ULI Real Estate Economic Forecast

A Survey of Leading Real Estate Economists/Analysts

uli.org/economicforecast

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ULI Center for Capital Markets and Real Estate

Urban Land Institute
ULI Center for Capital Markets and Real Estate

ULI Real Estate Economic Forecast

- Three-year forecast ('18-'20) 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 14th survey; completed August 17 – September 5, 2018.
- A semi-annual survey; next release planned for April 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* for April 2018 projects continued economic expansion over the three forecast years, with growth moderating over that period. For example, GDP growth is forecast to average 2.4 percent a year, ranging from 3.0% in 2018 to 1.7% in 2020. Employment growth, forecast to be above the long term average in ’18, is expected to fall below that average by ’20. Forecasts include relatively high but moderating commercial real estate volumes; continued but moderating commercial price appreciation, rent growth, and returns; better than long-term average vacancy/occupancy rates, 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, 17 real estate indicators are projected to be better than their 20-year averages, while 6 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 below their long-term averages.

- In 2020, 8 indicators are expected to be better than their 20-year average and 15 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 below 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 Returns: Apartment, Office, Retail
NCREIF Returns: Industrial	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	

2020 Forecast

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

Key Findings

- Following a post-recession high of $569 billion in 2015, transaction volume reversed direction with $511 billion in ’16 and $490 billion in ‘17. Annual volume is forecast to further decrease to $475 billion in ‘18 and $415 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, has rebounded since a low in ‘09 but to a much lower level than pre-recession. Issuance is forecast to remain essentially level in ’18 and ‘19 at $90 billion and $88 billion respectively, before decreasing slightly in ‘20 to $80 billion.

- Commercial real estate prices are projected to grow at slowing rates relative to recent years, at 6.0% in ‘18, 5.0% in ‘19 and 4.0% in ‘20, which would be below the long-term average growth rate of 4.4% for the first time since 2010.

- Institutional real estate assets are expected to provide total returns of 6.5% in ‘18, moderating to 5.0% by ‘20. By property type, 2018 returns are expected to range from 11.4% for industrial to 4.5% for retail. In ‘20, returns are expected to range from 7.2% for industrial to retail’s 3.9%.

- Both apartment and office vacancy rates are expected to plateau in ’18 from their ‘17 rates, before edging up in both ‘19 and ‘20. Both industrial and retail availability rates are expected to see a slight decline in ’18 before seeing an increase in ’20 to rates above their 2017 levels. 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. In 2018, rent increases will range from 3.9% for industrial to 1.8% for retail. Rental rate growth rates in all four sectors are expected to decelerate in both ’19 and ‘20. Rent increases in 2020 will range from 2.4% for industrial to 0.6% for retail. Hotel RevPAR is expected to increase by 3.0% in 2018 and 1.5% in 2020.

- Single-family housing starts are projected to increase from their 2017 level of 848,900 units to 900,000 in ‘18, and 930,000 in ’19. This completes eight straight years of growth, bringing annual starts to their highest level since 2007. Starts are then projected to moderate somewhat to 900,000 in ‘20.

Economy

- The economists/analysts expect continued strong economic expansion over the first 2 forecast years, with growth continuing in the third year, but at a slower pace. Employment growth, expected to be strong in ‘18, is projected to slow significantly over the following two years, while unemployment rate remains low.

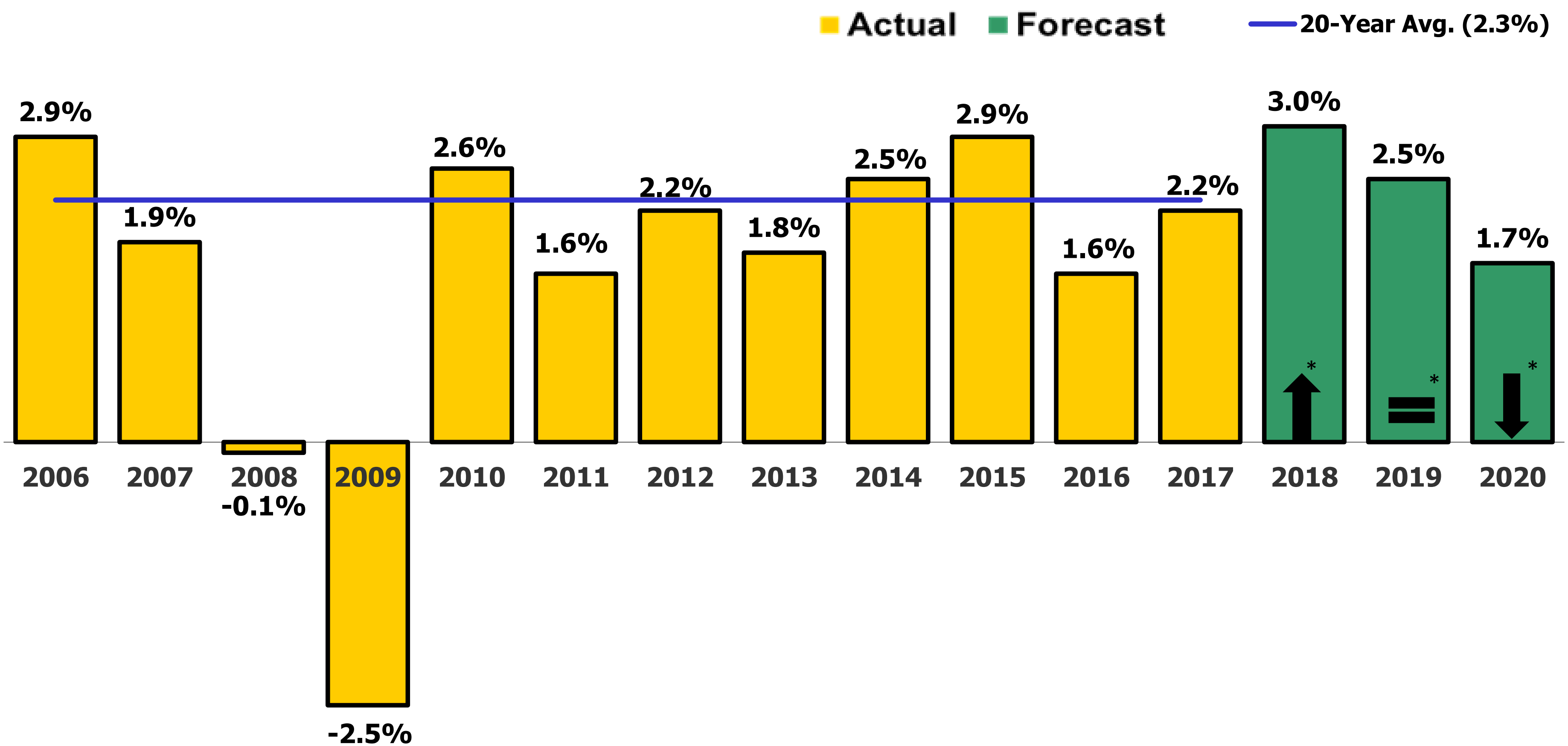
- GDP growth was 2.2% in 2017, up from the 1.6% growth in ‘16. Growth rates are forecast to increase to 3.0% in ‘18 before moderating to 2.5% in ‘19 and 1.7% in ‘20.

- The unemployment rate is expected to continue its eight-year decline, reaching 3.8% by the end of 2018 and plateauing in ‘19 before ticking back up slightly to 4.0% by the end of ‘20.

- Employment growth is expected to rise in 2018 to 2.40 million jobs from the 2.19 million jobs added in 2017. Employment growth is expected to moderate to 1.90 million jobs in ‘19 and 1.00 million jobs in ‘20.

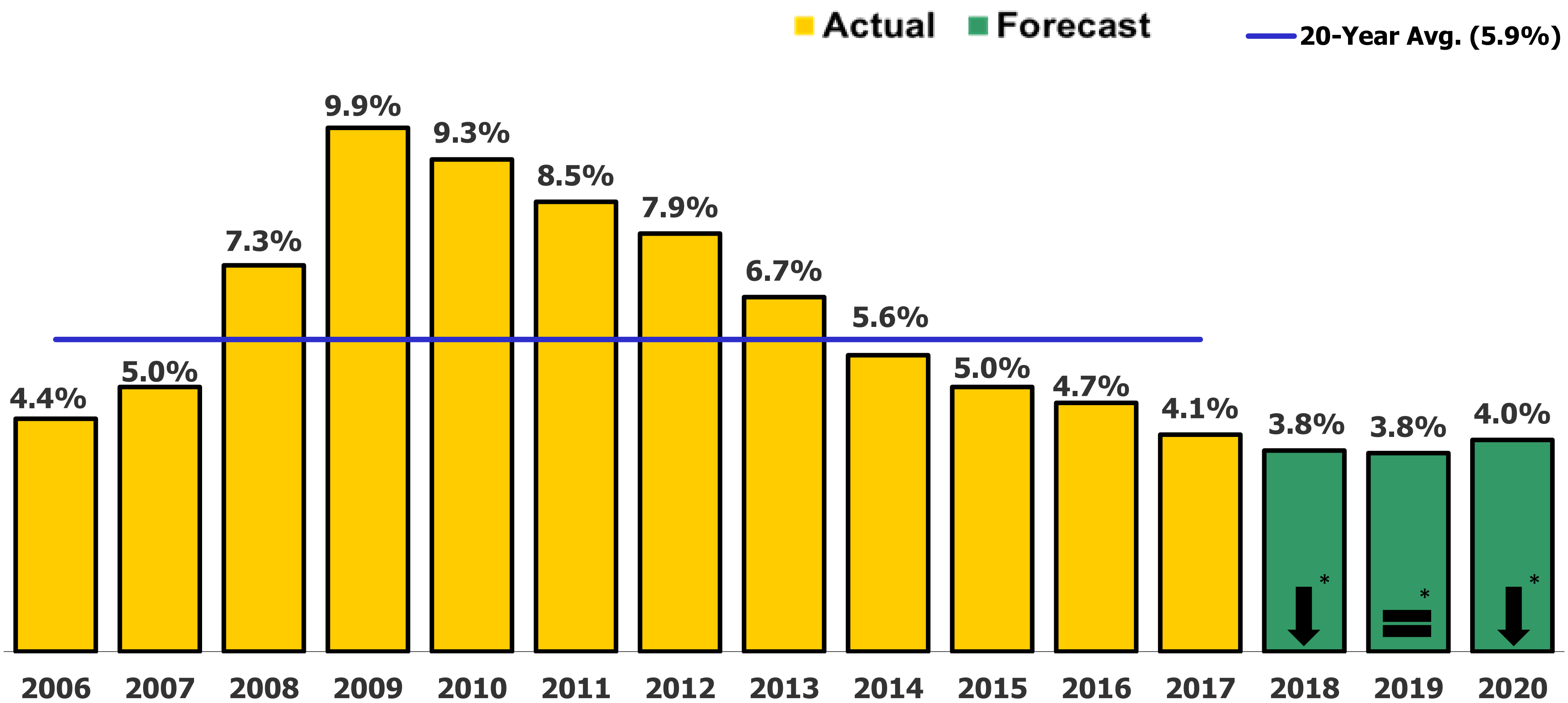
- Compared to forecasts of 6 months ago, the forecast for GDP is more optimistic for ‘18, unchanged for ‘19, and less optimistic for ‘20. The unemployment rate and employment growth forecasts are both more optimistic for ’18 and largely unchanged for ’19, but unemployment rate is more optimistic for ’20, while employment growth is less optimistic.

Real GDP Growth



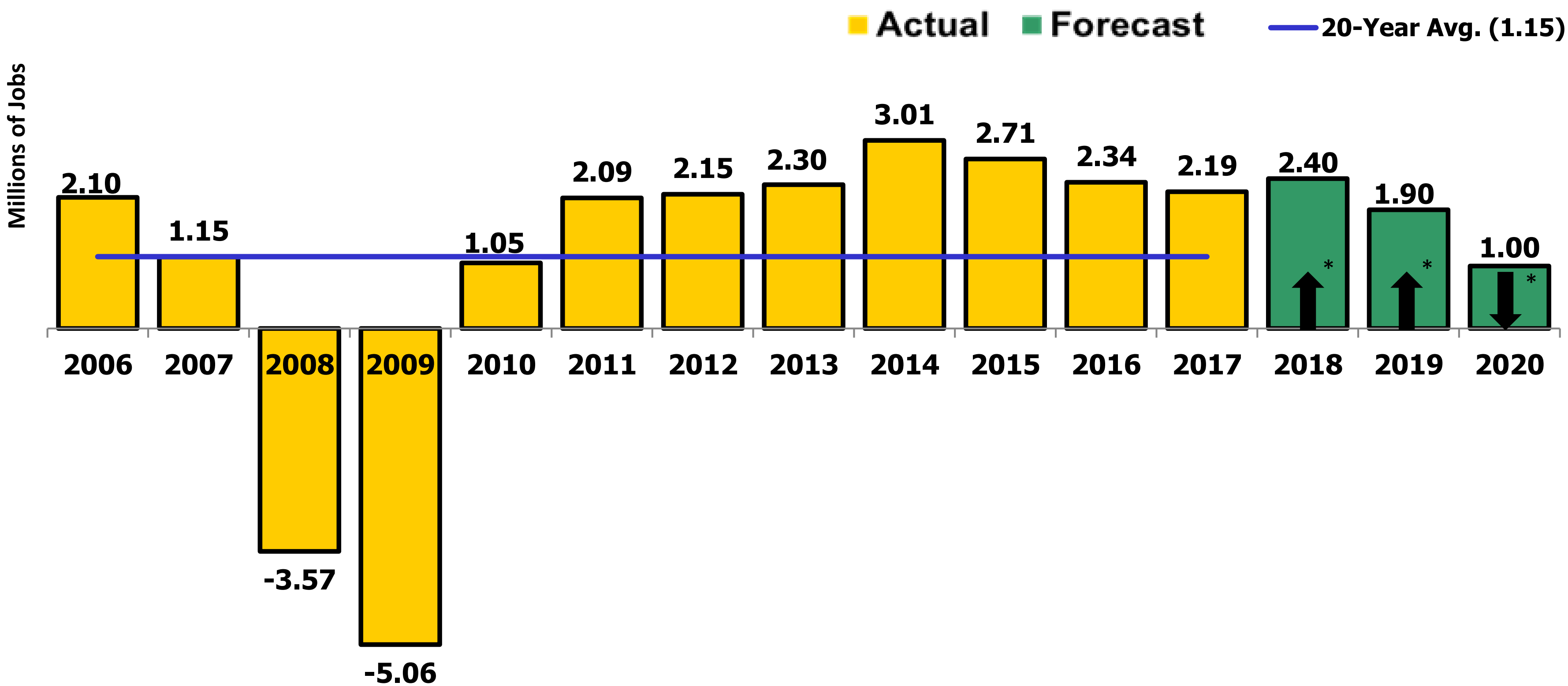
Sources: 1998-2017, Bureau of Economic Analysis; 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 2.8%, 2.5%, and 2.0%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 3.9%, 3.8%, and 4.1%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 2.20, 1.89, and 1.38, respectively, for 2018, 2019, and 2020.

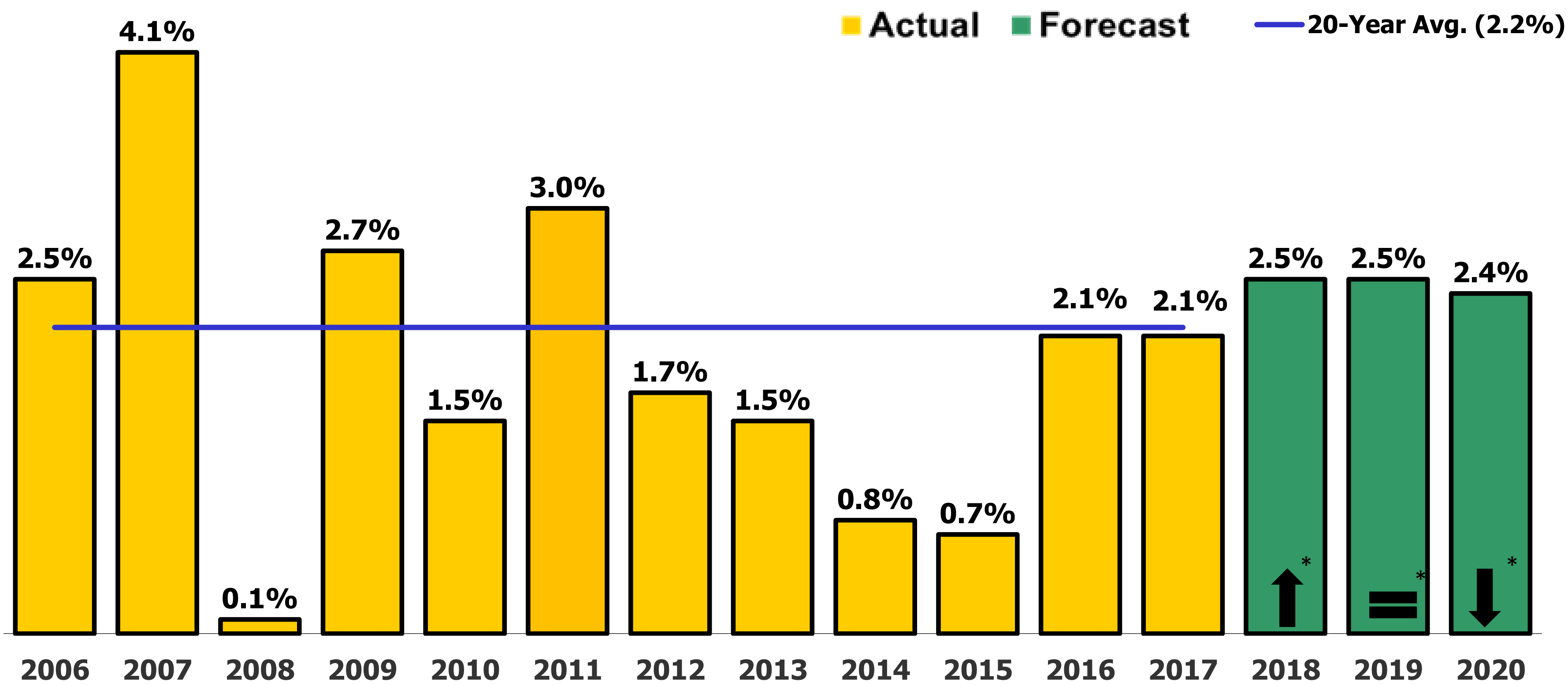
Inflation, Interest Rates, and Cap Rates

- 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 2.5% in ‘18 and ‘19, and 2.4% in ‘20.

- Ten-year treasury rates have remained fairly steady over the past 4 years, with rates at 2.4% at year-end 2017. However, rates are projected to jump to 3.0% by the end of ’18, and increase to 3.3% in ’19 and 3.5% in ‘20. These rates remain below the 20-year average of 3.6%.

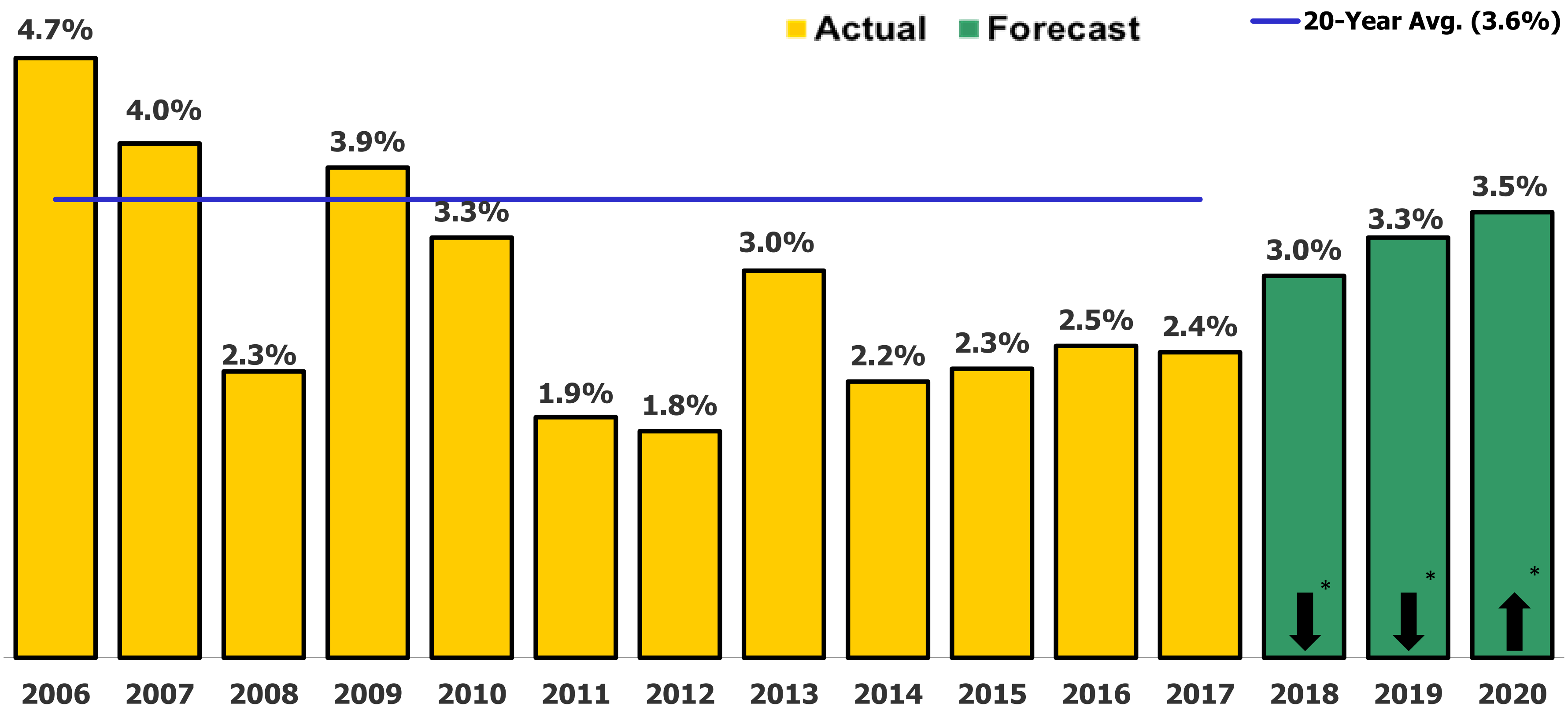
- Capitalization rates for institutional-quality investments (NCREIF cap rates) declined for the 8th straight year in 2017, ending the year at 5.0%. They are expected to remain at 5.0% in ’18 before reversing the long decline, increasing to 5.1% in ‘19 and 5.3% in ‘20.

Consumer Price Index Inflation Rate



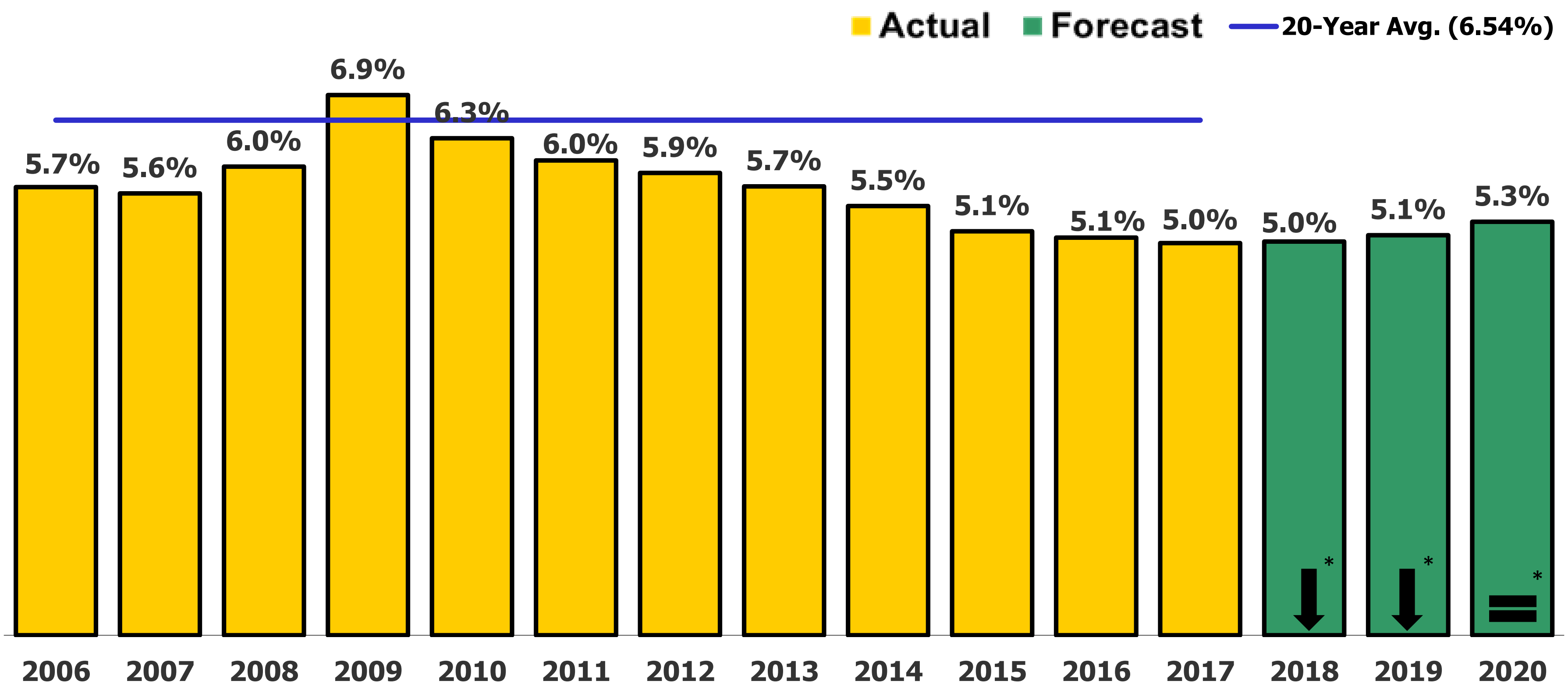
Sources: 1998-2017, (12-month change, as of December), Bureau of Labor Statistics; 2018-2020 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 2.3%, 2.5%, and 2.45%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 3.1%, 3.4%, and 3.4% respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 5.1%, 5.2%, and 5.3%, respectively, for 2018, 2019, and 2020.

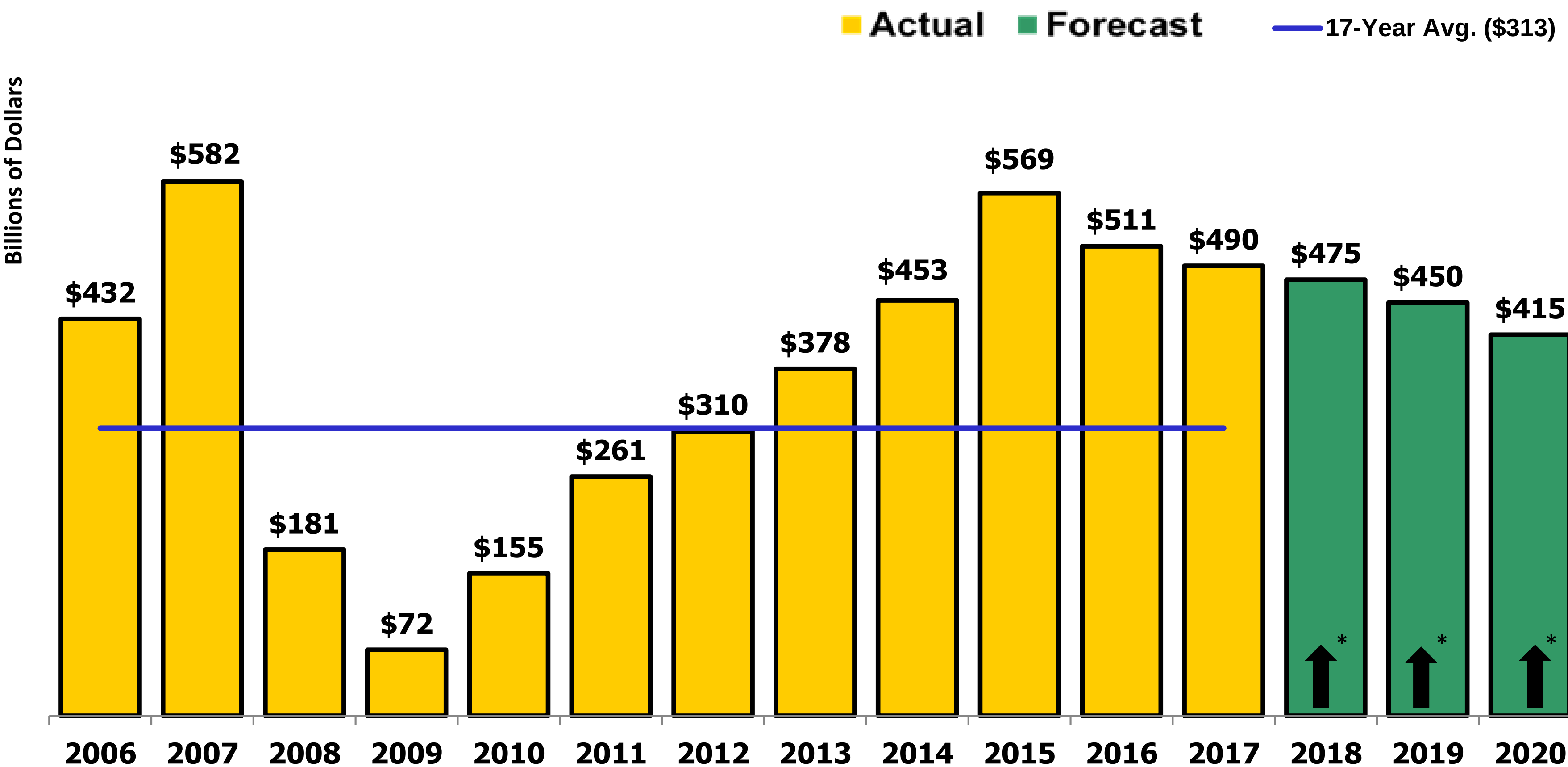
Real Estate Capital Markets

- Commercial real estate transaction volume reached a post-recession peak of $569 billion; volume declined in ‘16 to $511 billion and again in ‘17 to $490 billion but remained among the highest annual volumes. Volume is expected to further decline in the forecast years to $475 billion in ‘18, $450 billion in ‘19, and $415 billion in ‘20. Despite these projected declines, volumes remain substantially above the 17-year annual average of $313 billion.

- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate, has rebounded since a low in ’09 but at a much lower level than pre-recession levels. CMBS issuance is expected to be $90 billion in ’18, $88 billion in ‘19, and $80 billion in ‘20.

- Compared to the forecasts of 6 months ago, the current forecast for transaction volume is expected to be higher in all three forecast years, while the forecast for CMBS issuance remains essentially the same.

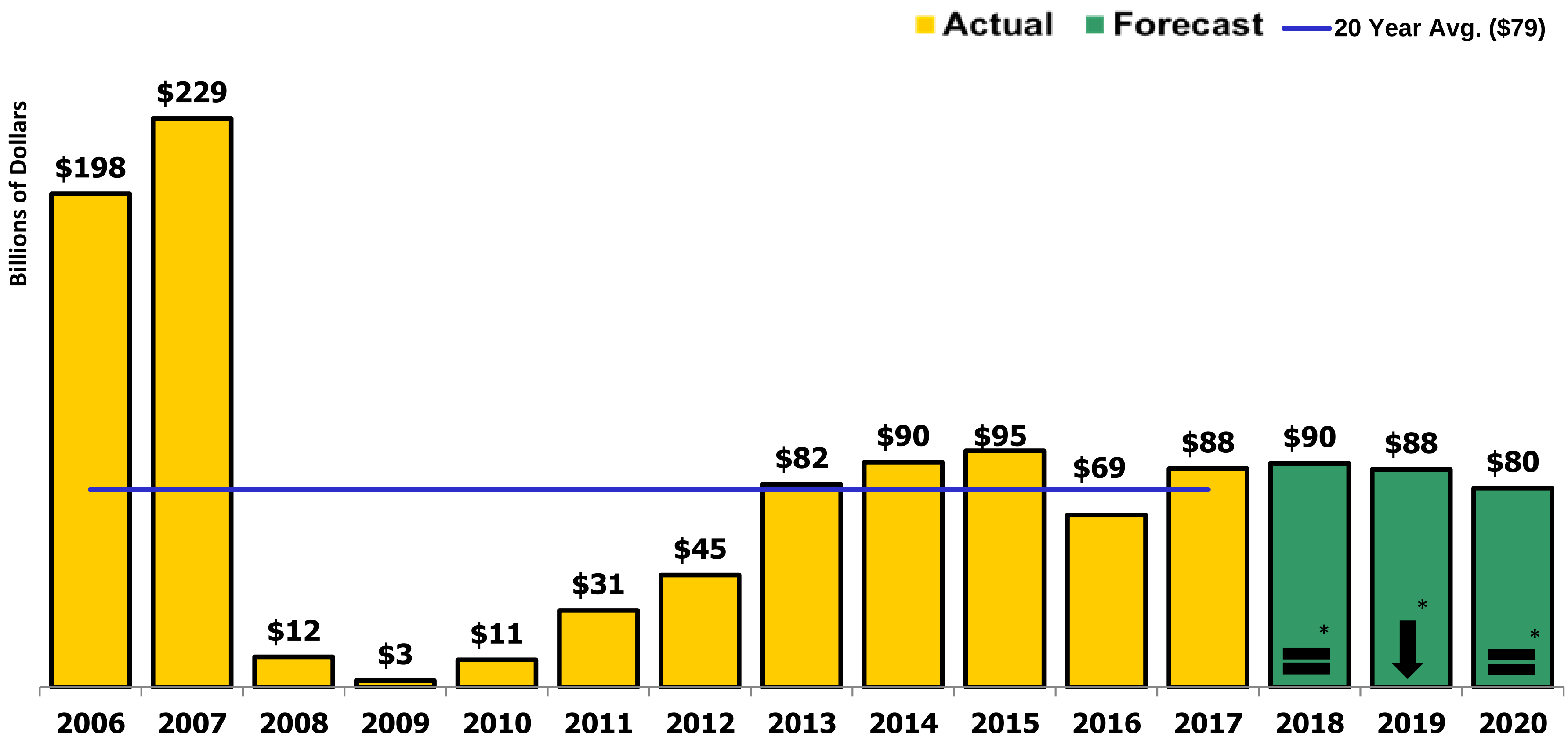
Commercial Real Estate Transaction Volume



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 April, 2018. Previous projections were $450, $425, and $408 respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were $90 billion, $90 billion, and $80 billion, respectively, for 2018, 2019, and 2020.

Real Estate Returns and Prices

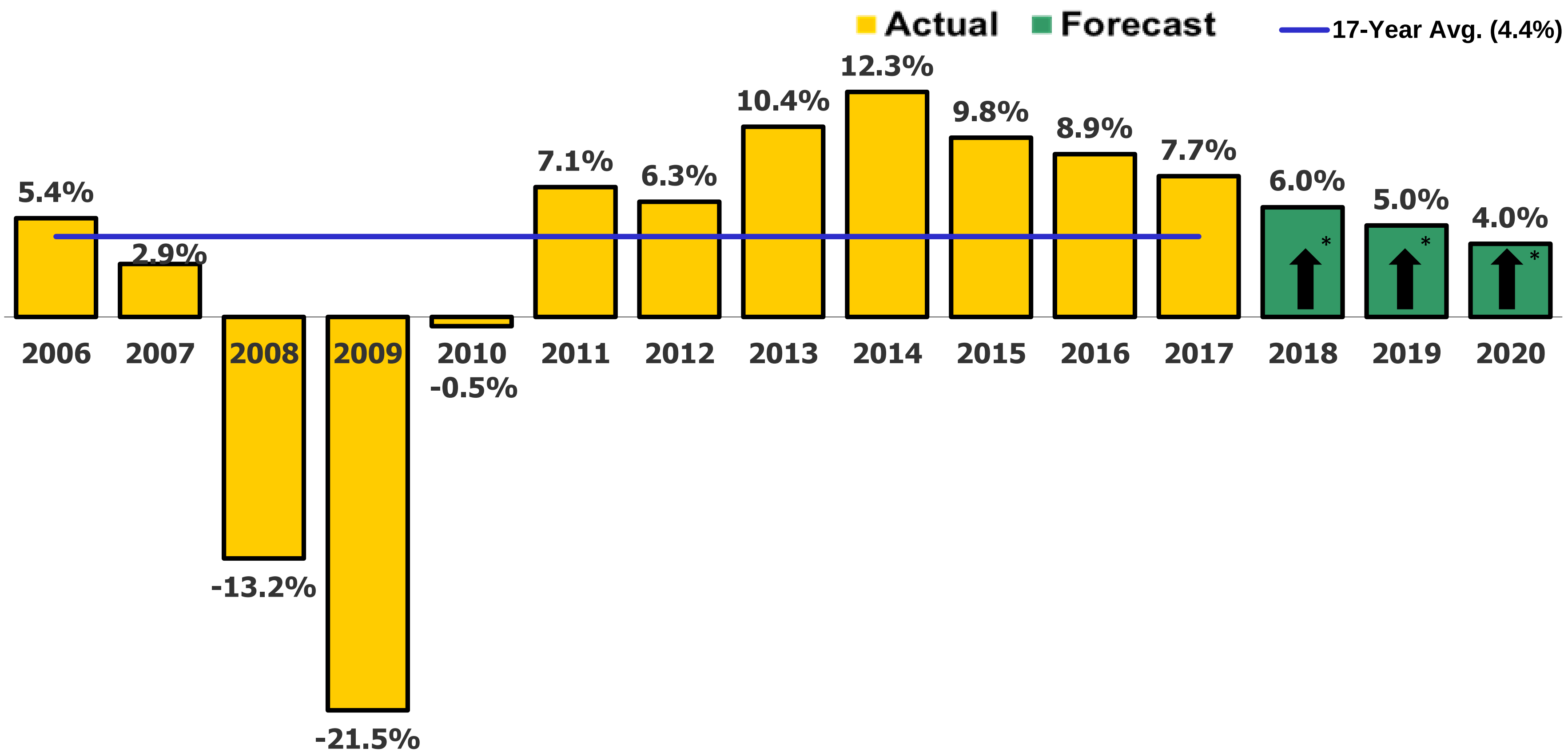
- The RCA Commercial Property Price Index (CPPI) has had some recent high growth years. Prices are expected to continue to grow, although at slowing rates in the next three years, at 6.0% in 2018, 5.0% in ’19, and 4.0% in ’20.

- 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 4.0% in ’18 and ‘19, and 4.2% in ‘20.

- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index (NPI), 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 6.5% in ‘18, 6.0% 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, ’19, and ‘20. The REIT returns forecasts are less optimistic for all three years, and NCREIF total returns forecasts are more optimistic for ‘18 and ‘19 and unchanged in ‘20.

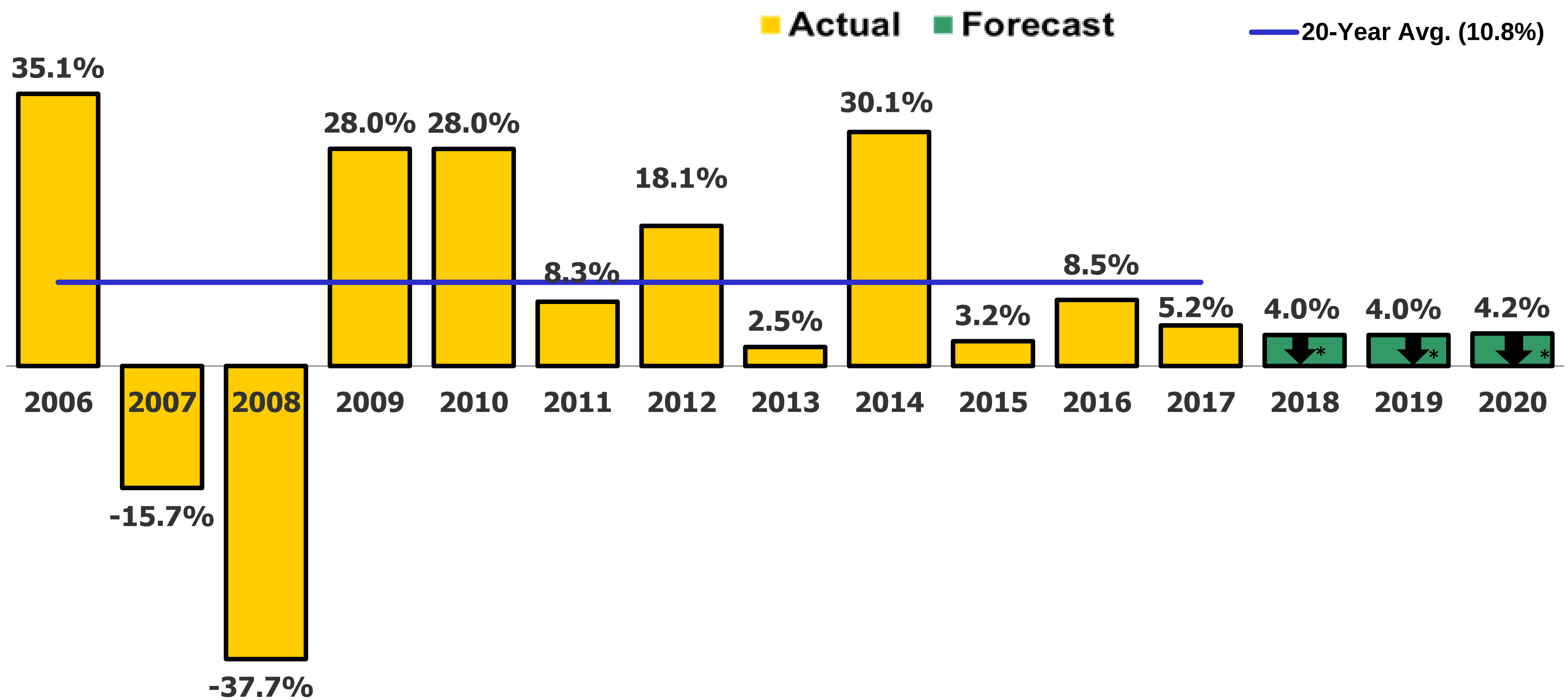
RCA Commercial Property Price Index (annual change)



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

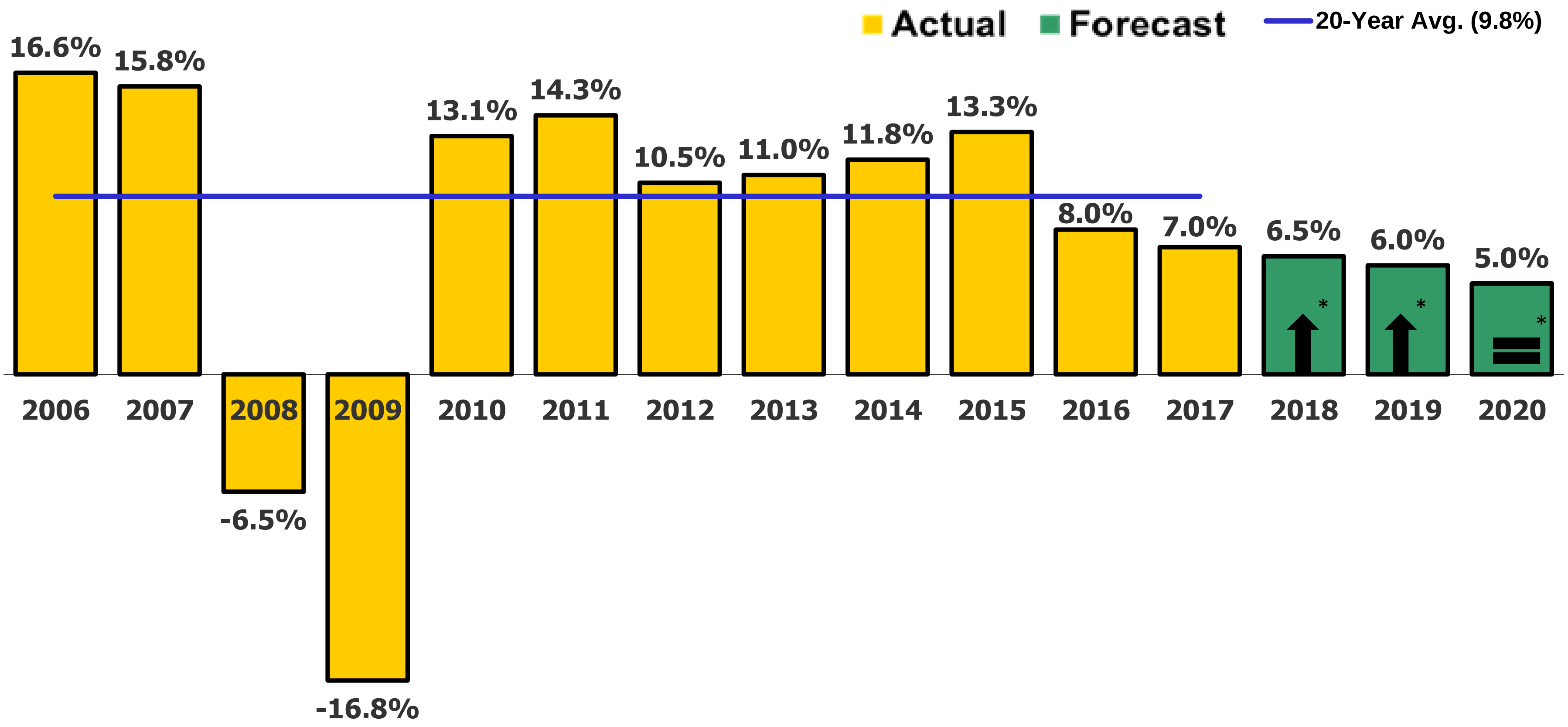
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 5.0%, 3.0%, and 2.3%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 4.4%, 5.5%, and 6.5%, respectively, for 2018, 2019, and 2020.

NCREIF Total Annual Returns

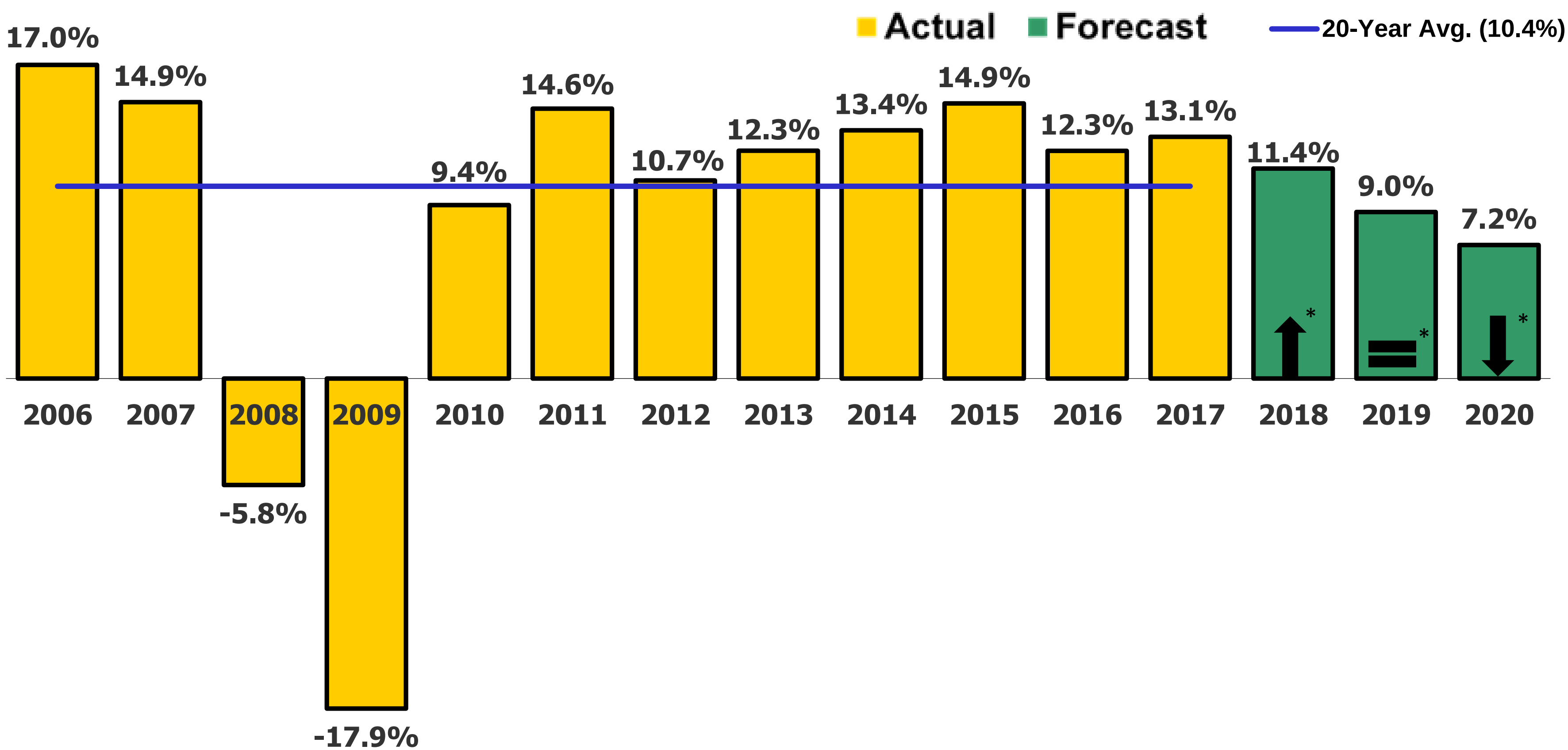


Sources: 1998-2017 National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 6.0%, 5.1%, and 5.0% respectively, for 2018, 2019, and 2020.

NCREIF Returns by Property Type

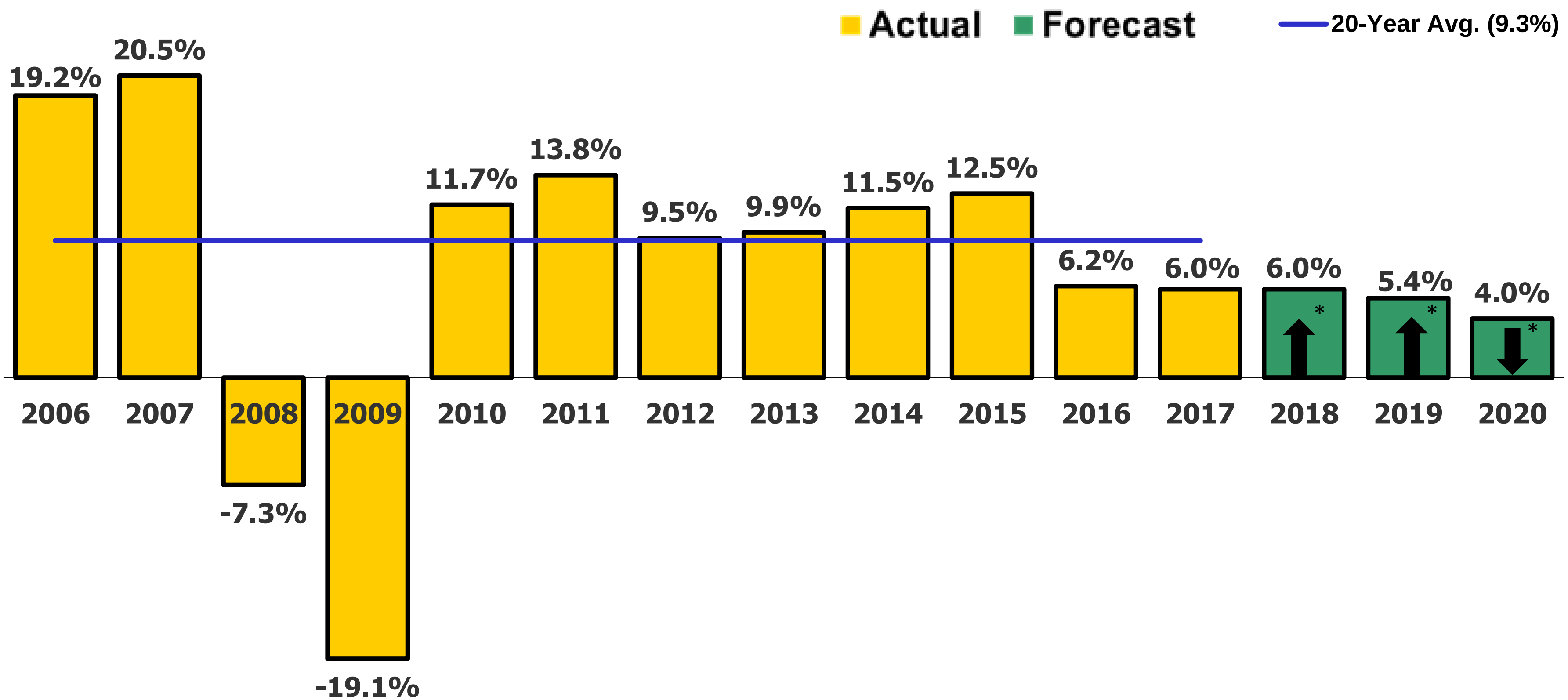
- NCREIF total returns in 2018 for the industrial, apartment, office, and retail sectors are expected to moderate relative to returns in 2017. By property type, 2018 returns for the industrial sector are forecast at 11.4%, followed by office returns and apartment returns both at 6.0%, and retail returns at 4.5%.
- By 2020, all sector returns are expected to further moderate, with industrial returns forecast at 7.2%, apartment returns at 5.0%, office returns at 4.0%, and retail returns at 3.9%.
- Compared to 6 months ago, forecasts for ‘18 are more optimistic for the industrial, apartment, and office sectors and less optimistic for retail. Forecasts for ‘20 are less optimistic for the industrial, office, and retail sectors, but more optimistic for apartments.

NCREIF Industrial Total Annual Returns



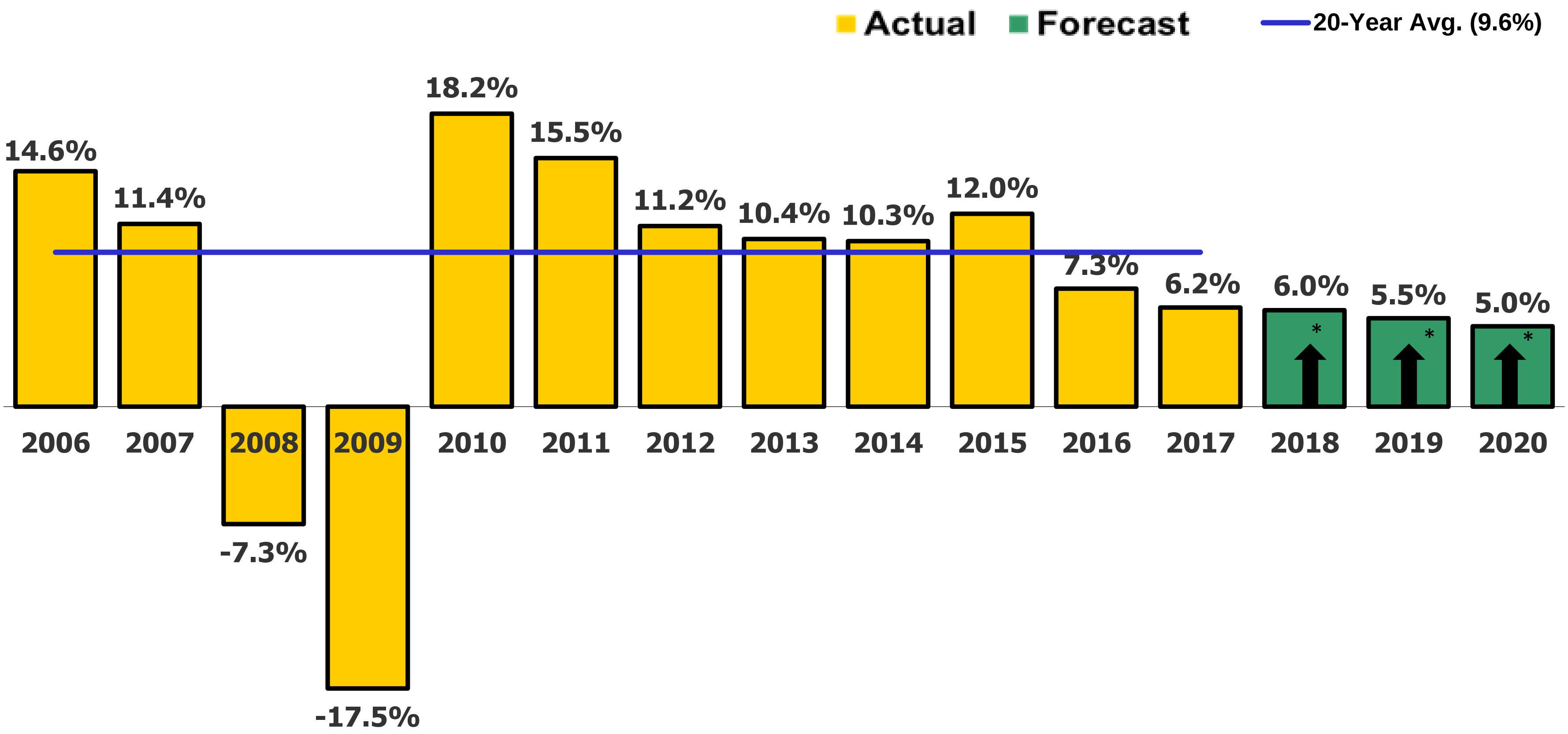
Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 10.0%, 9.0%, and 8.0% respectively, for 2018, 2019, and 2020.

NCREIF Office Total Annual Returns



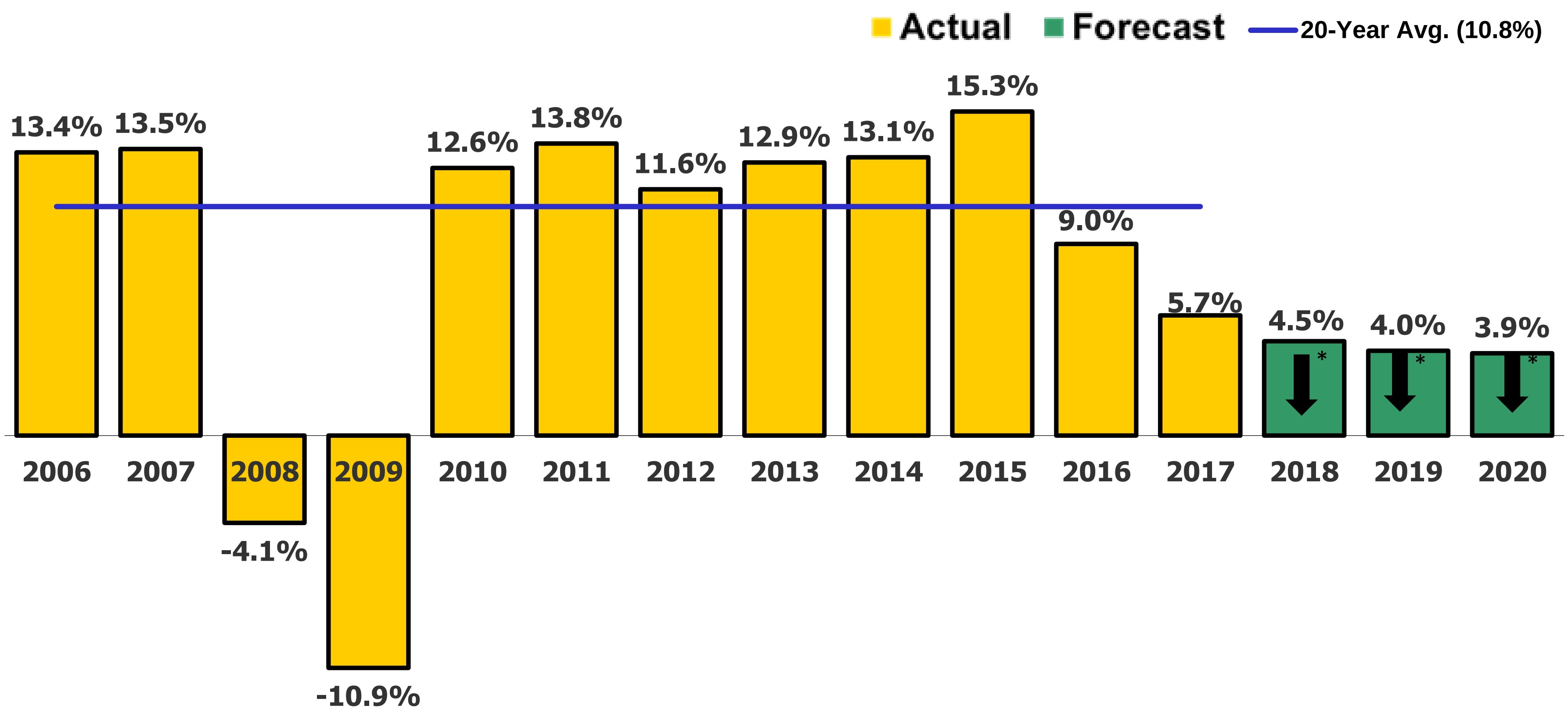
Sources: 1998-2017, National Council of Real Estate Investment Fiduciaries (NCREIF); 2018-2020, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 5.4%, 5.0%, and 4.5% respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 5.4%, 5.0%, and 4.5%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 5.0%, 4.6%, and 4.3%, respectively, for 2018, 2019, and 2020.

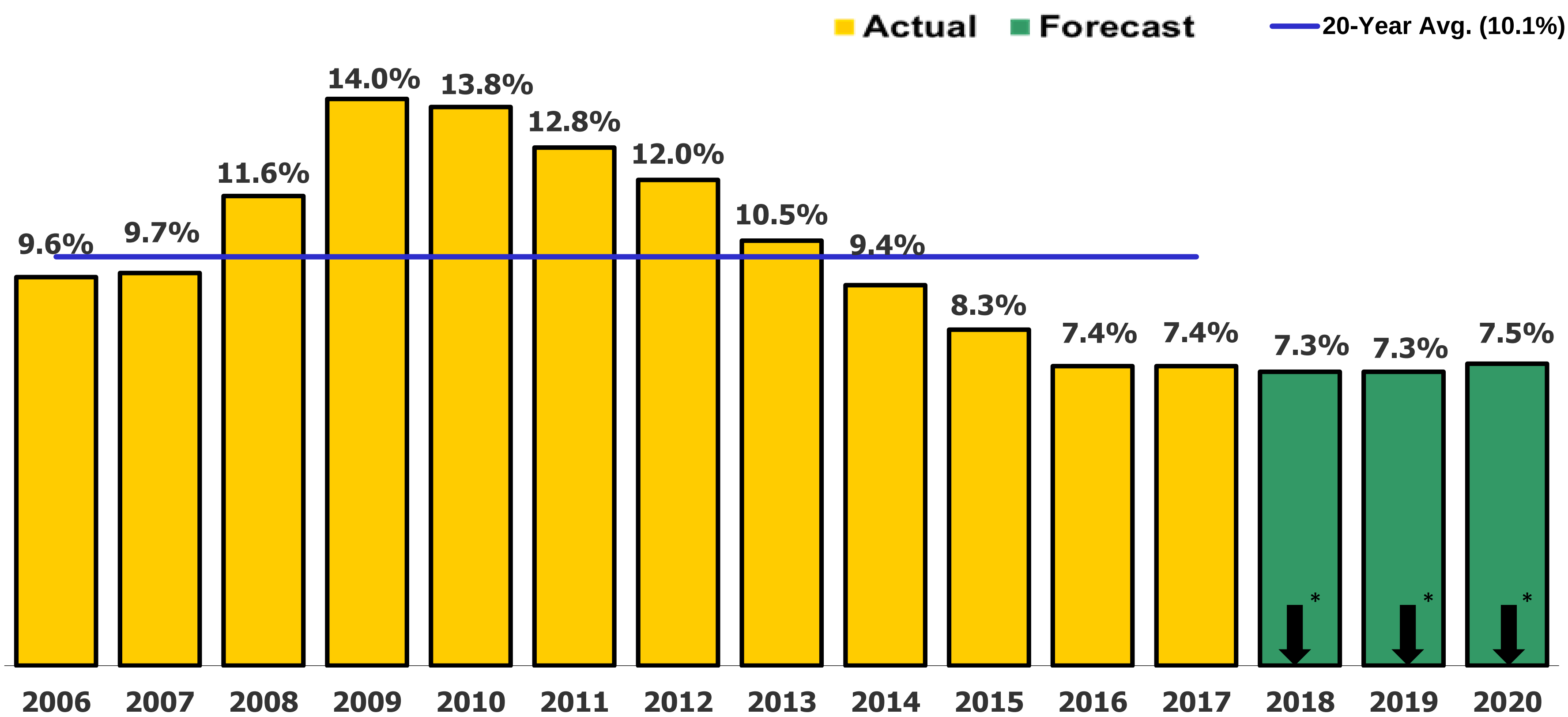
Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector ended a seven-year decline in 2017, plateauing at 7.4%. Availability rates are expected to tick down to 7.3% in 2018, where it will remain in ‘19 before ticking up to 7.5% by ‘20. Rates in all three forecast years are projected to remain well below the 20-year average.

- Warehouse rental rate growth in the last five years has been substantially above the long-term average. Forecasts are for healthy but moderating rental rate growth with increases of 3.9% in 2018, 3.3% in ‘19, and 2.4% in ‘20, still remaining above the 20-year average growth rate.

- Compared to the forecast from six months ago, the forecast for industrial/warehouse availability rates is more optimistic for ‘18, ‘19, and ‘20, while rental rate growth is less optimistic for all three years.

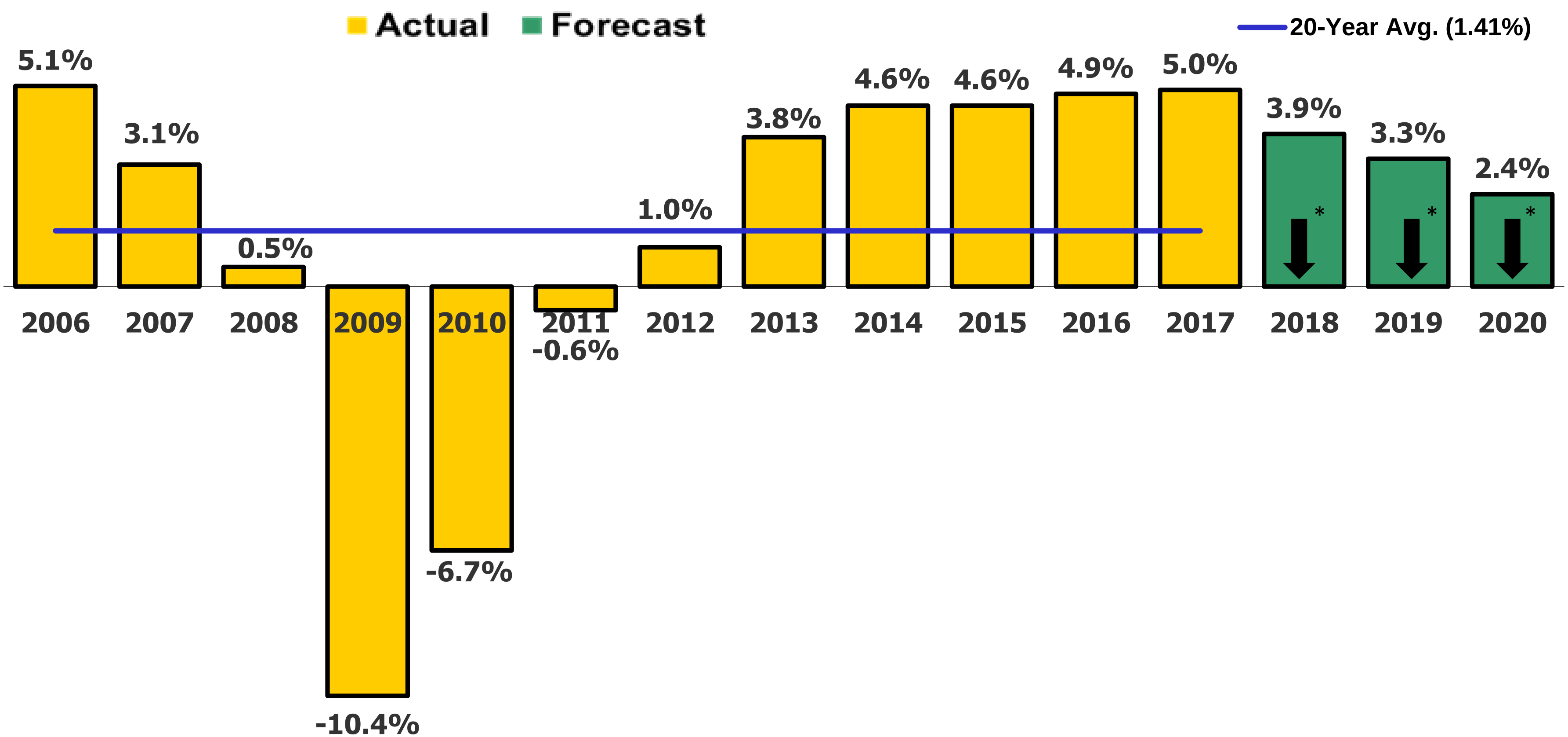
Industrial/Warehouse Availability Rates



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 April, 2018. Previous projections were 7.4%, 7.5%, and 7.7%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 4.6%, 3.8%, and 3.0%, respectively, for 2018, 2019, and 2020.

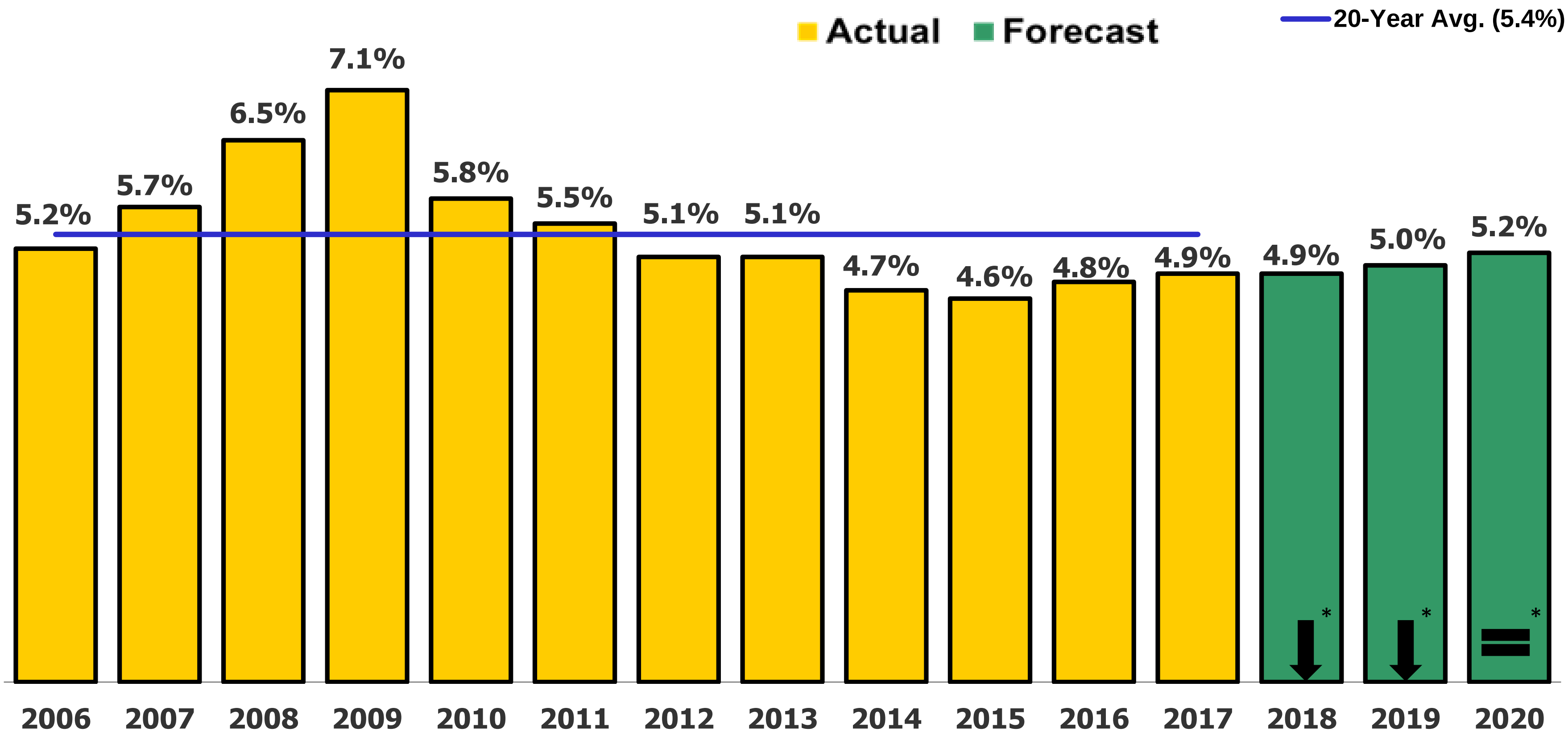
Apartment Sector Fundamentals

- 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 reach 5.2% in 2020.

- Apartment rental rate growth was positive in 2017 for the eighth straight year in 2017 at 1.8%. Rental rate growth is expected to stay positive throughout the forecast period, increasing to 2.9% in ’18 before moderating to 2.5% in ’19 and 2.0% in ‘20.

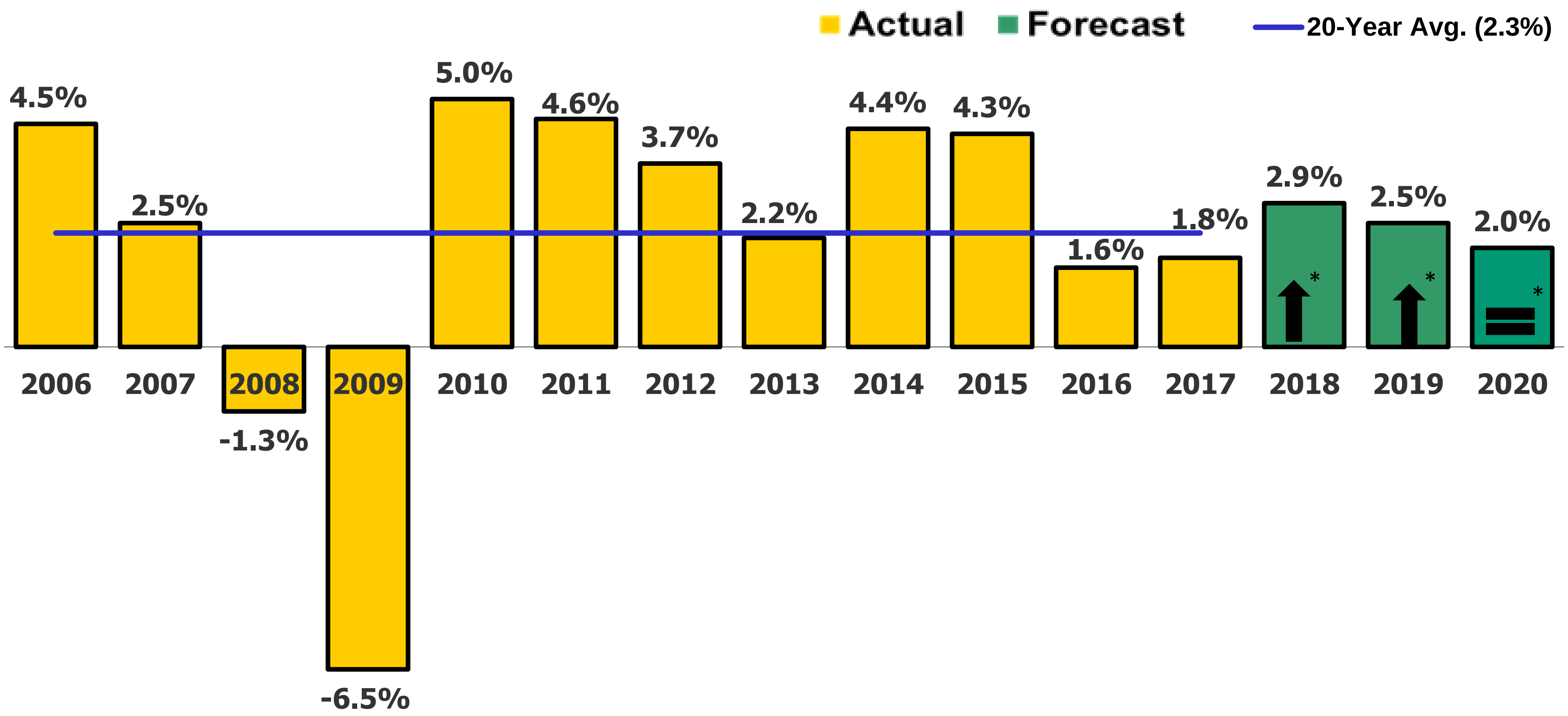
- Compared to 6 months ago, the forecasts for both vacancy rates and rental rate growth are more optimistic for ’18 and ‘19, but unchanged for ‘20.

Apartment Vacancy Rates



Sources: 1998-2017 (Q4), CBRE; 2018-2020 (Q4), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2018. Previous projections were 5.0%, 5.2%, and 5.2%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 1.5%, 2.0%, and 2.0% respectively, for 2018, 2019, and 2020.

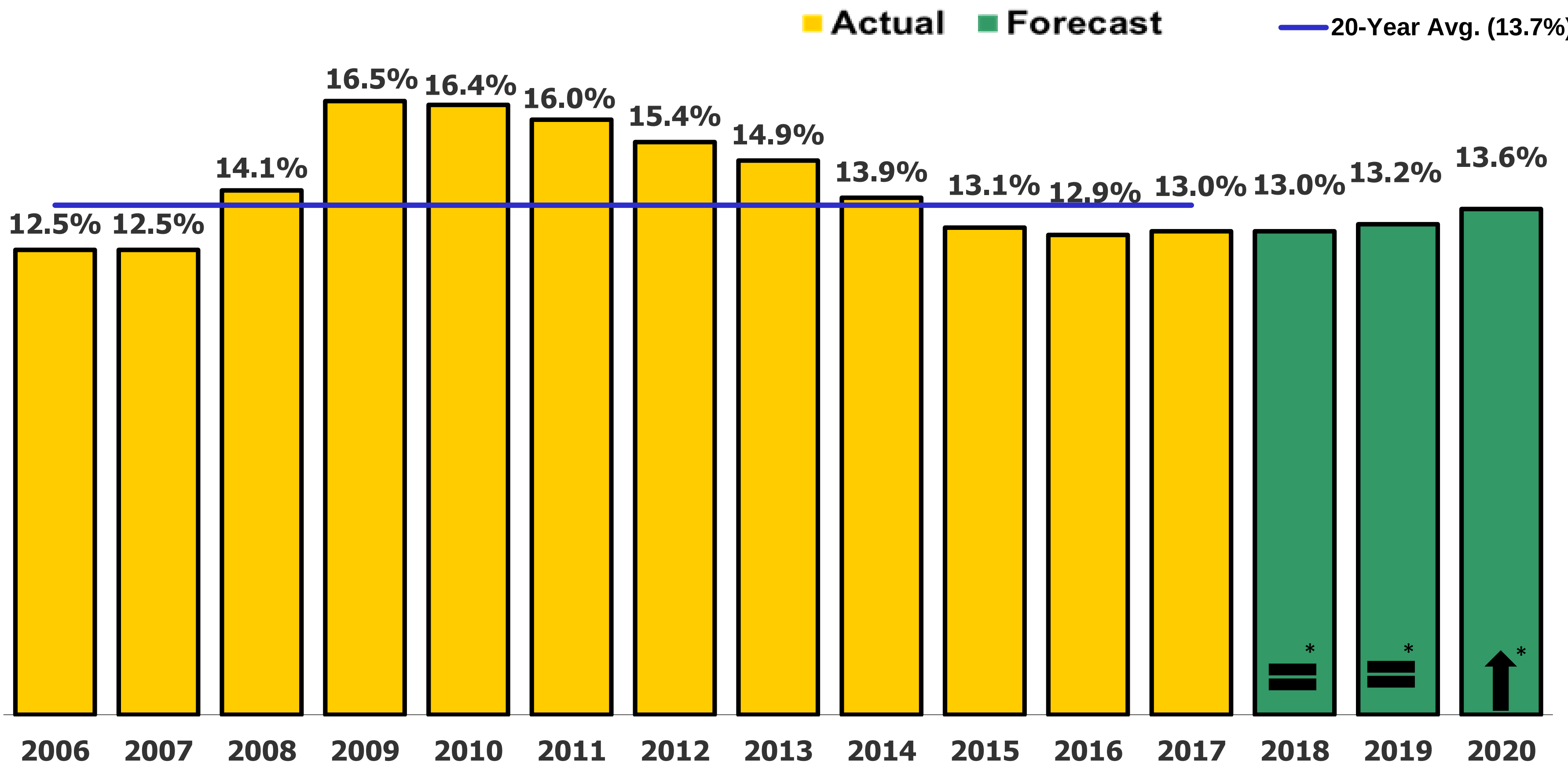
Office Sector Fundamentals

- 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 13.6% in 2020. All of these rates remain below the 20-year average.

- Office rental rates increased 2.1% in 2017, just above the 20-year average of 1.9%. Rental rate growth is expected to increase to 2.2% in 2018, before edging back down to 2.0% in ’19 and 1.0% in ‘20.

- Compared to 6 months ago, the forecast for office vacancy rates is unchanged for both ‘18 and ‘19, but less optimistic for ’20. The forecast for office rental rate growth is less optimistic for ‘18 and ’20.

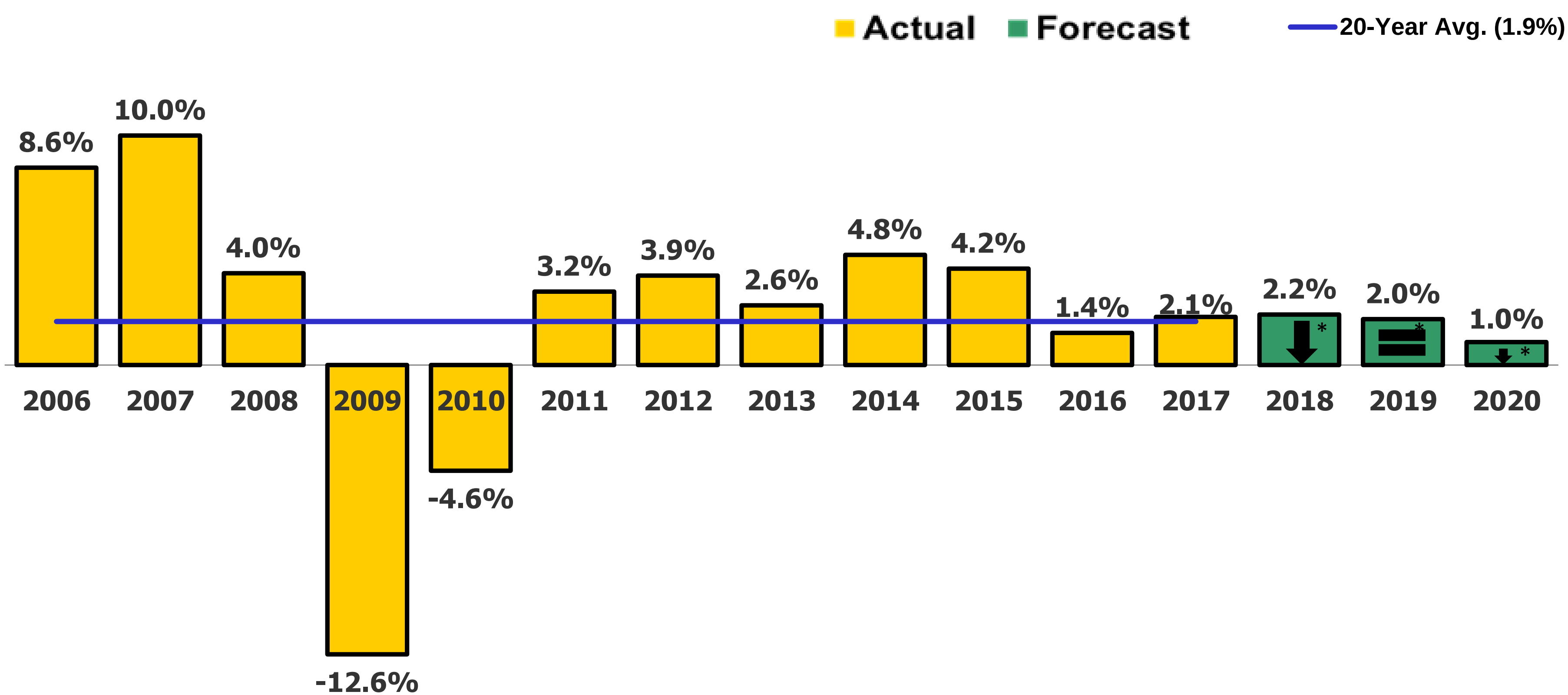
Office Vacancy Rates



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 April, 2018. Previous projections were 13.0%, 13.2%, and 13.4%, respectively, for 2018, 2019, and 2020.

Office 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 April, 2018. Previous projections were 2.5%, 2.0%, and 1.5%, respectively, for 2018, 2019, and 2020.

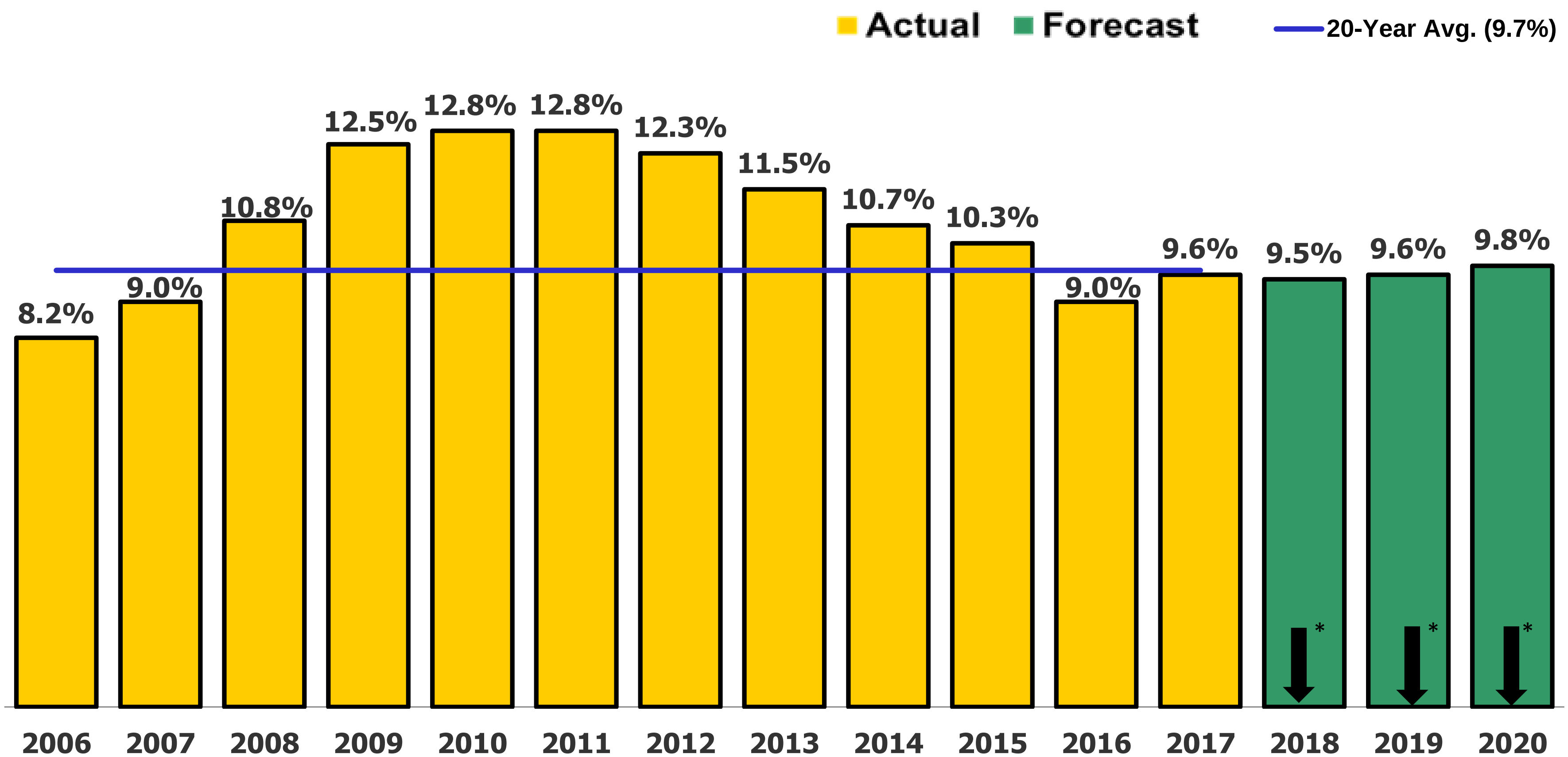
Retail Sector Fundamentals

- 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 a slight dip in ’18 before returning to 9.6% in ‘19, and increasing to 9.8% in ‘20.

- Retail rental rate growth reached a post-recession high of 3.1% in 2017. The forecast expects growth to substantially moderate during the forecast period to 1.8% in ‘18, 1.6% in ‘19, and 0.6% in ‘20.

- Compared to 6 months ago, the forecast for retail availability rates is more optimistic for ‘18, ‘19, and ‘20, while retail rental rate growth is less optimistic for all three years.

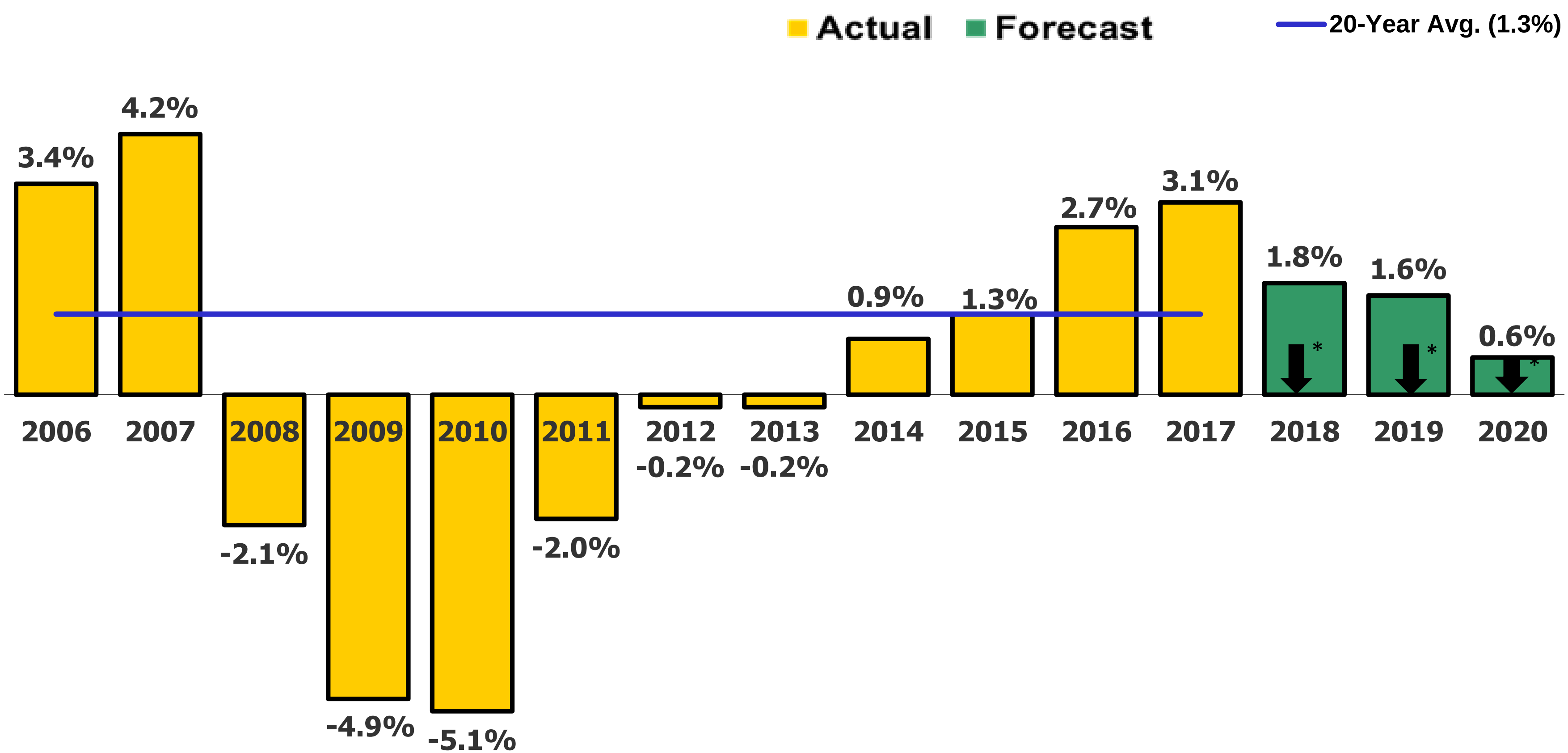
Retail Availability Rates



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 April, 2018. Previous projections were 9.8%, 9.9%, and 10.0% respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 2.0%, 1.8%, and 1.1%, respectively, for 2018, 2019, and 2020.

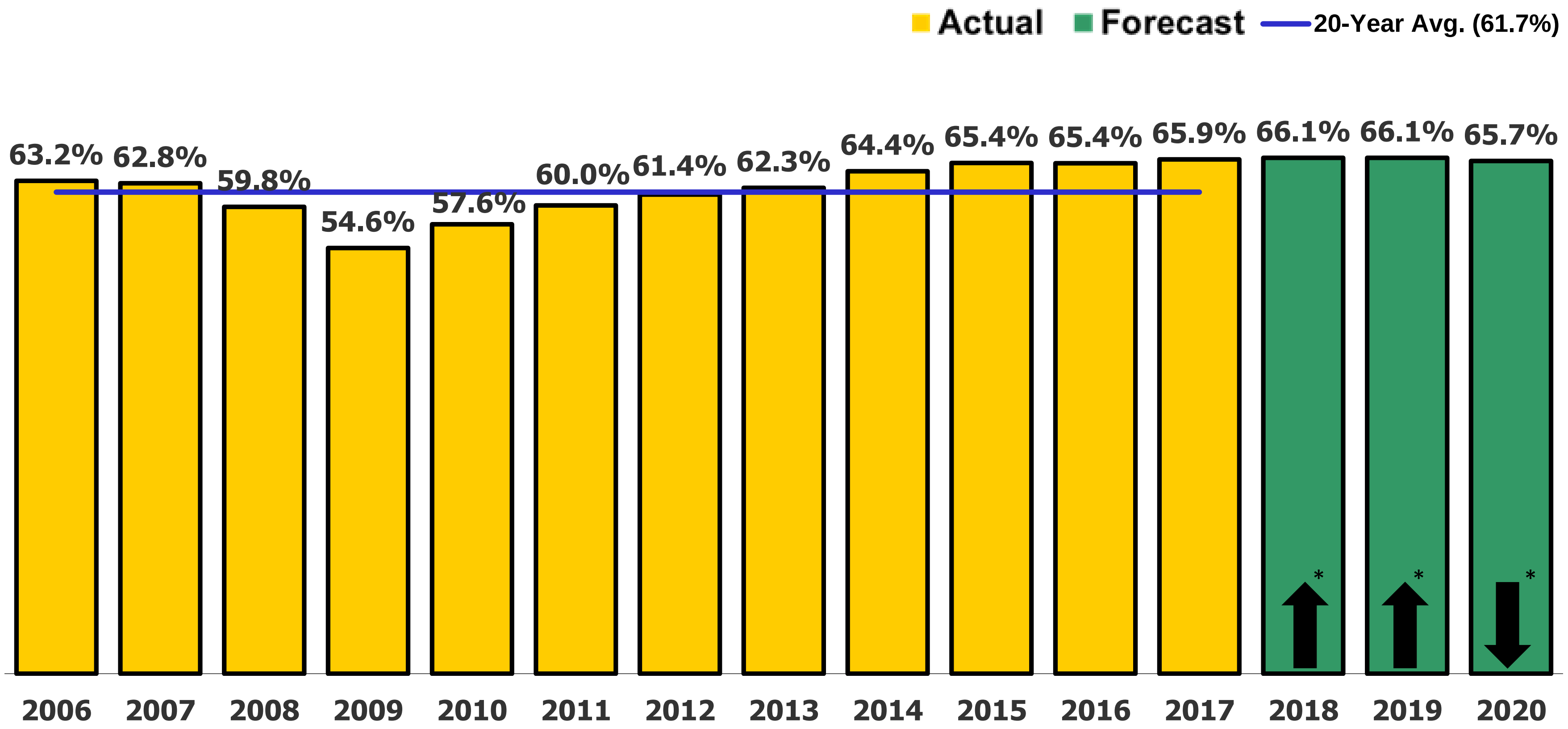
Hotel Sector Fundamentals

- Hotel occupancy rates, according to STR, have been steadily improving since reaching a low of 54.6% in 2009. Occupancy rates came in at 65.9% in 2017, above the twenty-year average. Rates are forecast to remain strong over the forecast years, at 66.1% in ’18 and‘19 and 65.7% in ‘20.

- Following six years of above-average hotel revenue per available room (RevPAR), RevPAR growth began to moderate in 2016 and ’17, reaching 2.9%. It is expected to decrease to 2.5% in ‘19, and 1.5% in ‘20.

- Compared to the forecast of 6 months ago, the current forecasts for both occupancy rates and RevPAR growth are more optimistic for ‘18 and ’19, but less optimistic for ’20.

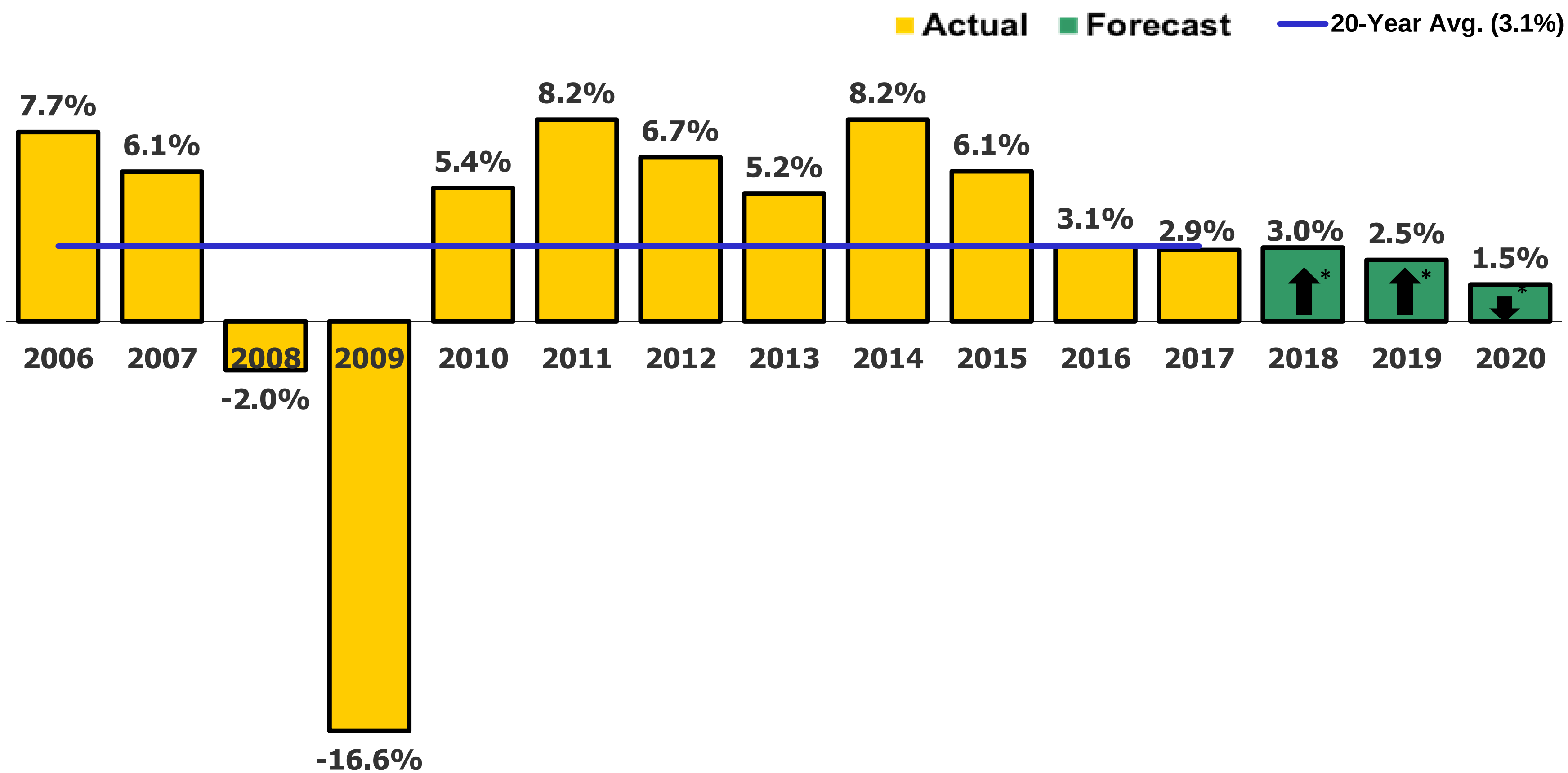
Hotel Occupancy Rates



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 April, 2018. Previous projections were 66.0%, 66.0%, and 65.8%, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 2.7%, 2.4%, and 1.7%, respectively, for 2018, 2019, and 2020.

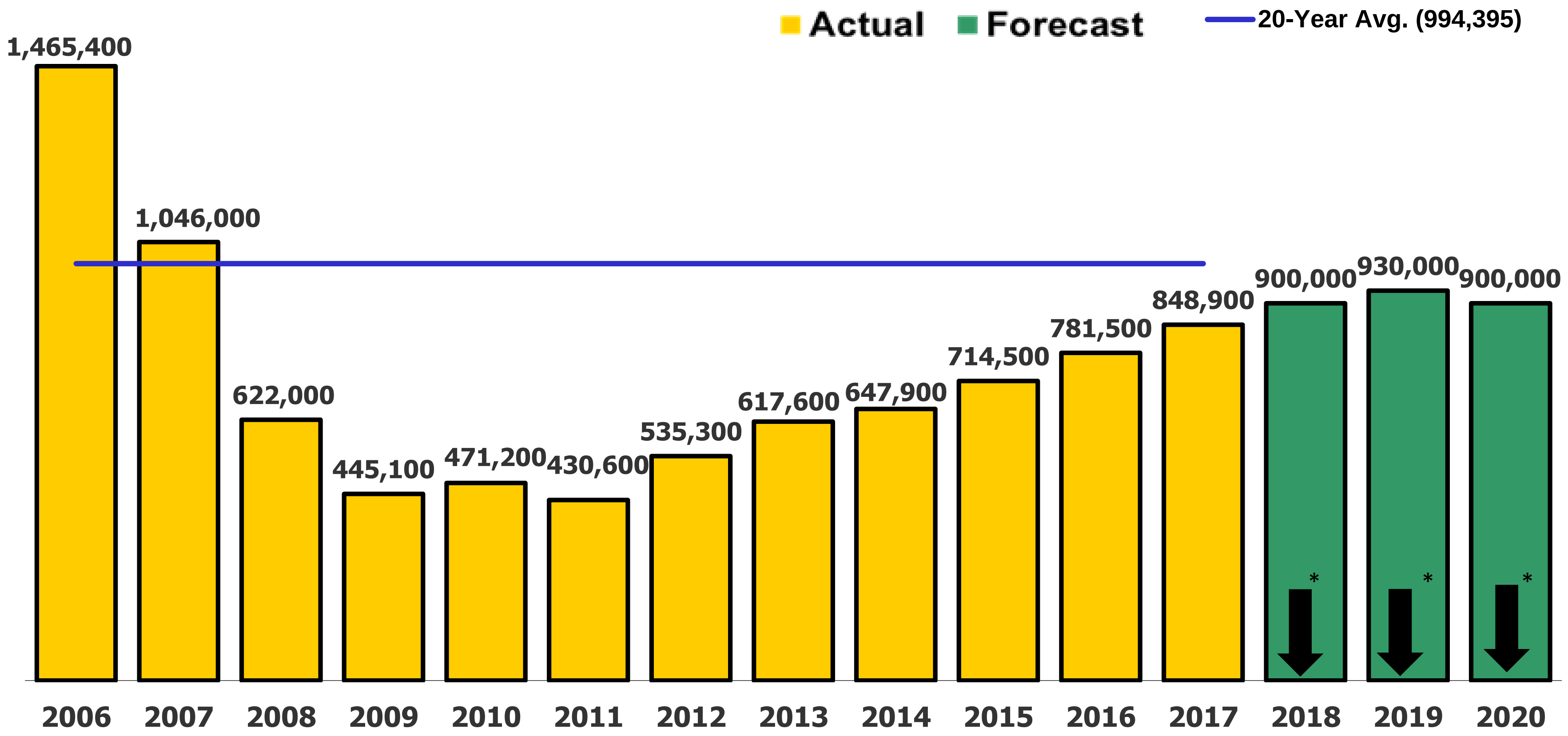
Housing Sector

- The single-family housing sector experienced positive growth in starts for the sixth straight year in 2017. Growth is expected to continue but remain below the long-term average, increasing to 900,000 in ’18 and 930,000 in ’19 before moderating back down to 900,000 in ’20.

- According to the FHFA, growth in existing home prices increased on average by 6.9% in 2017, the sixth consecutive year of strong price growth. Price growth is expected to be more moderate during the forecast period: 5.0% in ‘18, 4.2% in ‘19, and 3.4% in ‘20.

- Compared to six months ago, forecasts for both housing starts and existing house price growth is less optimistic for all three years of the forecast period.

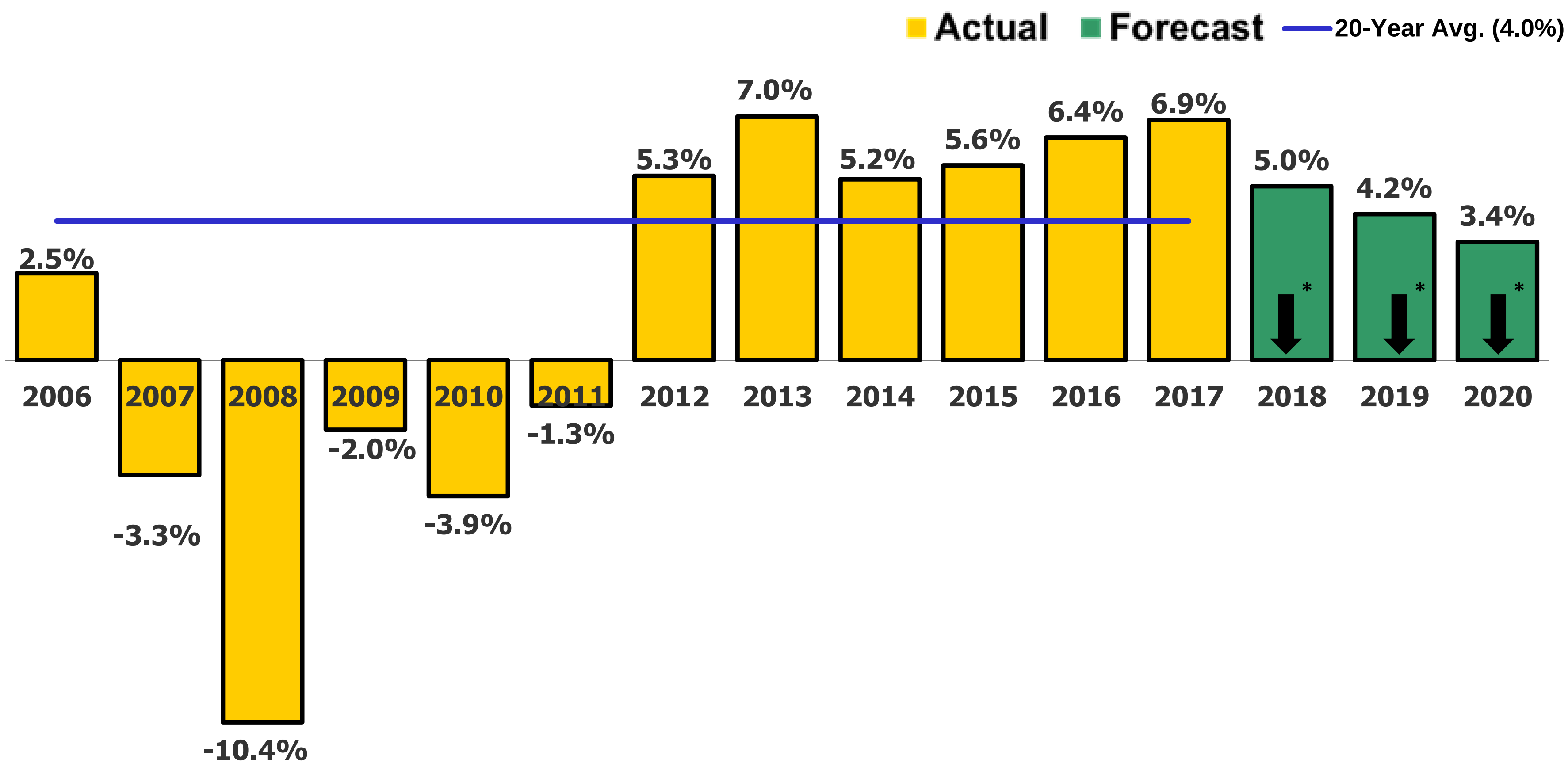
Single-Family Housing Starts



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 April, 2018. Previous projections were 923,000, 987,500, and 925,000, respectively, for 2018, 2019, and 2020.

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 April, 2018. Previous projections were 5.3%, 4.3%, and 4.0% respectively, for 2018, 2019, and 2020.

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
Bentall Kennedy	Douglas Poutasse	EVP, Head of Strategy and Research
Berkshire Group	Gleb Nechayev	SVP, Head of Research
CBRE	Tim Savage	Data Science Advisor
	Jeanette Rice	Americas Head of Multifamily Research
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
DWS	Mark Roberts	Head of Research & Strategy, Alternatives
Eigen 10 Advisors, LLC	Eileen E. Marrinan	Managing Director
	Paige Mueller	Managing Director

continued…….

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Everest Healthcare Properties, LLC	David J. Lynn	CEO, President and Founder
	Ross Tieken	Manager
Green Street Advisors	Dave Bragg	Managing Director
	Peter Rothemund	Senior Analyst
Harrison Street Real Estate Capital	Thomas Errath	Senior Vice President
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	Director, Americas Research & Strateegy
Linneman Associates	Peter Linneman	CEO
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	Greg Daco	Head of U.S. Economics
	Matthew Mowell	Senior Economist
	Aran Ryan	Tourism Economics, Director of Lodging Analytics

continued……

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
PwC, LLP	Andrew Warren	Director, Real Estate Research
RCLCO	Taylor Mammen	Managing Director
	Ben Maslan	Principal
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

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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A Survey of Leading Real Estate Economists/Analysts

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