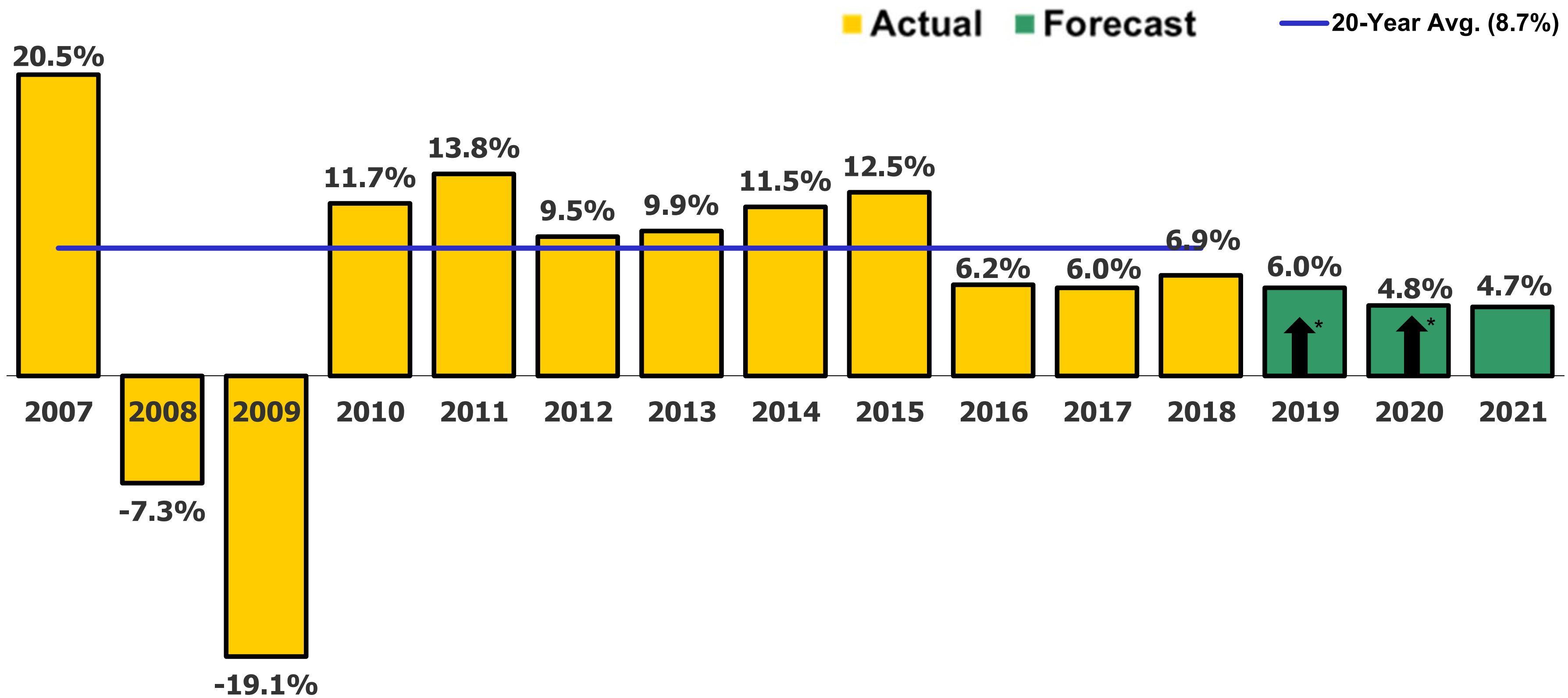
- Compared to 6 months ago, forecasts for both '19 and '20 are more optimistic for the industrial, apartment, and office sectors and less optimistic for retail.

NCREIF Industrial Total Annual Returns



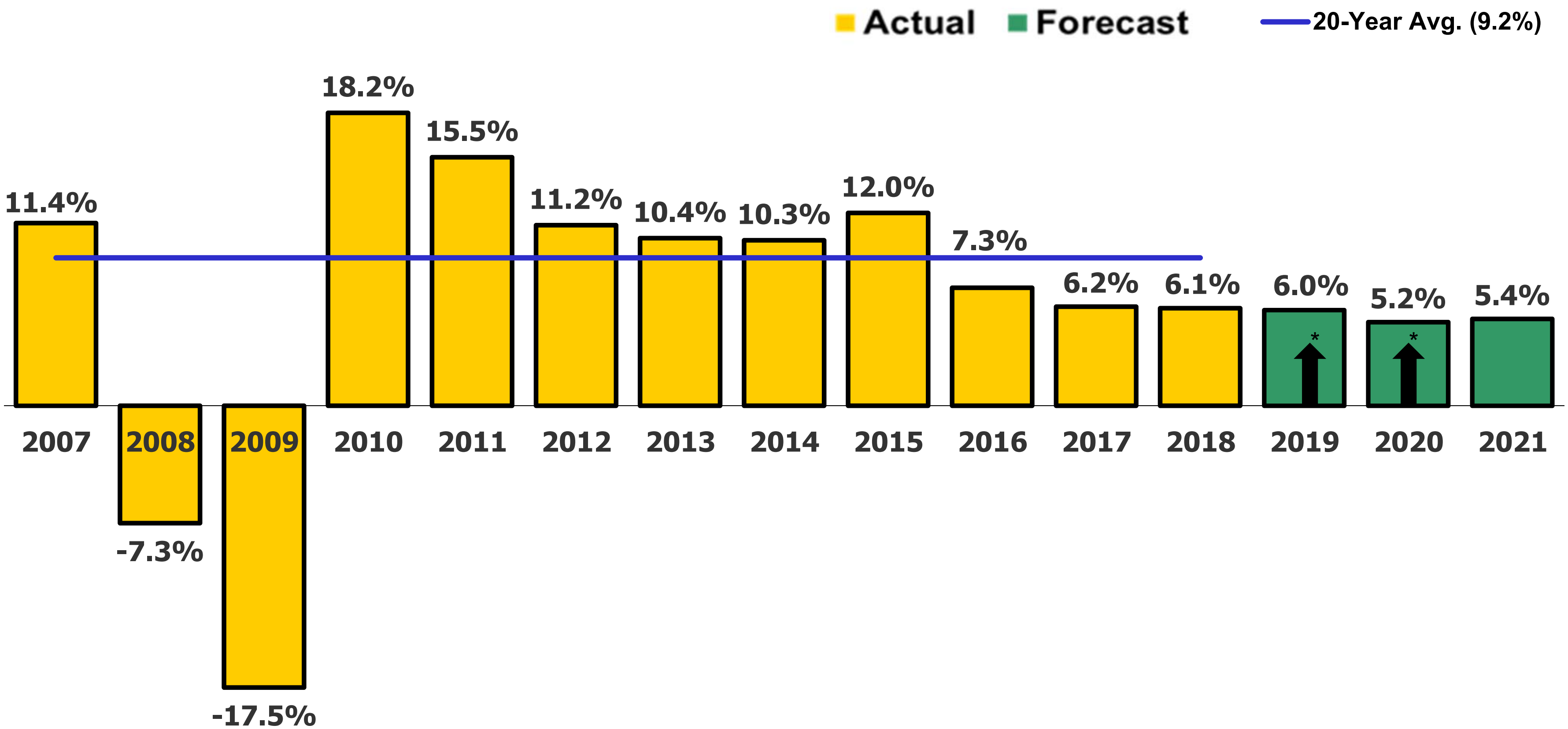
Sources: 1999-2018, National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 9.0% and 7.2%, respectively, for 2019 and 2020.

NCREIF Office Total Annual Returns



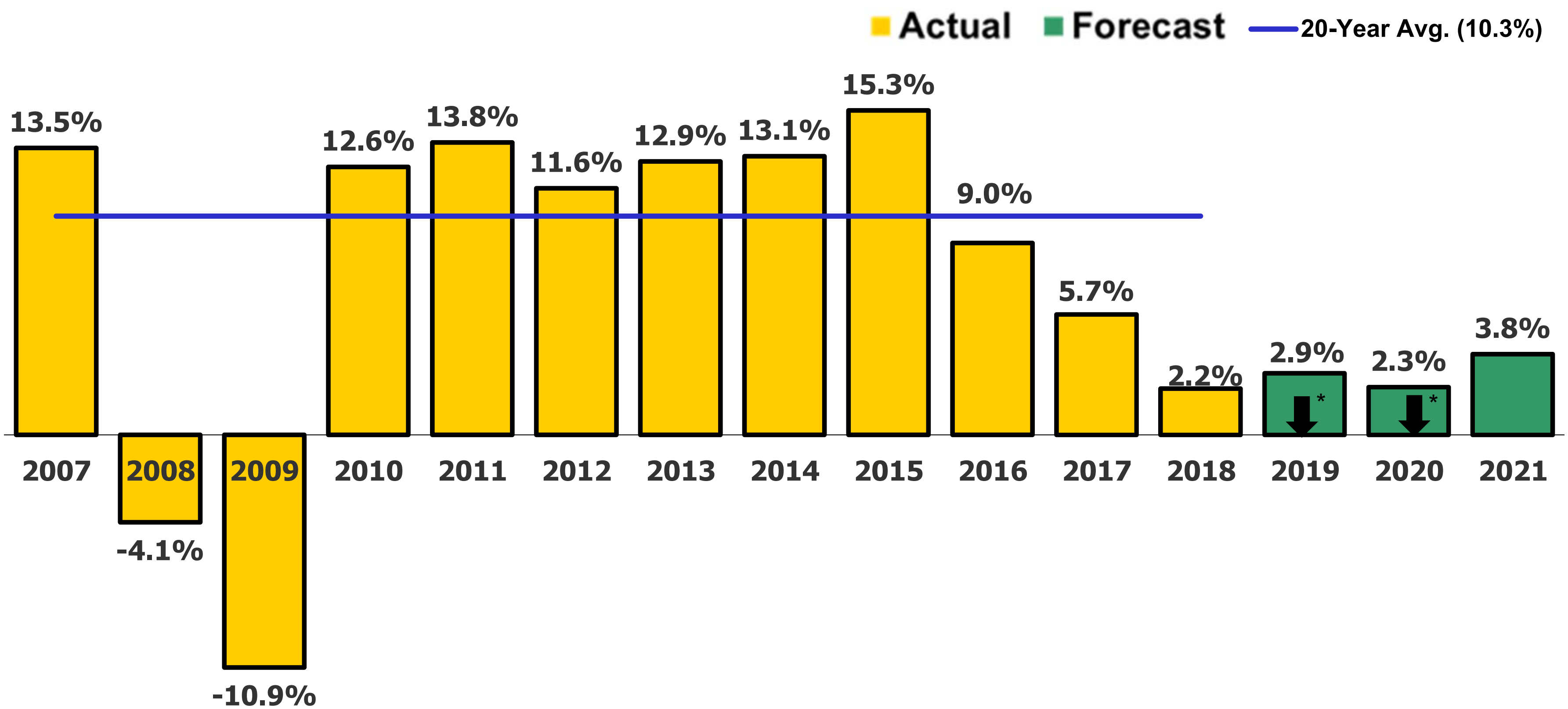
Sources: 1999-2018, National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 5.4% and 4.0%, respectively, for 2019 and 2020.

NCREIF Apartment Total Annual Returns



Sources: 1999-2018, National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 5.5% and 5.0%, respectively, for 2019 and 2020.

NCREIF Retail Total Annual Returns



Sources: 1999-2018, National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 4.0% and 3.9%, respectively, for 2019 and 2020.

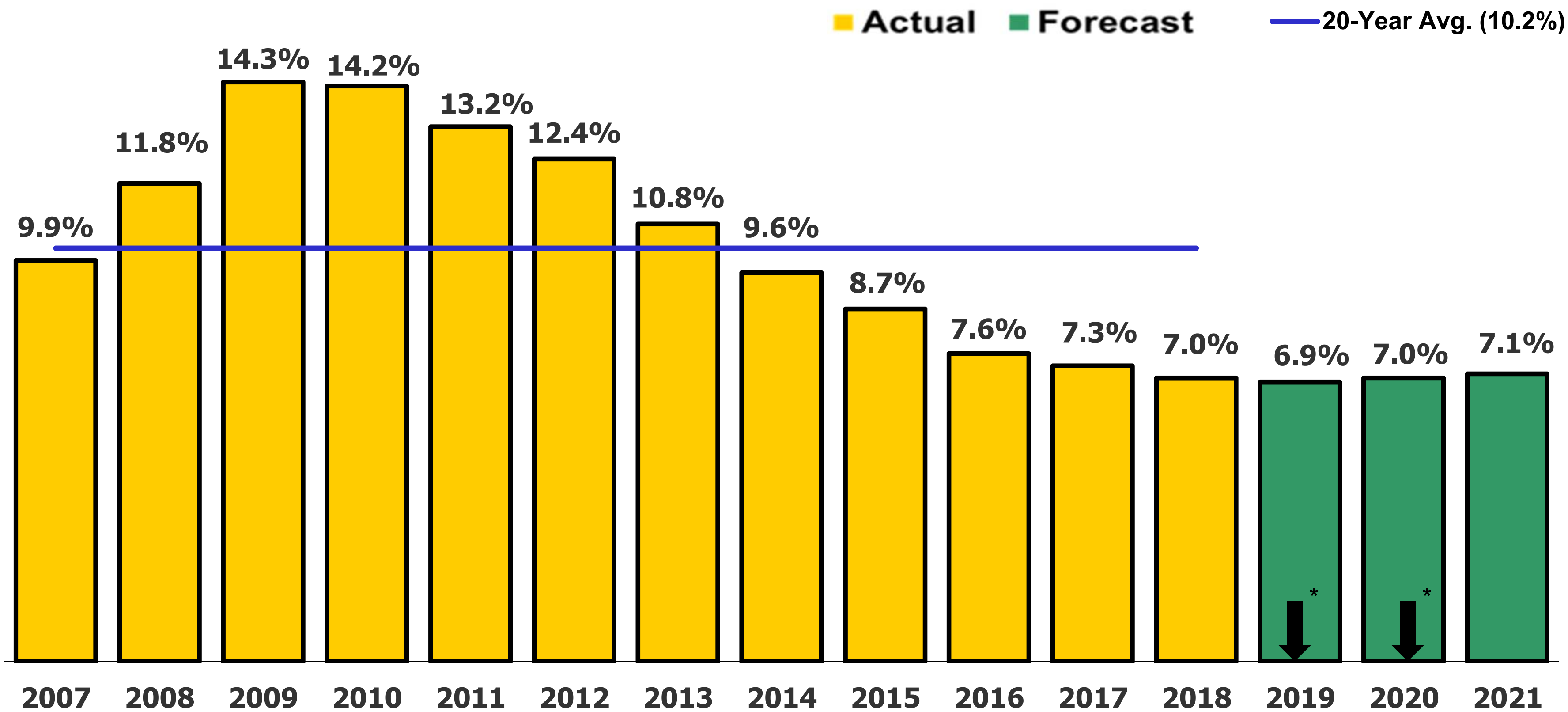
Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector declined for the ninth straight year in 2018, to 7.0%. Availability rates are expected to reach a new post-recession low in '19 of 6.9%, before ticking up to 7.0% in '20 and 7.1% in '21. Rates in all three forecast years are projected to remain well below the 20-year average.

- Warehouse rental rate growth in the last six years has been substantially above the long-term average of 1.3%. Healthy growth is expected to continue in the forecast years, although at moderating rates, with increases of 3.8% in 2019, 3.0% in '20, and 2.4% in '21.

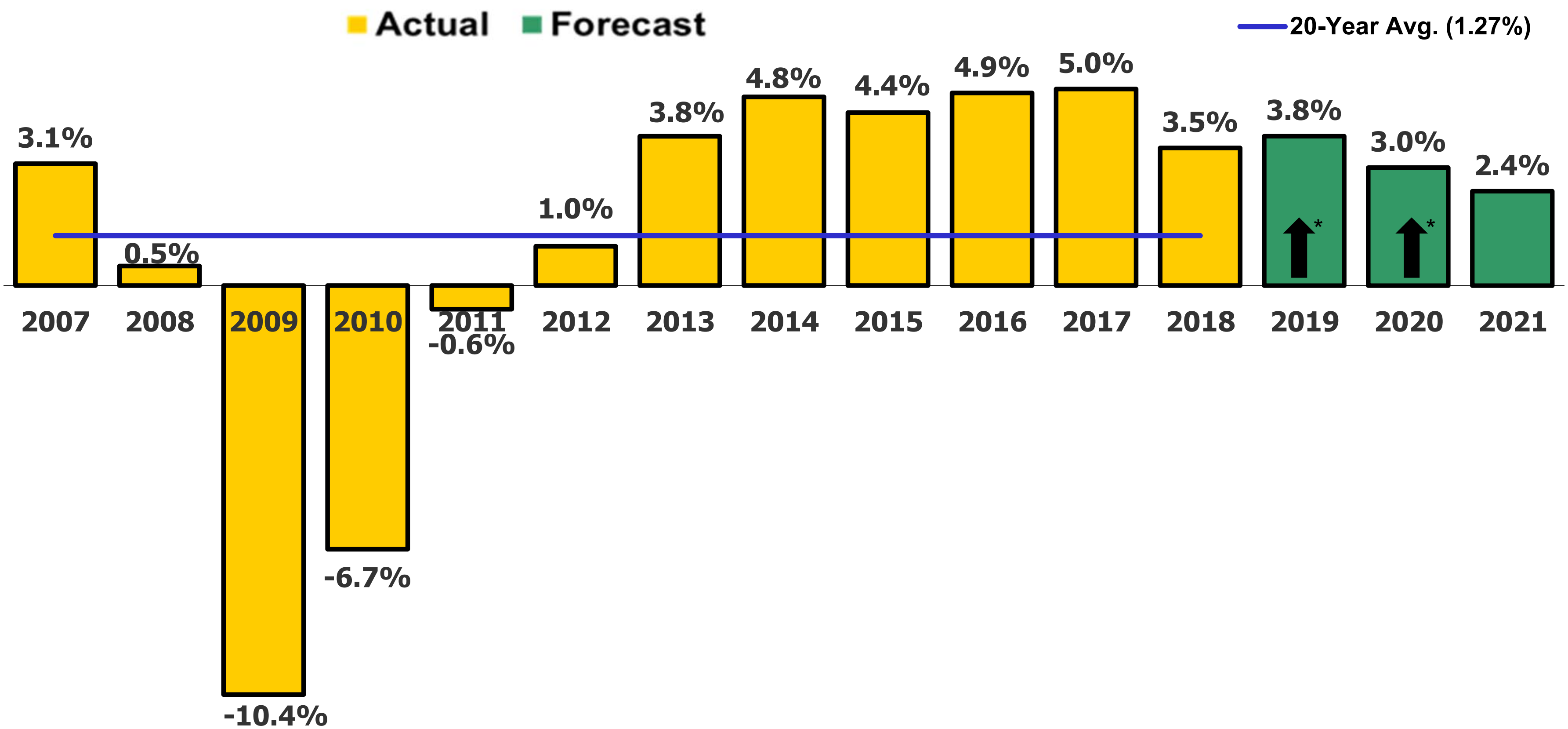
- Compared to the forecast from six months ago, the forecasts for both industrial/warehouse availability rates and rental rate growth are more optimistic in both '19 and '20.

Industrial/Warehouse Availability Rates



Sources: 1999-2018 (Q4), CBRE; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 7.3% and 7.5%, respectively, for 2019 and 2020.

Industrial/Warehouse Rental Rate Change



Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 3.3% and 2.4%, respectively, for 2019 and 2020.

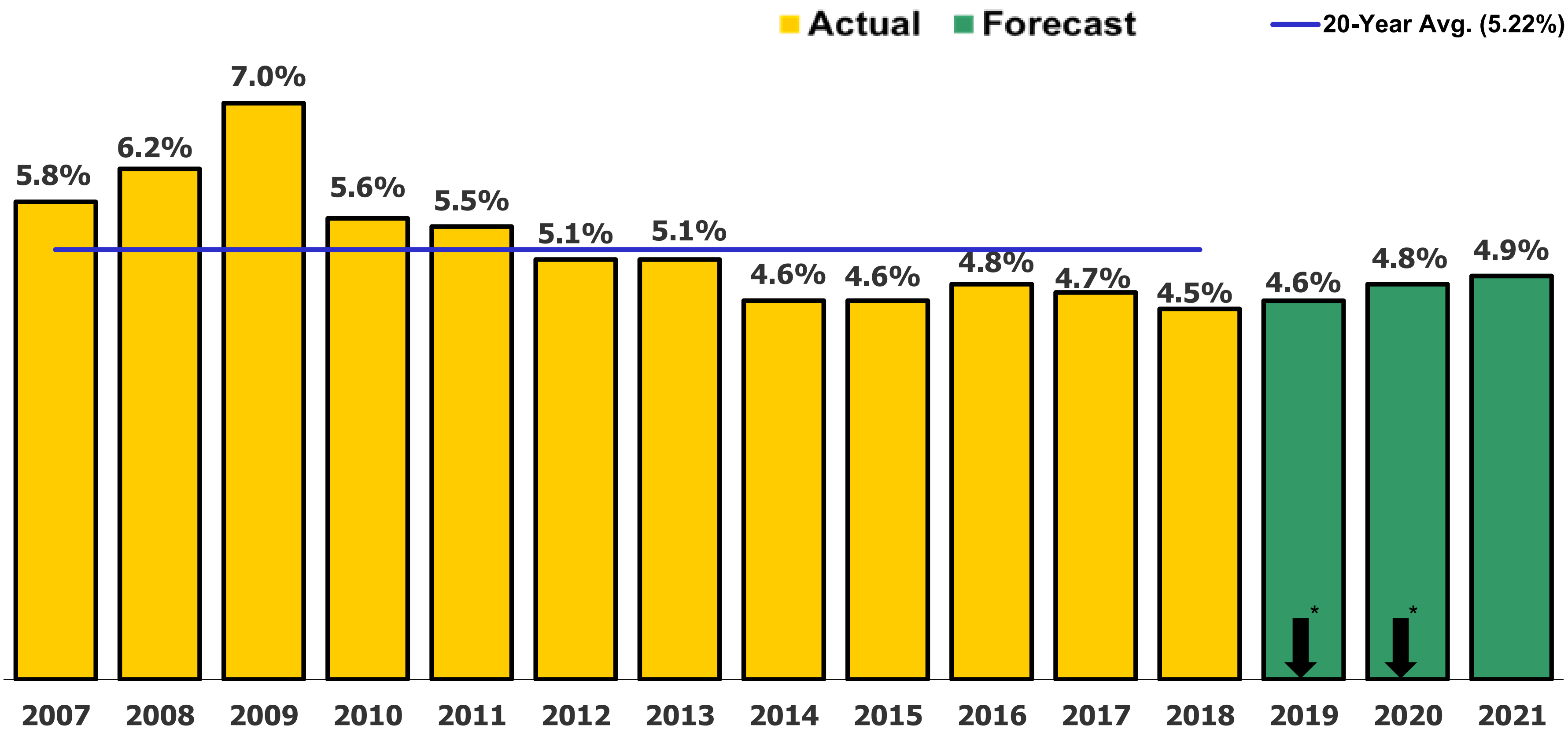
Apartment Sector Fundamentals

- Even with continued strong construction activity over the past decade, the apartment sector has continued to perform very well, with vacancy rates decreasing fairly steadily from 7.0% in 2009 to 4.5% in ‘18. Vacancy rates are expected to increase slightly each year of the forecast period, to 4.6% in ’19, 4.8% in ‘20 and 4.9% in ’21, still all below the long-term average.

- Rental rate growth, which has averaged just above the long-term average of 2.4% over the last three years, is expected to average just at the long-term average during the forecast period, moderating from 2.6% in ’19 to 2.3% in ’20 and 2.2% in ‘21.

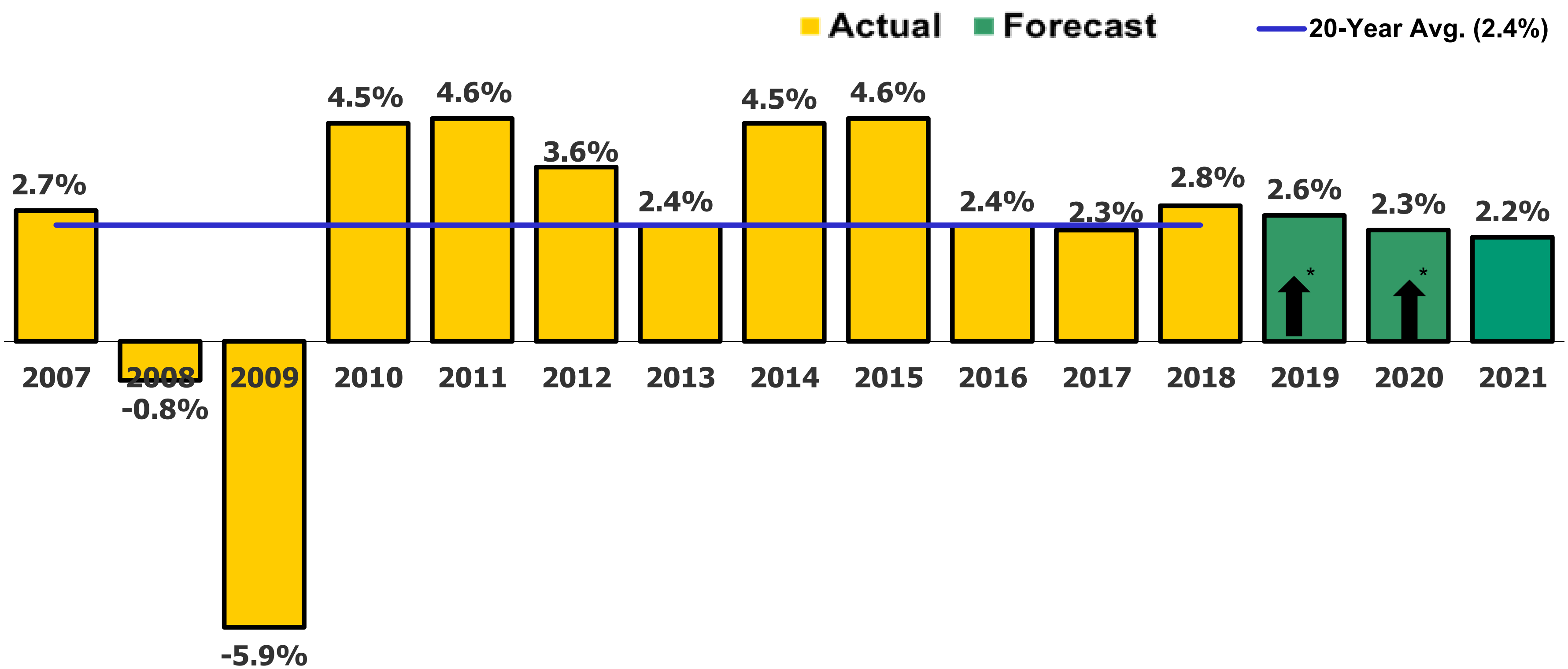
- Compared to 6 months ago, the forecasts for both vacancy rates and rental rate growth are more optimistic for both ’19 and ‘20.

Apartment Vacancy Rates



Sources: 1999-2018 (Q4), CBRE; 2019-2021 (Q4), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 5.0% and 5.2%, respectively, for 2019 and 2020.

Apartment Rental Rate Change



Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 2.5% and 2.0%, respectively, for 2019 and 2020.

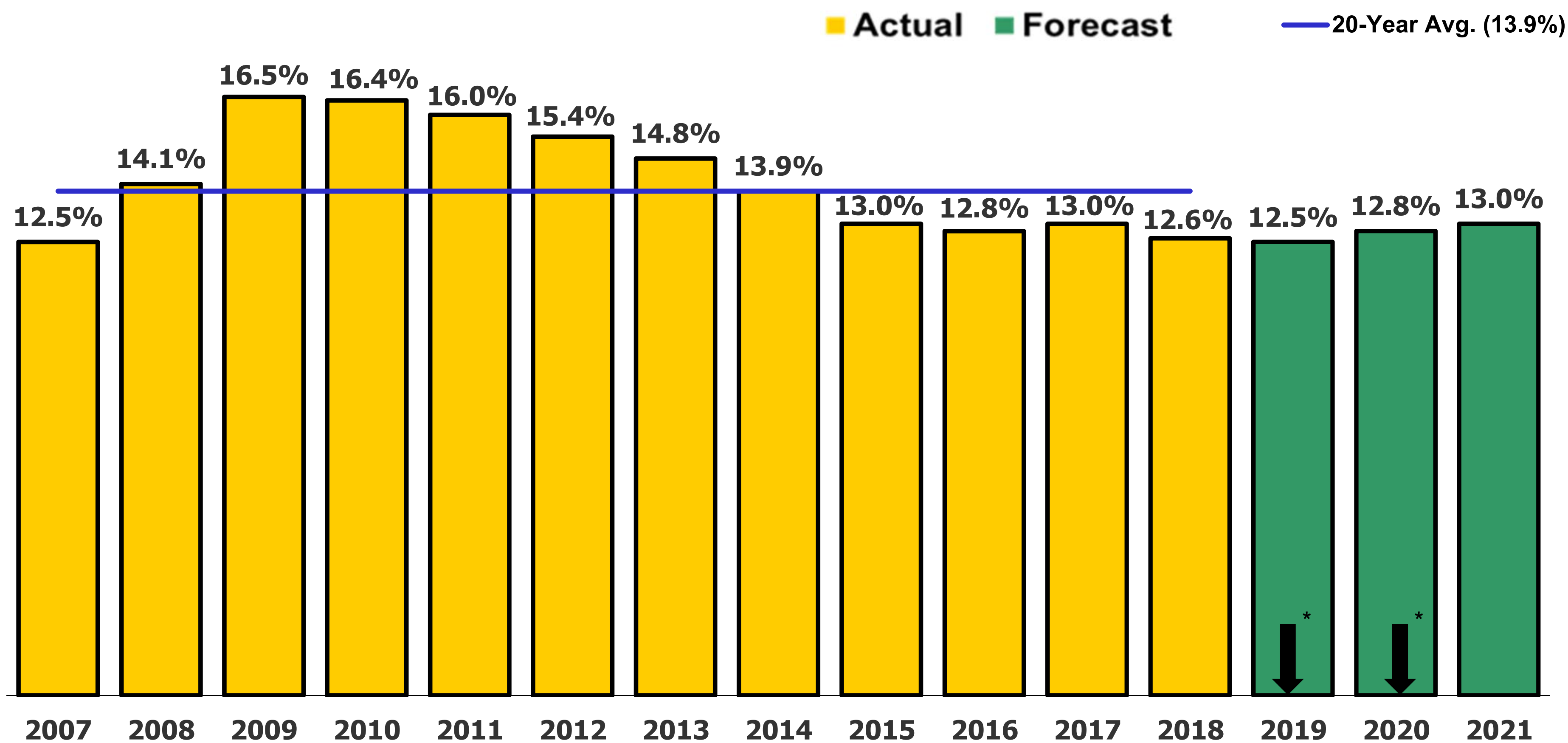
Office Sector Fundamentals

- Office vacancy rates reversed a seven-year decline in 2017, ticking up to 13.0%, before moderating back to 12.6% in '18. Rates are forecast to continue this fluctuation, edging down to 12.5% in '19 before reversing direction and increasing to 12.8% in '20 and 13.0% in '21. All of these rates remain below the 20-year average.

- Office rental rates increased 2.5% in 2018, above the 20-year average of 1.9%. Rental rate growth is expected to tick down to 2.4% in '19, before falling to 1.5% in '20 and 1.3% in '21.

- Compared to 6 months ago, the forecast for both office vacancy rates and office rental rate change are more optimistic for both '19 and '20.

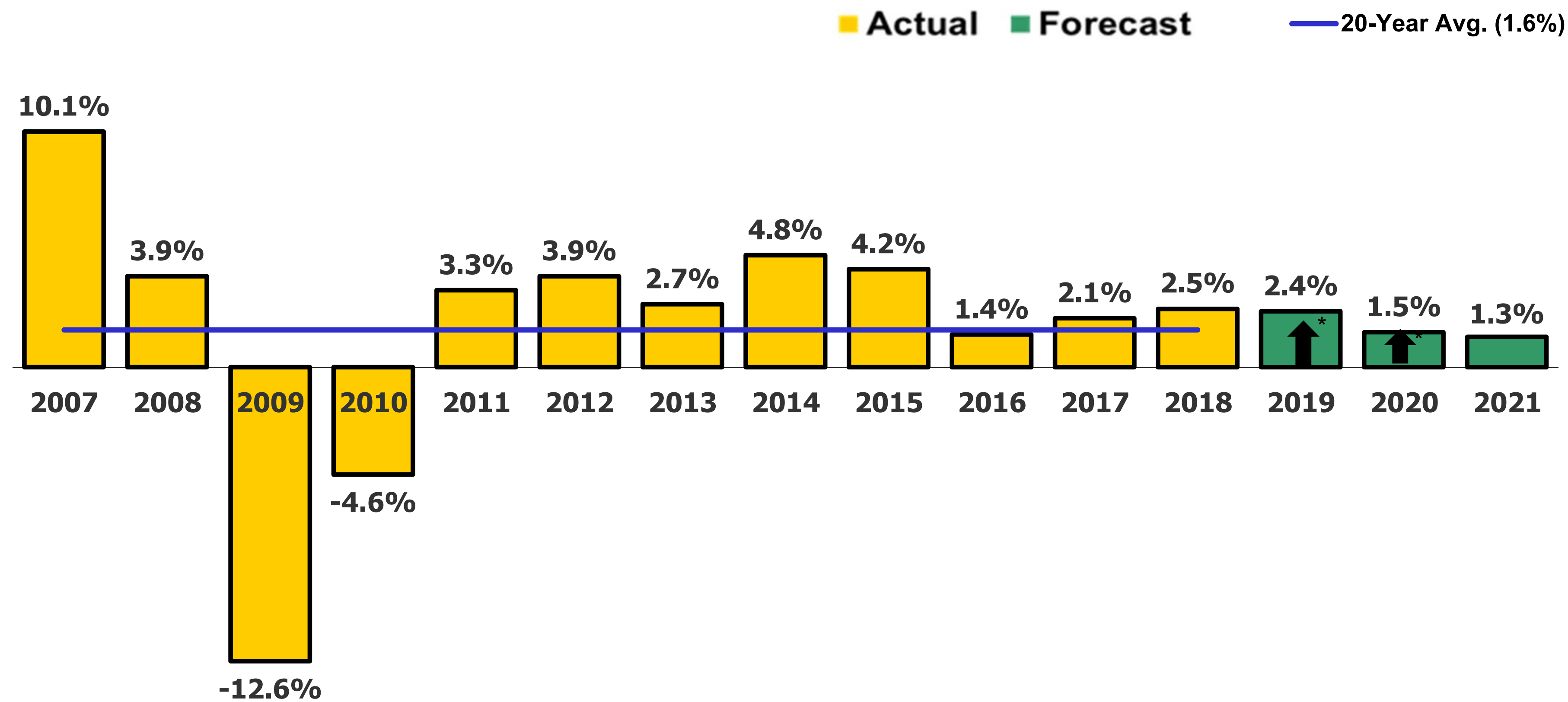
Office Vacancy Rates



Sources: 1999-2018 (Q4), CBRE; 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 13.2% and 13.6%, respectively, for 2019 and 2020.

Office Rental Rate Change



Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 2.0% and 1.0%, respectively, for 2019 and 2020.

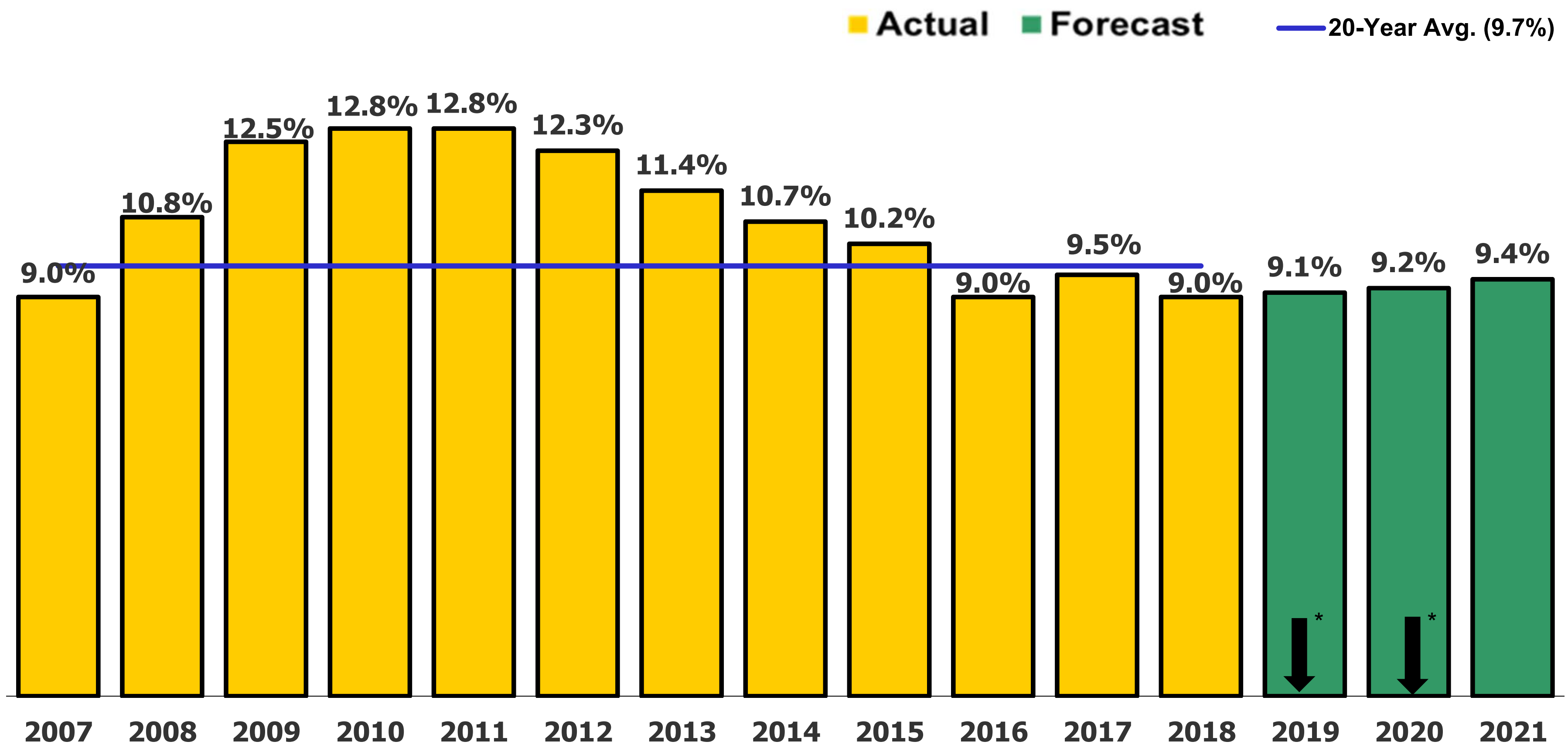
Retail Sector Fundamentals

- Retail availability rates were at 9.0% in ‘18, the lowest post-recession rate, also seen in 2016. The forecast anticipates slight increases each year of the forecast, inching up to 9.1% in ‘19, 9.2% in ‘20, and 9.4% in ‘21.

- Retail rental rate growth reached a post-recession high of 3.1% in 2017 before moderating to 2.4% in ‘18. The forecast expects growth to further moderate during the forecast period to 1.5% in ‘19, 1.0% in ‘20, and remain at 1.0% in ‘21.

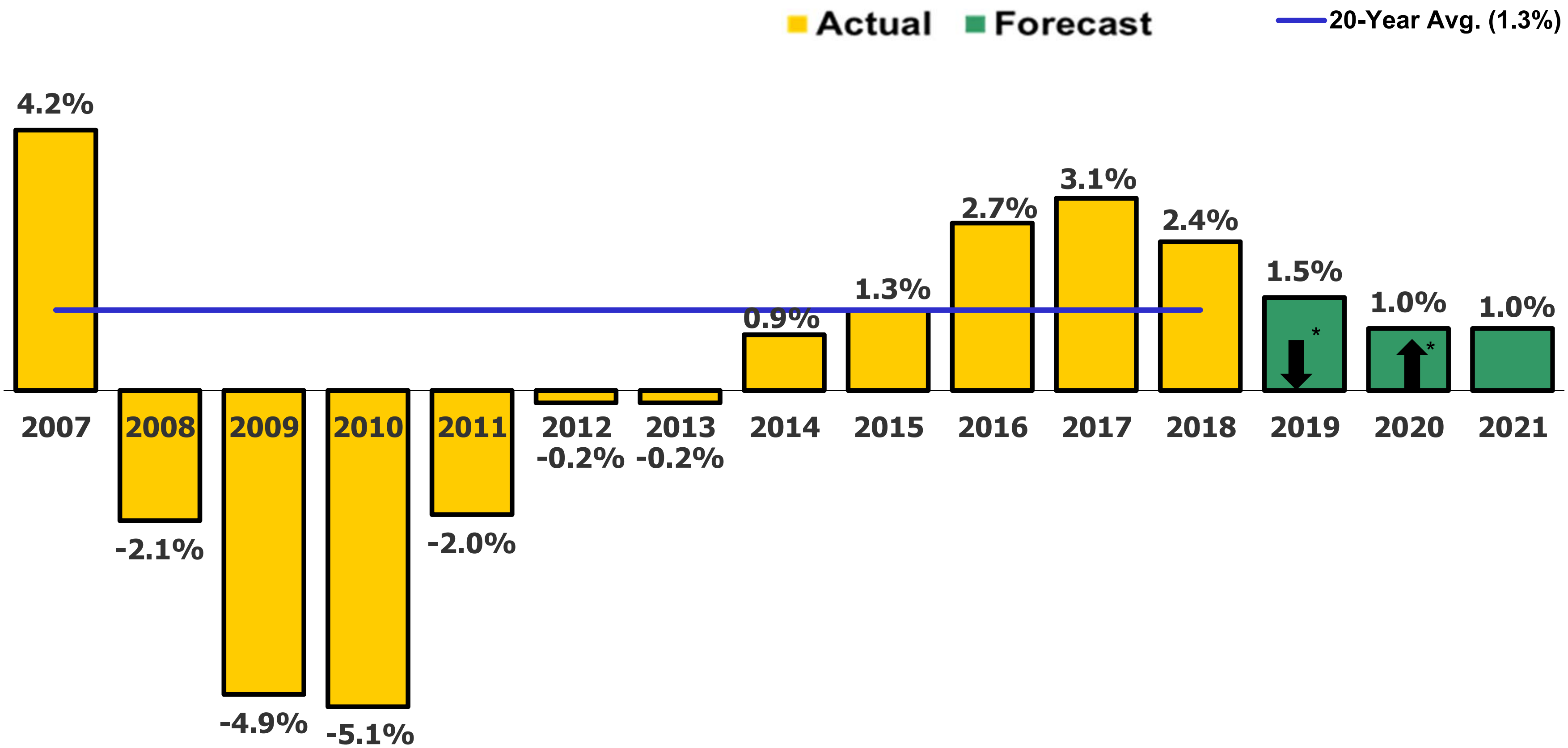
- Compared to 6 months ago, the forecast for retail availability rates is more optimistic for both ‘19 and ‘20, while the forecast for retail rental rate growth is less optimistic for ‘19 and more optimistic for ‘20.

Retail Availability Rates



Sources: 1999-2018 (Q4), CBRE; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 9.6% and 9.8%, respectively, for 2019 and 2020.

Retail Rental Rate Change



Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 1.6% and 0.6%, respectively, for 2019 and 2020.

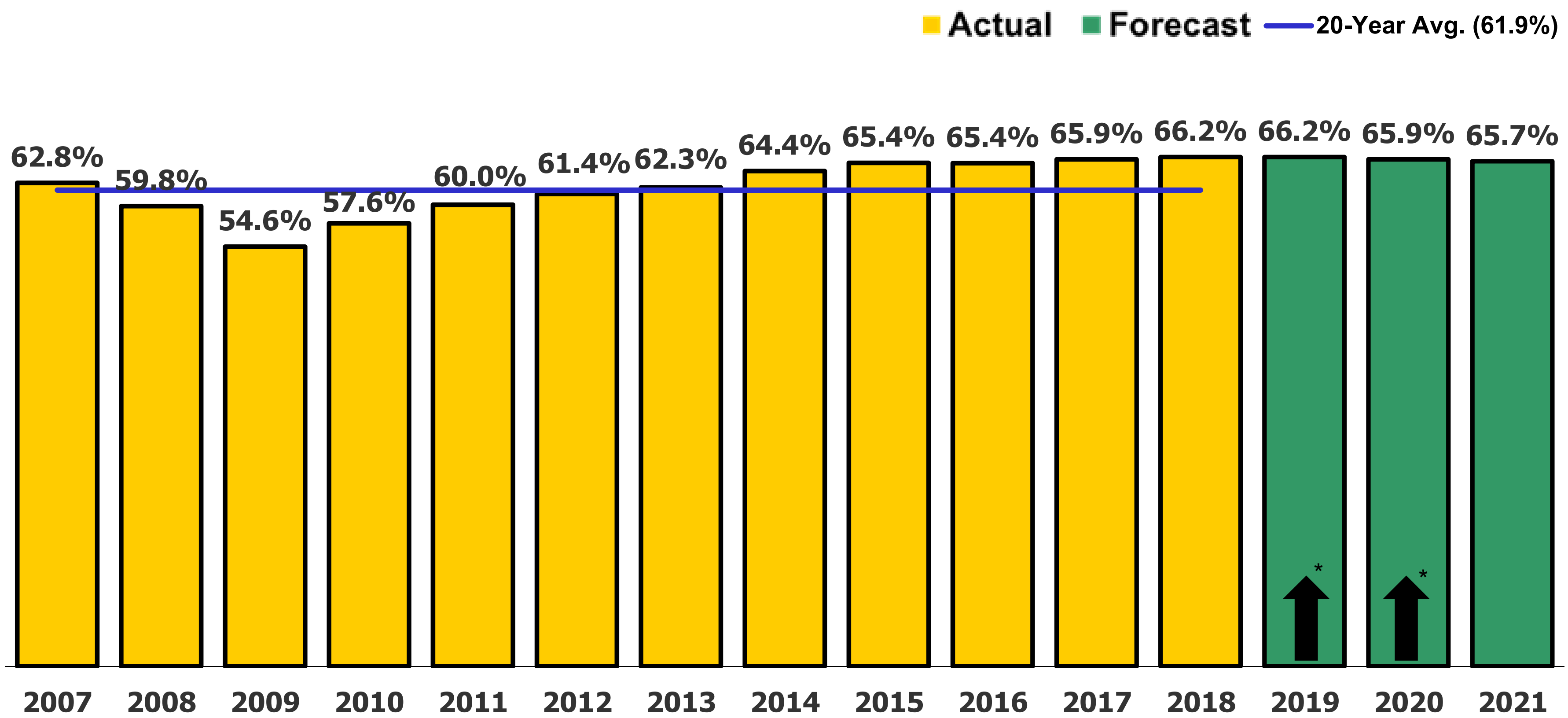
Hotel Sector Fundamentals

- Hotel occupancy rates, according to STR, have been steadily improving since reaching a low of 54.6% in 2009. Occupancy rates came in at 66.2% in 2018, above the twenty-year average. Rates are forecast to remain strong over the forecast years, staying level at 66.2% in ’19 before moderating slightly to 65.9% in ‘20 and 65.7% in ‘21.

- Following seven years of above-average hotel revenue per available room (RevPAR) growth, the RevPAR growth rate dipped below the long-term average in ‘17 to 2.9% and plateaued at that rate in ’18. The growth rate is expected to moderate further to 2.5% in ‘19, 2.0% in ’20, and 1.0% in ‘21.

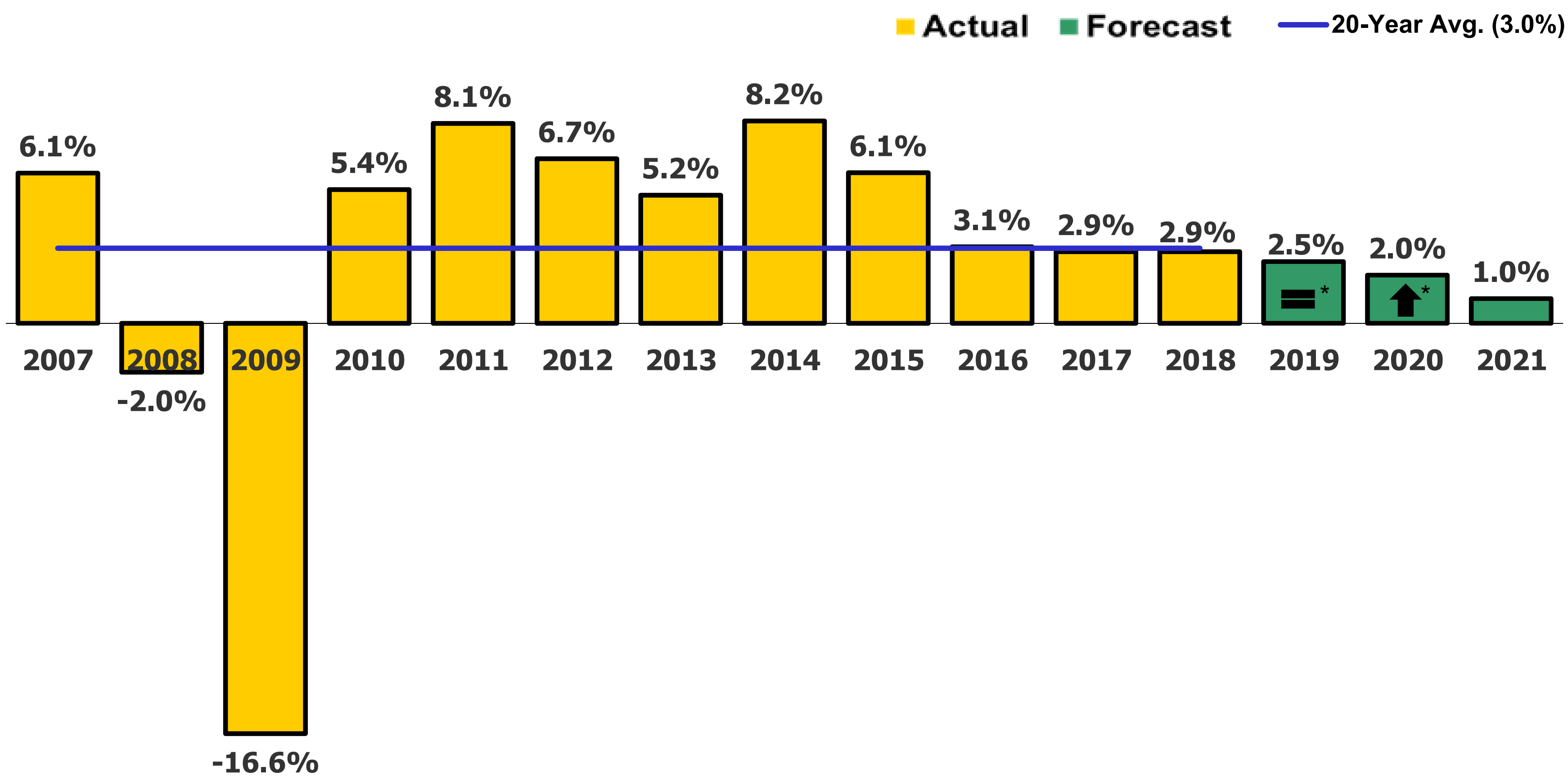
- Compared to the forecast of 6 months ago, the current forecast for occupancy rates is more optimistic for both ‘19 and ‘20, while the forecast for RevPAR growth is unchanged for ’19 and more optimistic for ’20.

Hotel Occupancy Rates



Sources: 1999-2018, (December, 12-month rolling average), STR; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 66.1% and 65.7%, respectively, for 2019 and 2020.

Hotel Revenue per Available Room (RevPAR) Change

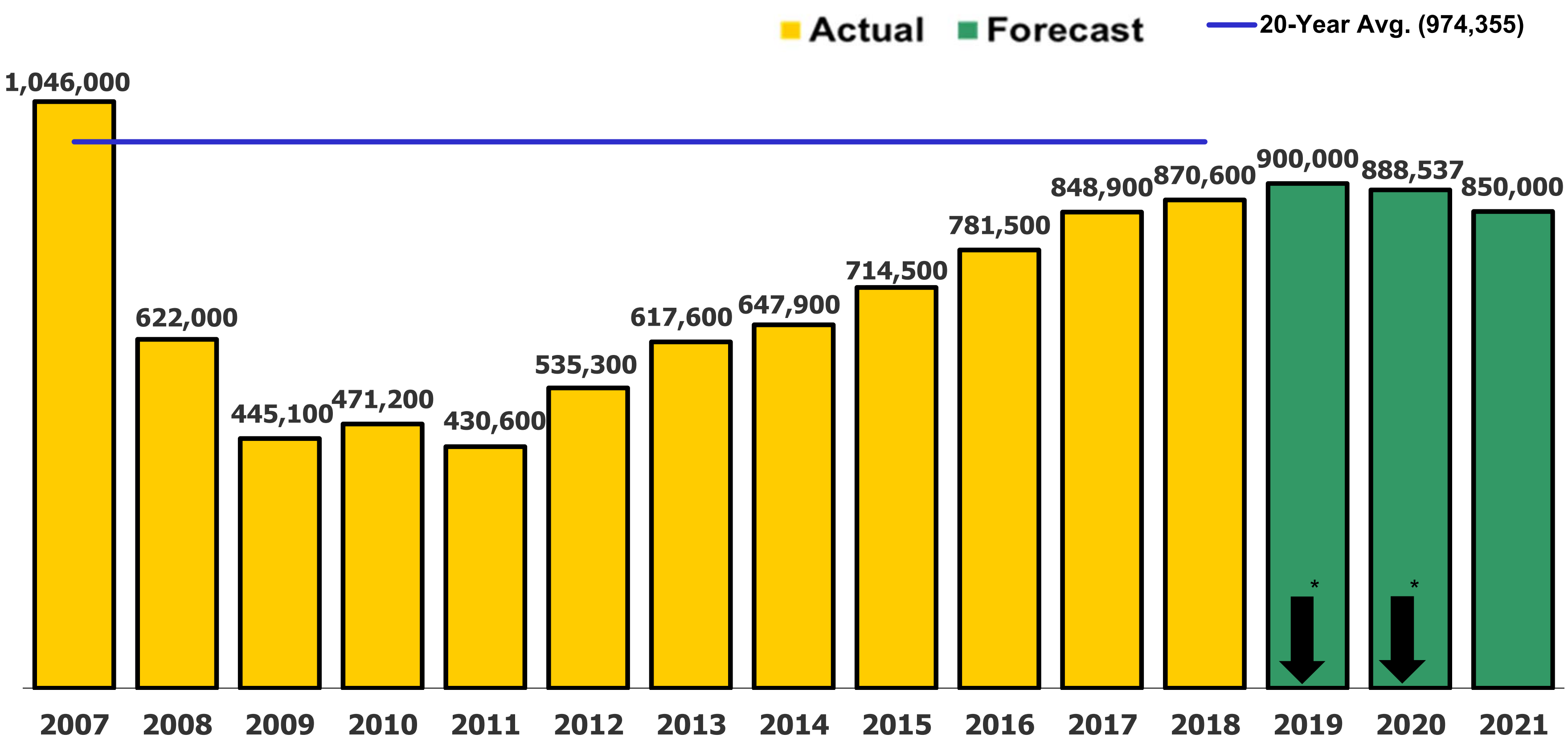


Sources: 1999-2018, (December, 12-month rolling average), STR; 2019-2021, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 2.5% and 1.5%, respectively, for 2019 and 2020.

Housing Sector

- The single-family housing sector experienced positive growth in starts for the seventh straight year in 2018. Growth is expected to continue in 2019 but remain below the long-term average, increasing to 900,000 in ’19 before moderating down to 888,500 in ’20 and 850,000 in ‘21.
- According to the FHFA, existing home prices increased an average of 5.6% in 2018, the seventh consecutive year of strong price growth. Price growth is expected to moderate during the forecast period to 4.0% in ‘19, 3.2% in ‘20, and 2.8% in ‘21.
- Compared to six months ago, forecasts for both housing starts and existing house price growth are less optimistic for both 2019 and 2020.

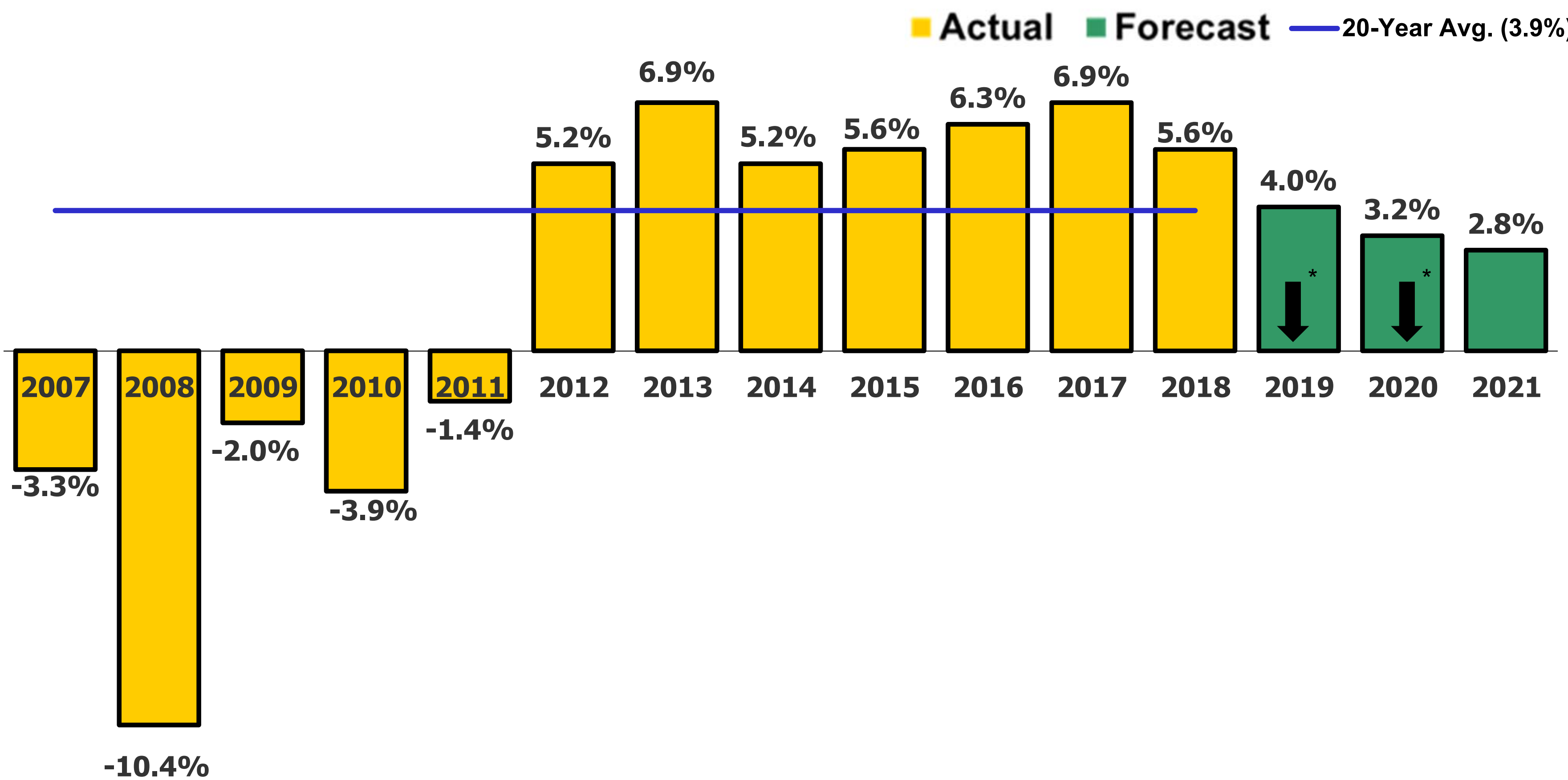
Single-Family Housing Starts



Sources: 1999-2018, (Structures w/ 1 Unit), U.S. Census; 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 930,000 and 900,000, respectively, for 2019 and 2020.

Average Home Price Change



Sources: 1999-2018, (Seasonally Adjusted, December Y/Y), Federal Housing Finance Agency; 2019-2021, ULI Real Estate Economic Forecast.

*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in October, 2018. Previous projections were 4.2% and 3.4% , respectively, for 2019 and 2020.

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Aberdeen Standard Investments	Simon Kinnie	Head of Real Estate Pricing
Alvarez & Marsal	Steven Laposa	Senior Advisor
Bentall Kennedy	Douglas Poutasse	EVP, Head of Strategy and Research
Berkshire Residential Investments	Gleb Nechayev	SVP, Head of Research
CBRE	Jeanette Rice	Americas Head of Multifamily Research
CCIM Institute	Kiernan Conway	Chief Economist
Clarion Partners	Tim Wang	Managing Director & Head of Investment Research
CoreLogic, Inc.	Frank E. Nothaft	Executive, Chief Economist
Cushman & Wakefield	Revathi Greenwood	Head of Americas Research
	Rebecca Rockey	Economist, Head of Forecasting
DWS	Kevin White	Head of Americas Strategy, Alternatives
Eigen 10 Advisors, LLC	Paige Mueller	Managing Director
Everest Healthcare Properties, LLC	David J. Lynn	CEO, President and Founder
	James Emert	Analyst

continued…….

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Green Street Advisors	Dave Bragg	Managing Director
	Peter Rothemund	Senior Analyst
Harrison Street Real Estate	Thomas Errath	Director
Heitman	Mary Ludgin	Senior Managing Director
Hines	Josh Scoville	Senior Managing Director
JLL	Ryan Severino	Chief Economist, Americas Research
	Josh Gelormini	Vice President, Americas Research
LaSalle Investment Management	Richard Kleinman	Managing Director, Research & Strategy
	William Maher	Head of Research, Americas
Linneman Associates	Peter Linneman	Principal
Marcus & Millichap	John T. Chang	Senior Vice President, Director of Research
	Peter Tindall	Vice President, Research Data & Analytics
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

continued……

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Oxford Economics	Matthew Mowell	Senior Economist
	Aran Ryan	Director, Lodging Analytics
PGIM Real Estate	Lee Menifee	Managing Director, Head of Americas Investment Research
PNC Financial Services Group	Augustine Faucher	Chief Economist
	Stuart Hoffman	Senior Vice President and Senior Economic Advisor
PwC, LLP	Andrew Warren	Director, Real Estate Research
RCLCO	Taylor Mammen	Senior Managing Director
	Ben Maslan	Managing Director
Reis/Moody's Analytics	Dr. Victor Calanog	Chief Economist
	Cody Bond	Economic Analyst
Rosen Consulting Group	Kenneth T. Rosen	Chairman
	Randall Sakamoto	President
Situs RERC	Ken Riggs	President
	Jodi Airhart	Director of Research and Publications
Stockbridge Associates, LLC	George Casey	CEO
Trepp, LLC	Matthew Anderson	Managing Director

Urban Land Institute

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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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