



ULI Real Estate Economic Forecast

A Survey of Leading Real Estate Economists/Analysts

October 2019

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 ('19-'21) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 41 economists/analysts at 32 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 16th survey; completed August 6 – August 27, 2019.
- A semi-annual survey; next release planned for April 2020.
- 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 of 2.2% in '19 and '20. Employment growth is forecast to remain above the long-term average throughout the forecast period, but moderate to 1.50 million by 2021, which would be 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; better than long-term average vacancy/occupancy rates but with a slight retreat from the tightest recent rates; moderating single family housing starts.
- Altogether, 17 real estate indicators are projected to be better than their 20-year averages in 2019 while 6 are expected to be worse. By 2021, 2 indicators are expected to be equal to their 20-year average, 9 indicators expected to be better and 12 are expected to be worse. Also, inflation, the 10-year Treasury rate and the NCREIF 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	CMBS Issuance
Unemployment Rate Employment Growth	Hotel RevPAR Change
REIT Total Returns NCREIF Industrial Returns	NCREIF Returns: Apartment, Office, Retail
Transaction Volume	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, Apartment*, Office*	Rental Rate Growth: Retail
	REIT Total Returns
	Hotel RevPAR Change
	Single-family starts
	Home Price Growth

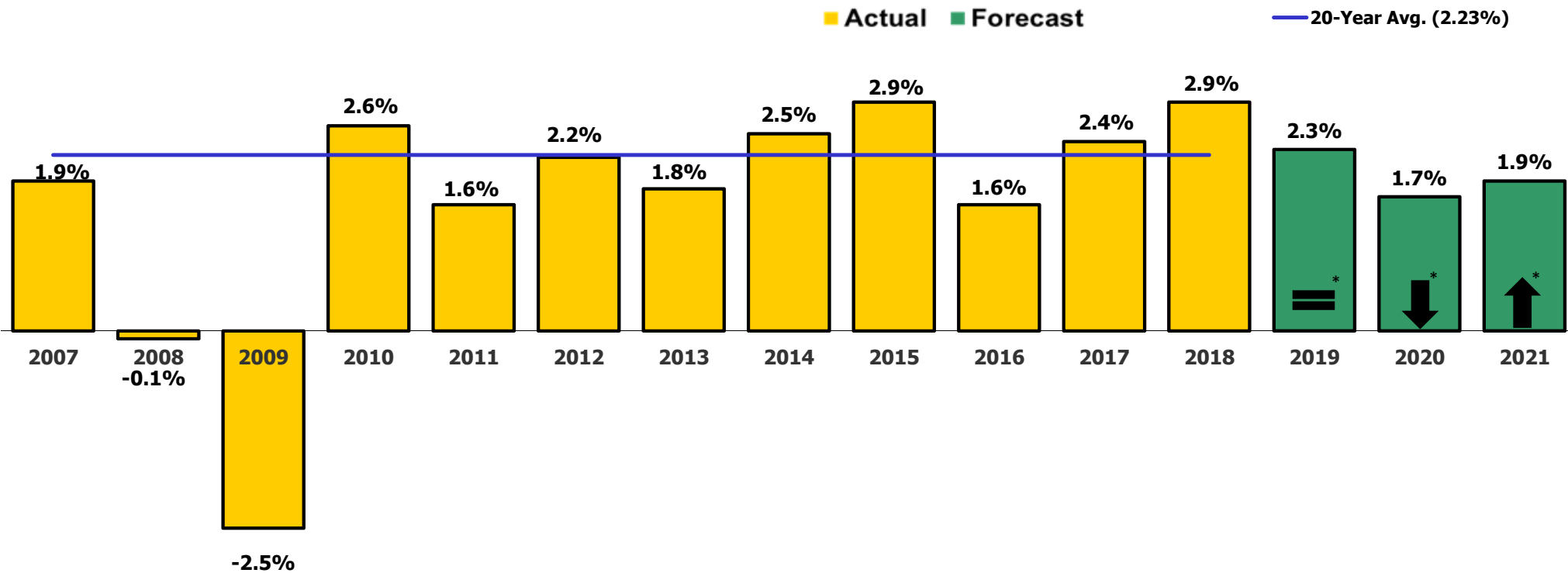
*equal to long-term average

Key Findings

- Transaction volume reached a post-recession high of \$579 billion in 2018, approaching the 2007 volume of \$582 billion. Annual volume is forecast to moderate during the forecast period to \$500 billion in '19, \$480 billion in '20, and \$470 billion in '21. Still, these are among the highest annual volumes and remain well above the long-term average.
- Commercial real estate prices are projected to grow at slowing rates relative to recent years, at 5.1% in '19, 4.0% in '20, and 3.9% in '21, with the latter two years falling below the long-term average growth rate of 4.3% for the first time in ten years.
- Institutional real estate assets are expected to provide total returns of 6.0% in '19, moderating to 5.2% in '20 and 5.5% in '21. By property type, 2019 returns are forecast to range from industrial's 11.0% to retail's 2.9%. In '21, returns are forecast to range from industrial's 7.1% to retail's 3.0%.
- Both industrial and retail availability rates are expected to be unchanged in 2019 from their '18 rates, before edging up in both '20 and '21. Both apartment and office vacancy rates are expected to see a slight decrease in '19 before slightly increasing in both '20 and '21. 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 3.6% for industrial to 1.8% 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 2.0% in 2019 and by 1.0% in 2020.
- Single-family housing starts are projected to slightly decrease from their 2018 level of 875,800 units to 850,000 in '19 which would see the end of seven straight years of growth. Starts are then projected to continue to moderate to 810,000 in '20 and 800,000 in '21.

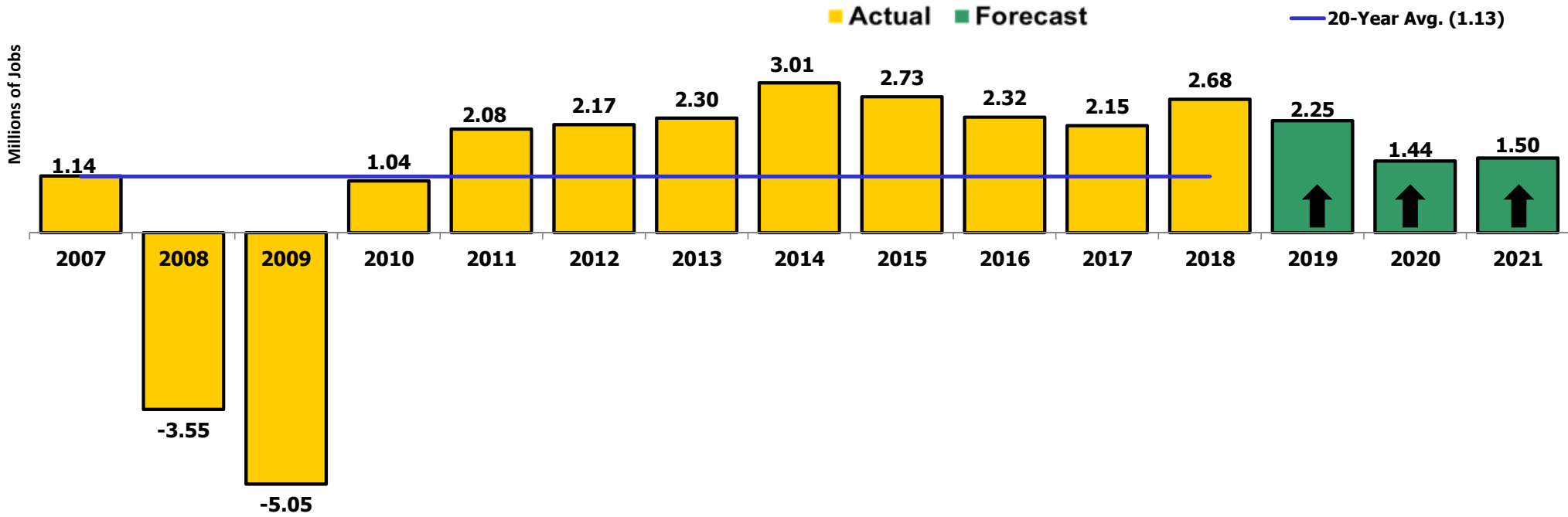
Economy

- 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, is projected to moderate over the forecast period; still, the unemployment rate remains well below the long-term average during the forecast period.
- GDP growth strengthened to 2.9% in 2018. Growth rates are forecast to moderate to 2.3% in '19 before further moderating to 1.7% in '20, and then ticking back up to 1.9% in '21.
- Employment growth is expected to moderate from the 2.68 million jobs added in 2018 to 2.25 million jobs in '19 and 1.44 million in '20, before inching up to 1.50 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 4.0% in '20 and 4.1% in '21.
- Compared to forecasts of 6 months ago, the three-year average of the forecast for GDP is unchanged; the three-year averages of the forecasts for employment growth and for the unemployment rate are slightly more optimistic.



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

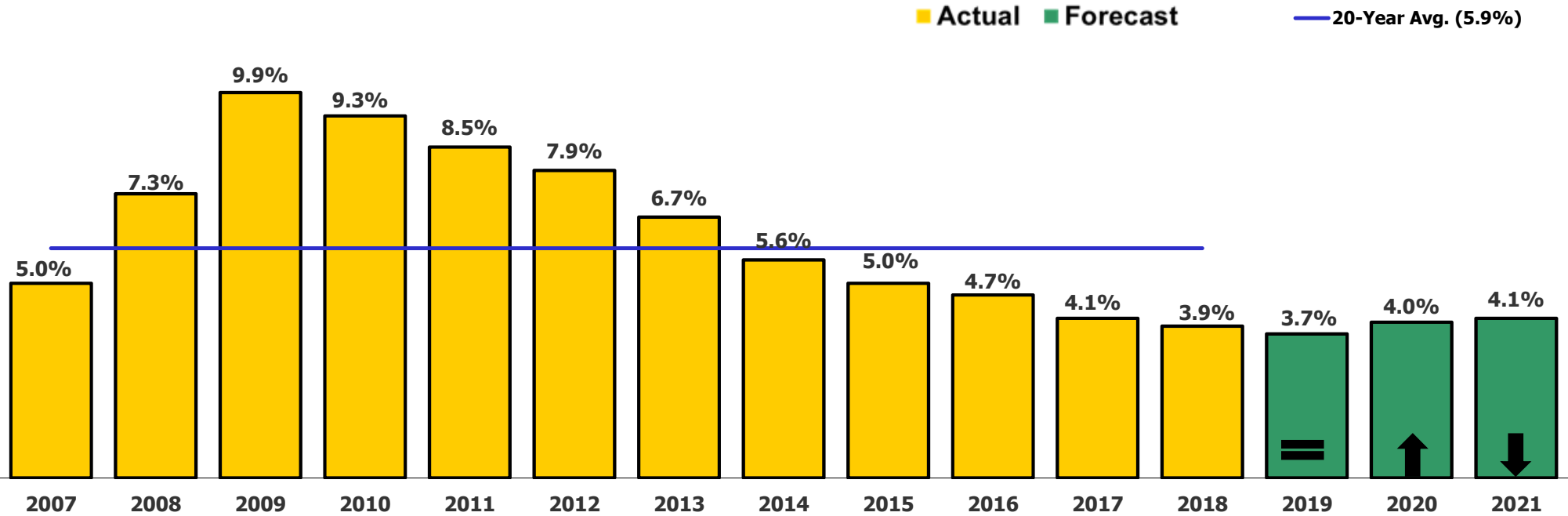
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast, released in April, 2019. Previous projections were 2.3%, 1.8%, and 1.8%, respectively, for 2019, 2020, and 2021.



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.10, 1.42, and 1.20, respectively, for 2019, 2020, and 2021.

Unemployment Rate



Sources: 1999-2018, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2019-2021 (YE), ULI Real Estate Economic Forecast.

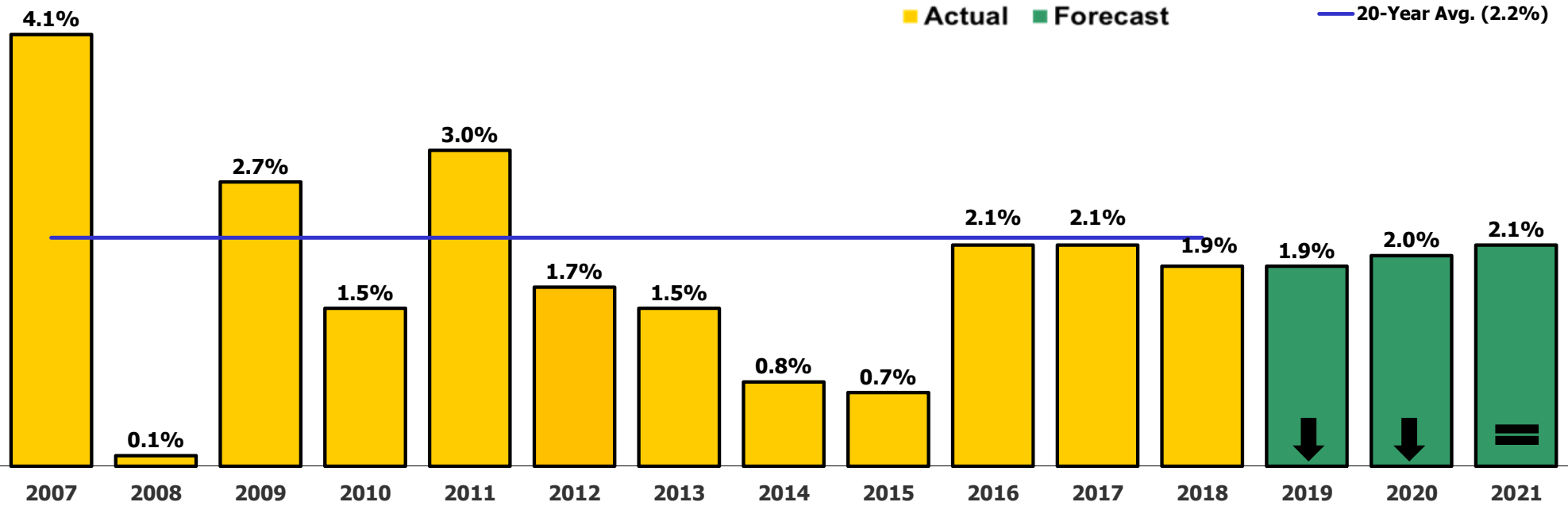
Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 3.7%, 3.9%, and 4.3%, respectively, for 2019, 2020, and 2021.

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 below the average over the forecast period. The CPI was 1.9% in 2018; it is projected to stay at 1.9% in '19, inch up to 2.0% in '20 and 2.1% in '21.
- The ten-year treasury rate has remained below the 20-year average of 3.5% for 9 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 fall to 1.8% by year-end '19 before ticking up to 2.0% in '20 and 2.3% in '21.
- Capitalization rates for institutional-quality investments (NCREIF cap rates) have steadily declined for nine years, 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 remaining at 5.0% in '21, still below the 20-year average of 6.36%.
- Compared to the forecast from 6 months ago, the three-year averages of the forecasts for the CPI inflation rate, for the ten-year treasury rate, and for the NCREIF cap rate are lower.



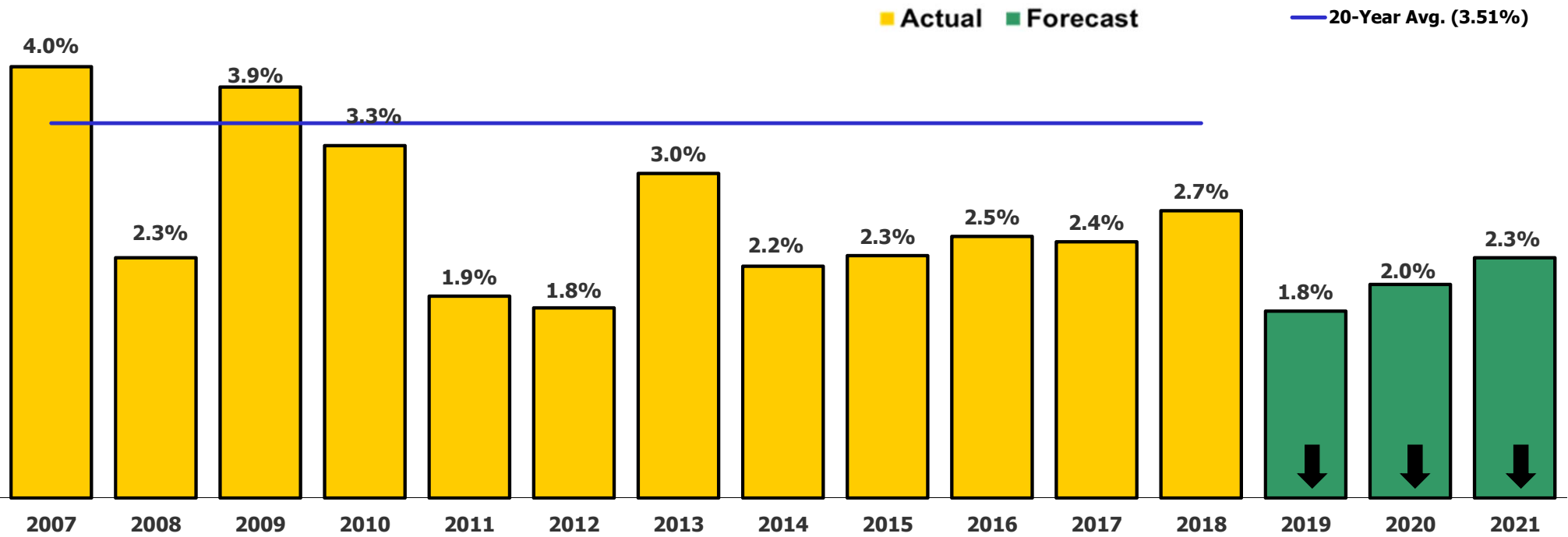
Consumer Price Index Inflation Rate



Sources: 1999-2018, (12-month change, as of December), Bureau of Labor Statistics; 2019-2021 (YE), ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.0%, 2.1%, and 2.1%, respectively, for 2019, 2020, and 2021.

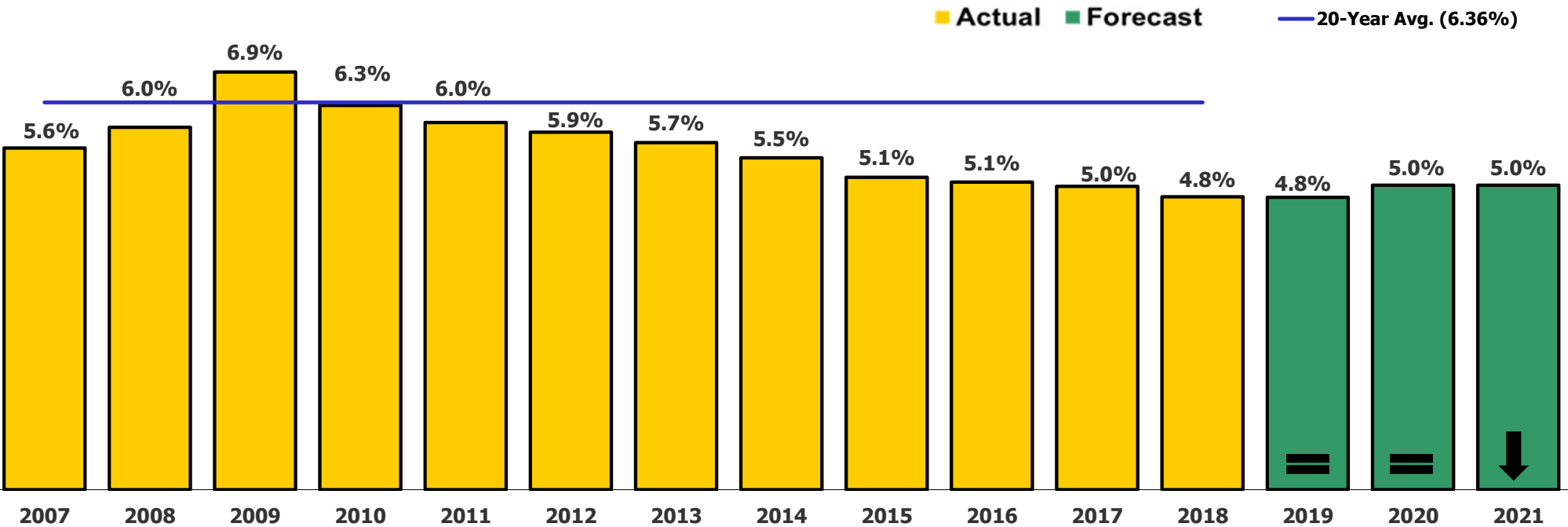
ULI Real Estate Economic Forecast Ten-Year Treasury Rate



Sources: 1999-2018 (YE), U.S. Federal Reserve; 2019-2021 (YE), ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.8%, 2.9%, and 2.9%, respectively, for 2019, 2020, and 2021.

ULI Real Estate Economic Forecast
NCREIF Capitalization Rate

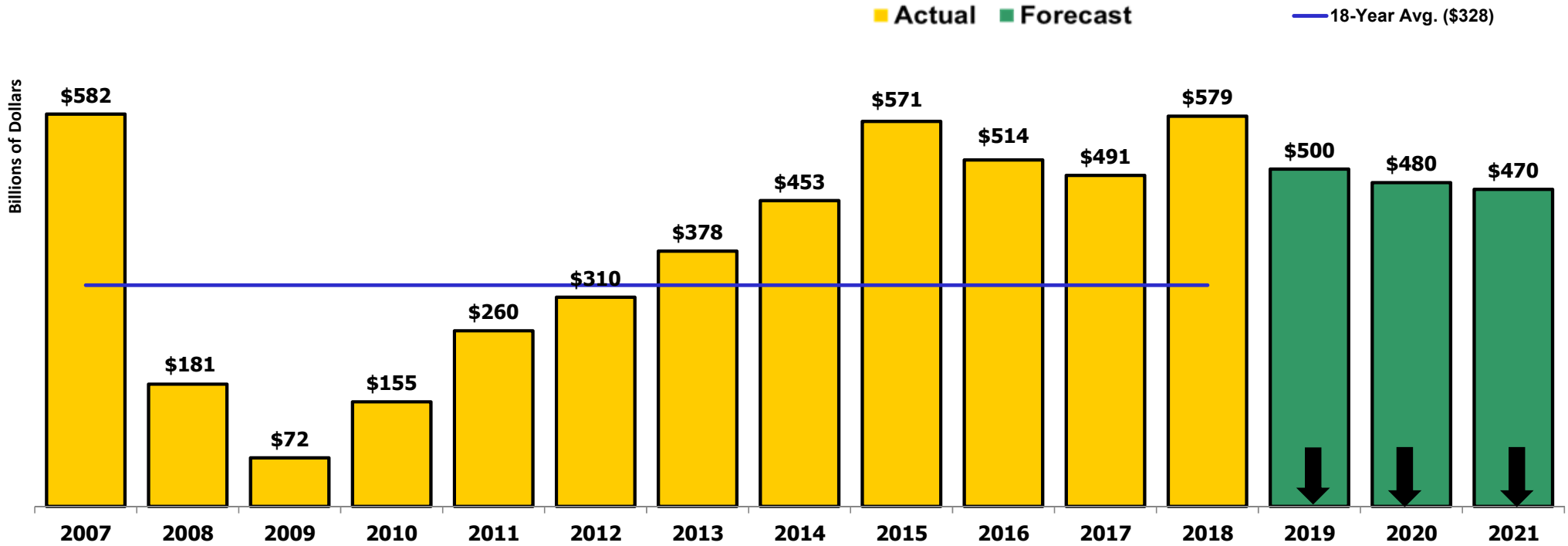


Sources: 1999-2018, (Q4), National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021 (YE), ULI Real Estate Economic Forecast.
Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 4.8%, 5.0% and 5.2%, respectively, for 2019, 2020, and 2021.

Real Estate Capital Markets

- Commercial real estate transaction volume reached \$579 billion in 2018, a post-recession high. Volume is expected to moderate in the forecast years to \$500 billion in '19, \$480 billion in '20, and \$470 billion in '21. Despite these projected declines, volumes remain substantially above the 18-year annual average of \$328 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 \$75 billion in '19, \$65 billion in '20, and \$75 billion in '21.
- Compared to the forecasts of 6 months ago, the three-year averages of the forecasts for both transaction volume and CMBS issuance are less optimistic.

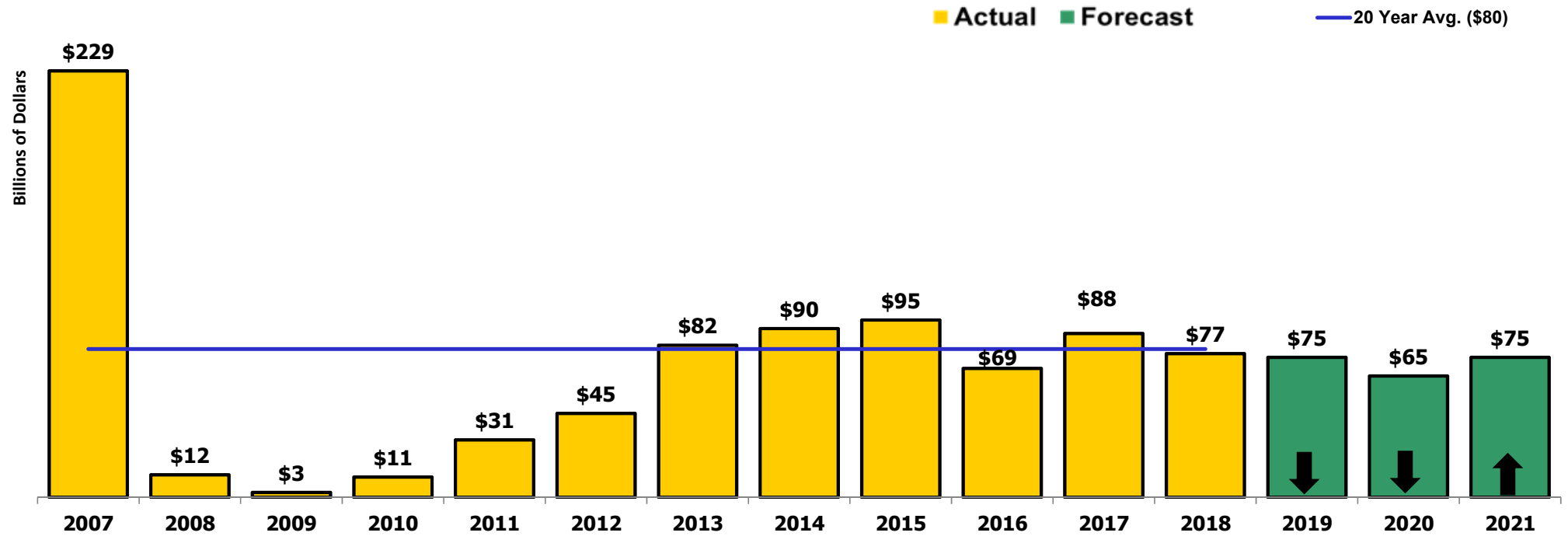
Commercial Real Estate Transaction Volume



Sources: 2001-2018, Real Capital Analytics; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected \$535, \$500 and \$480, respectively, for 2019, 2020, and 2021.

Commercial Mortgage-Backed Securities (CMBS) Issuance



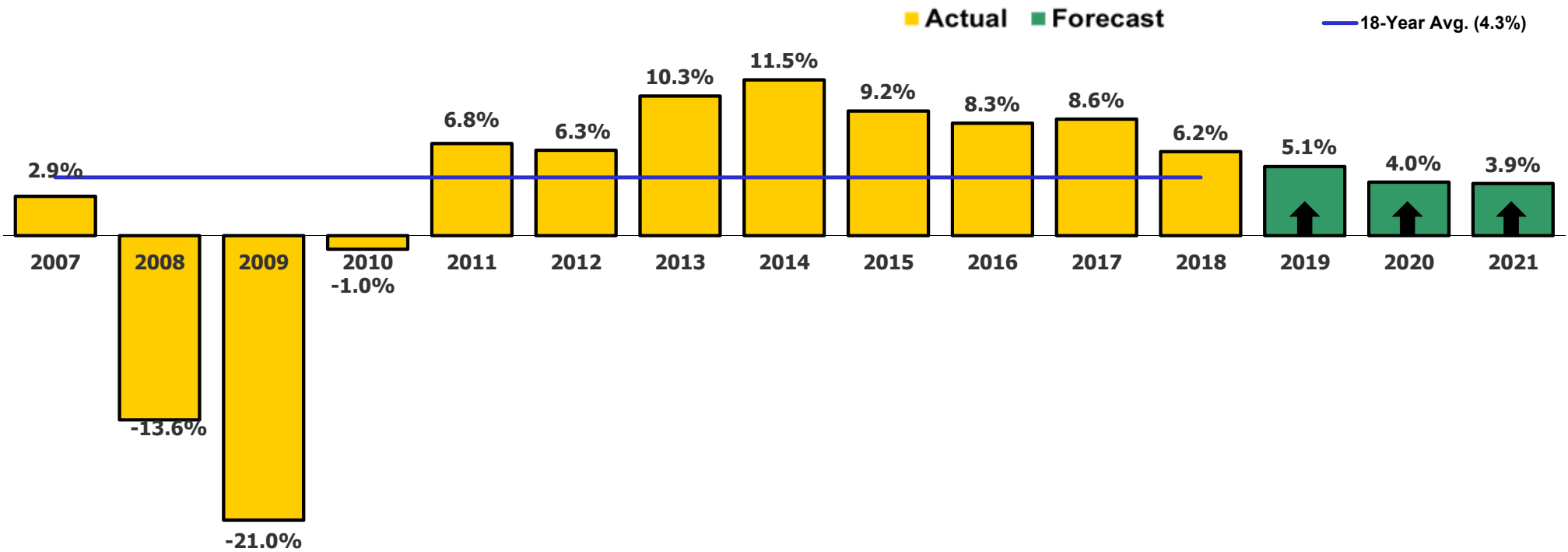
Sources: 1999-2018, Commercial Mortgage Alert; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected \$80 billion, \$75, and \$70 billion, respectively, for 2019, 2020, and 2021.

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 5.1% in 2019, 4.0% in '20, and 3.9% in '21. The growth rate in 2020 dips below the long-term average of 4.3% 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 return to positive throughout the forecast period, at 15.0% in '19, 6.3% in '20, and 8.0% in '21.
- 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 returns of 6.0% in '19, 5.2% in '20, and 5.5% in '21.
- Compared to the forecasts of 6 months ago, the forecasts for CPPI growth, REIT returns, and NCREIF total returns are more optimistic.

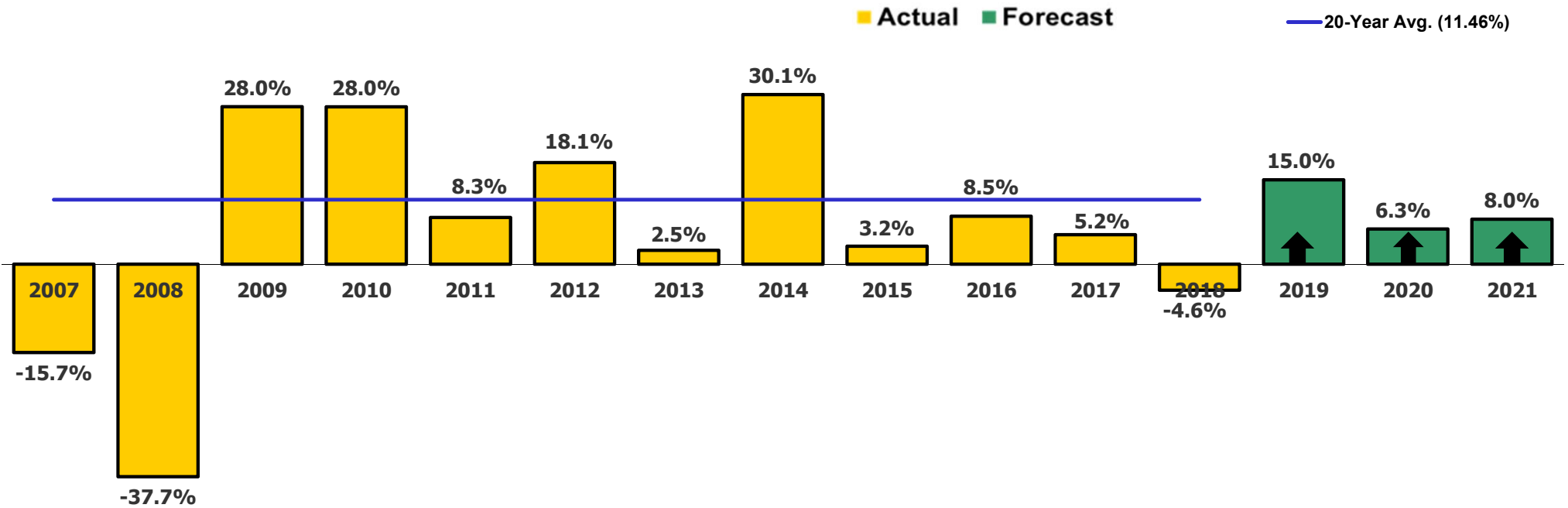
RCA Commercial Property Price Index (annual change)



Sources: 2001-2018, Real Capital Analytics; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 5.0%, 3.7%, and 2.8%, respectively, for 2019, 2020, and 2021.

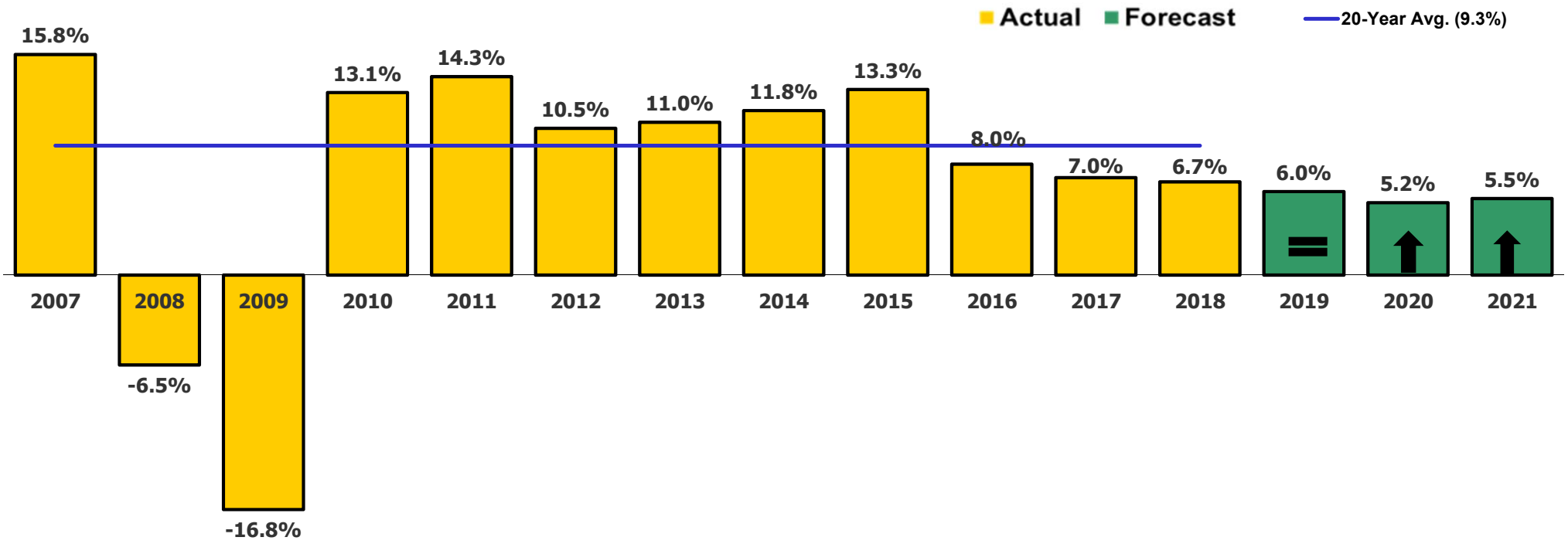
Equity REIT Total Annual Returns



Sources: 1999-2018, National Association of Real Estate Investment Trusts; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 6.0%, 5.3%, and 5.8%, respectively, for 2019, 2020, and 2021.

NCREIF Total Annual Returns



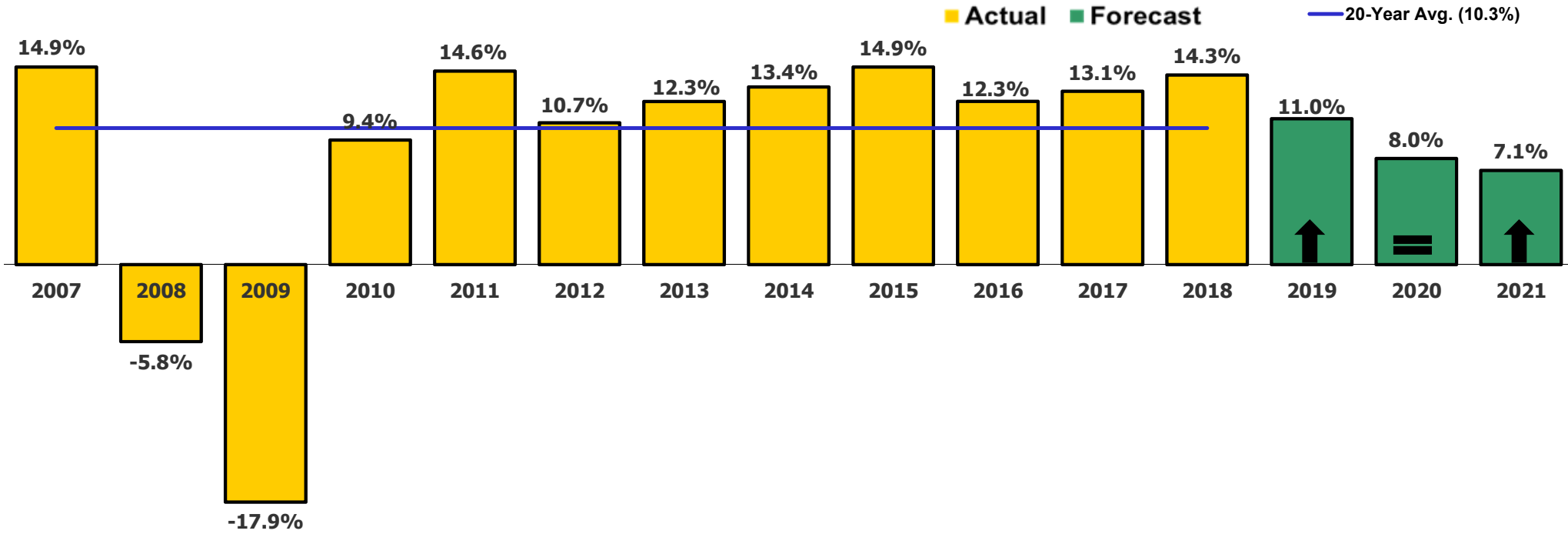
Sources: 1999-2018 National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 6.0%, 5.0%, and 5.0%, respectively, for 2019, 2020, and 2021.

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 11.0%, followed by office returns at 6.0%, apartment returns at 5.7%, and retail returns at 2.9%.
- By 2021, industrial, apartment, and office returns are expected to further moderate, with industrial returns forecast at 7.1%, apartment returns at 5.5%, and office returns at 5.1%. Retail returns are expected to rise slightly, although stay low at 3.0%.
- Compared to 6 months ago, the three-year averages of the forecasts for industrial returns and for office returns are more optimistic. The three-year averages of the forecasts for apartment returns and for retail returns are slightly less optimistic.



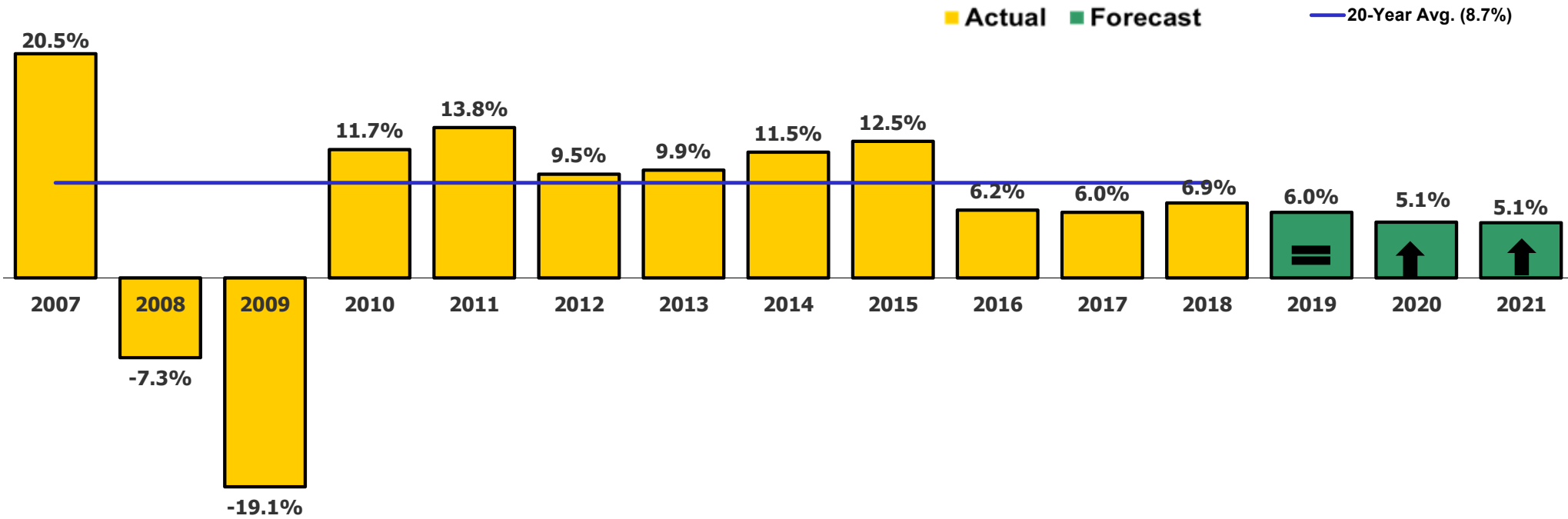
NCREIF Industrial Total Annual Returns



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 10.3%, 8.0%, and 7.0%, respectively, for 2019, 2020, and 2021.

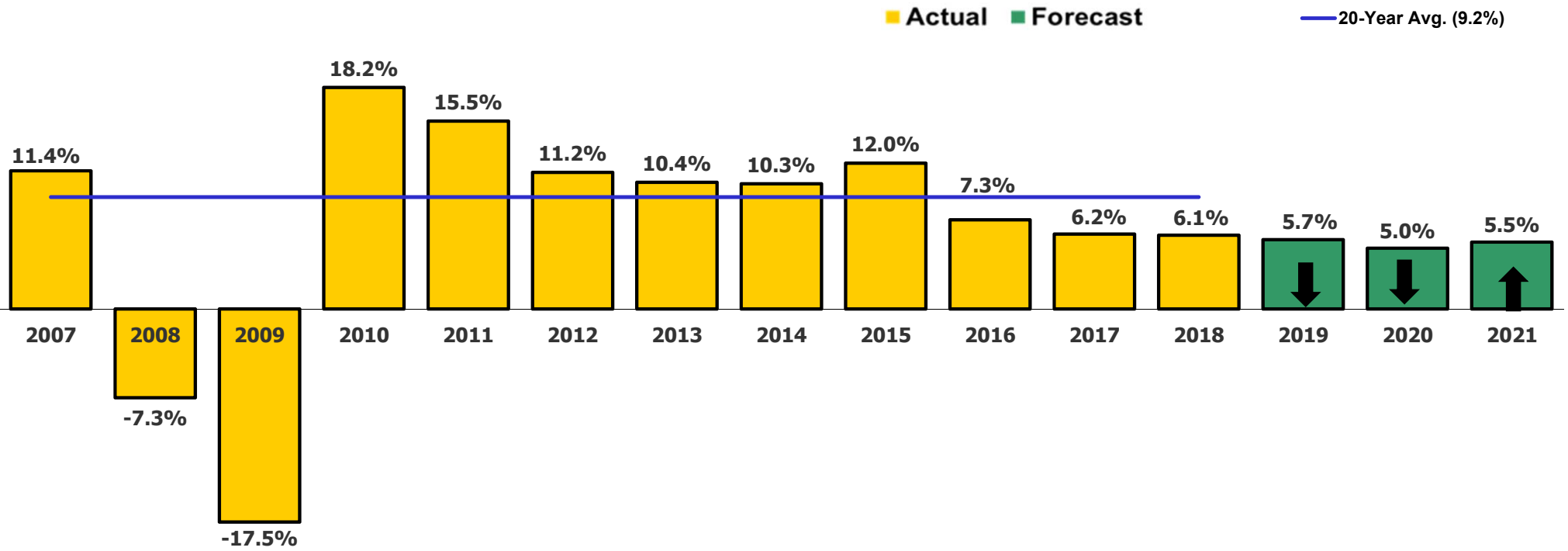
NCREIF Office Total Annual Returns



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 6.0%, 4.8%, and 4.7%, respectively, for 2019, 2020, and 2021.

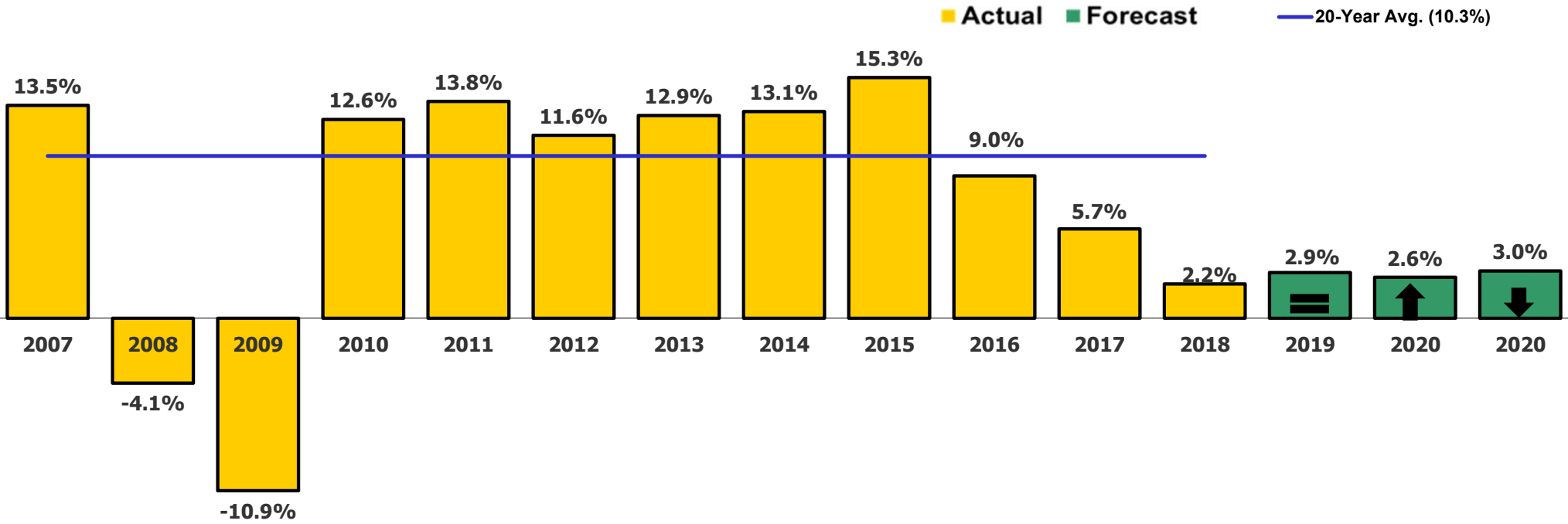
NCREIF Apartment Total Annual Returns



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 6.0%, 5.2%, and 5.4%, respectively, for 2019, 2020, and 2021.

NCREIF Retail Total Annual Returns



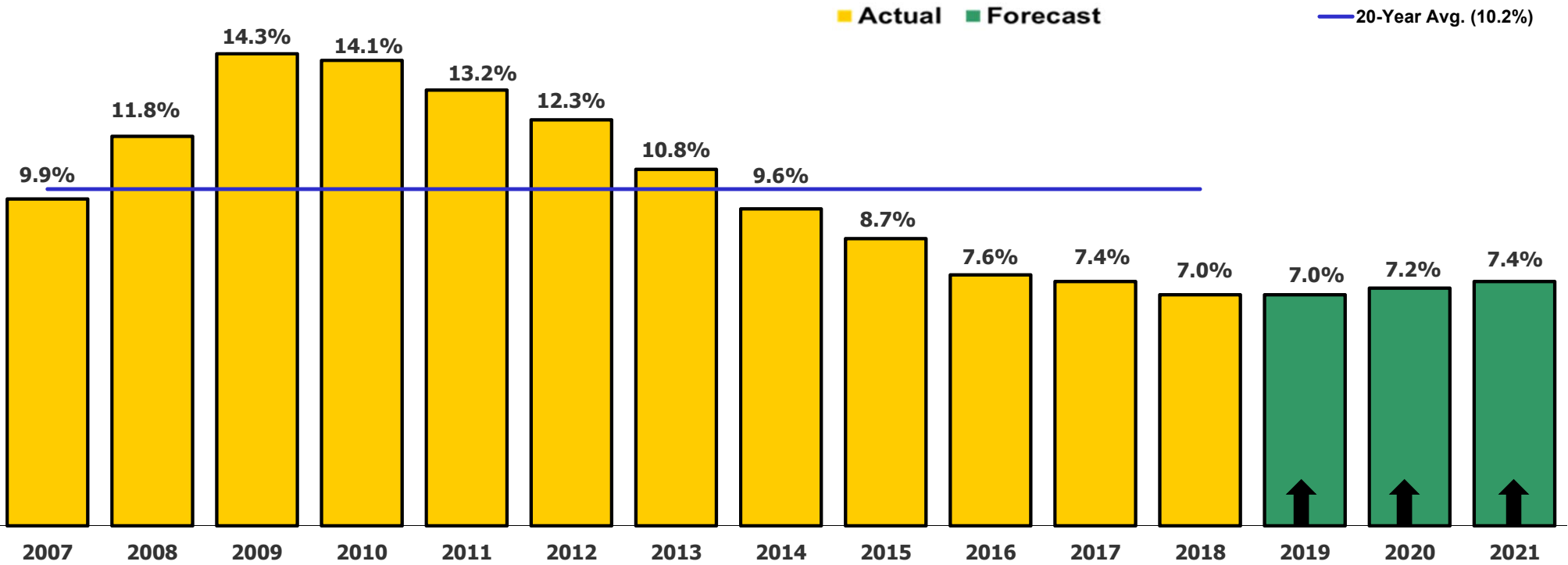
Sources: 1999-2018, National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2021, ULI Real Estate Economic Forecast.
Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.9%, 2.3%, and 3.8%, respectively, for 2019, 2020, and 2021.

Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector declined to 7.0% at the end of 2018, an 18-year low. Availability rates are expected to plateau at 7.0% in '19, before edging up to 7.2% in '20 and 7.4% in '21. Rates in all three forecast years are well below the 20-year average.
- Warehouse rental rate growth in the last six years has been substantially above the long-term annual average of 1.3%. Healthy growth is expected to continue in the forecast years, although at moderating rates, with increases of 3.6% in 2019, 3.0% in '20, and 2.4% in '21.
- Compared to the forecast from six months ago, the three-year averages of the forecasts for availability rates and for rental rate growth are slightly less optimistic.



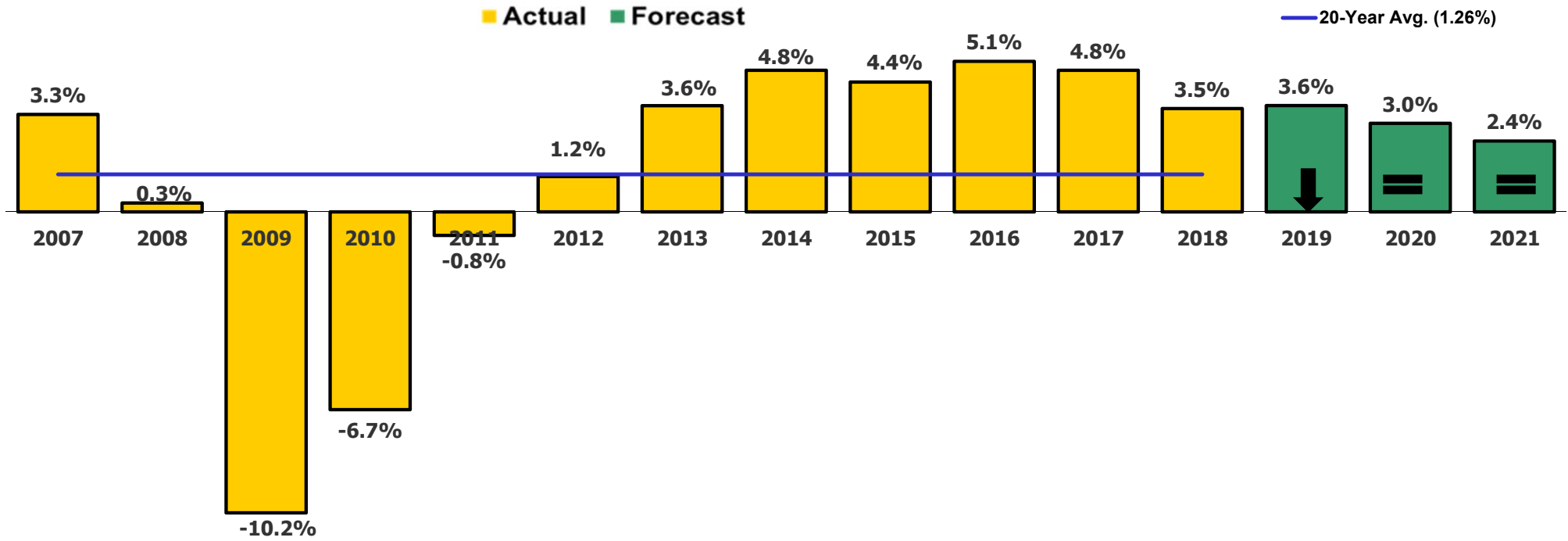
Industrial/Warehouse Availability Rates



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 6.9%, 7.0%, and 7.1%, respectively, for 2019, 2020, and 2021.

Industrial/Warehouse Rental Rate Change



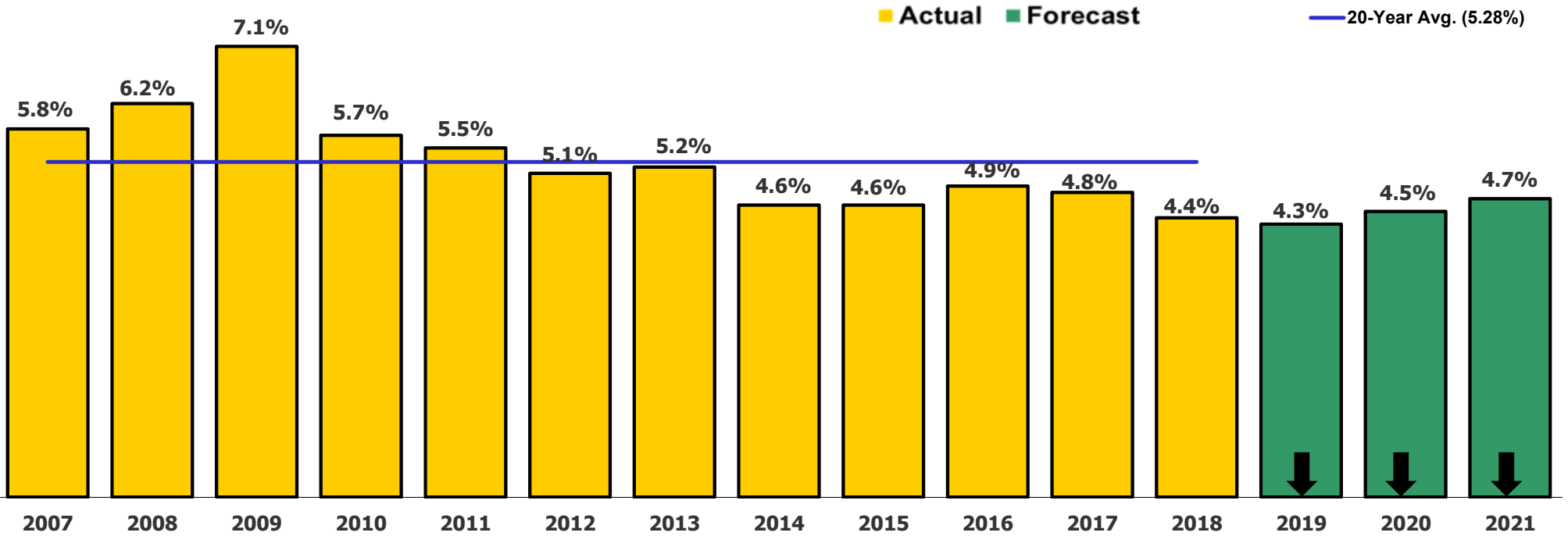
Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 3.8%, 3.0%, and 2.4%, respectively, for 2019, 2020, and 2021.

Apartment Sector Fundamentals

- Even with continued strong construction activity, the apartment sector has performed very well, with vacancy rates falling to 4.4% at the end of '18, an 18-year low. Vacancy rates are expected to inch down further to 4.3% by the end of '19, before slightly increasing to 4.5% in '20 and 4.7% in '21, still all below the long-term average.
- Rental rate growth, which has experienced 9 consecutive years of growth over 2%, is expected to continue that trend during the forecast period. Rent growth of 3% is expected in '19, although moderating to 2.3% in '20, and remaining at 2.3% in '21.
- Compared to 6 months ago, the three-year averages of the forecasts for vacancy rates and for rental rate growth are more optimistic.

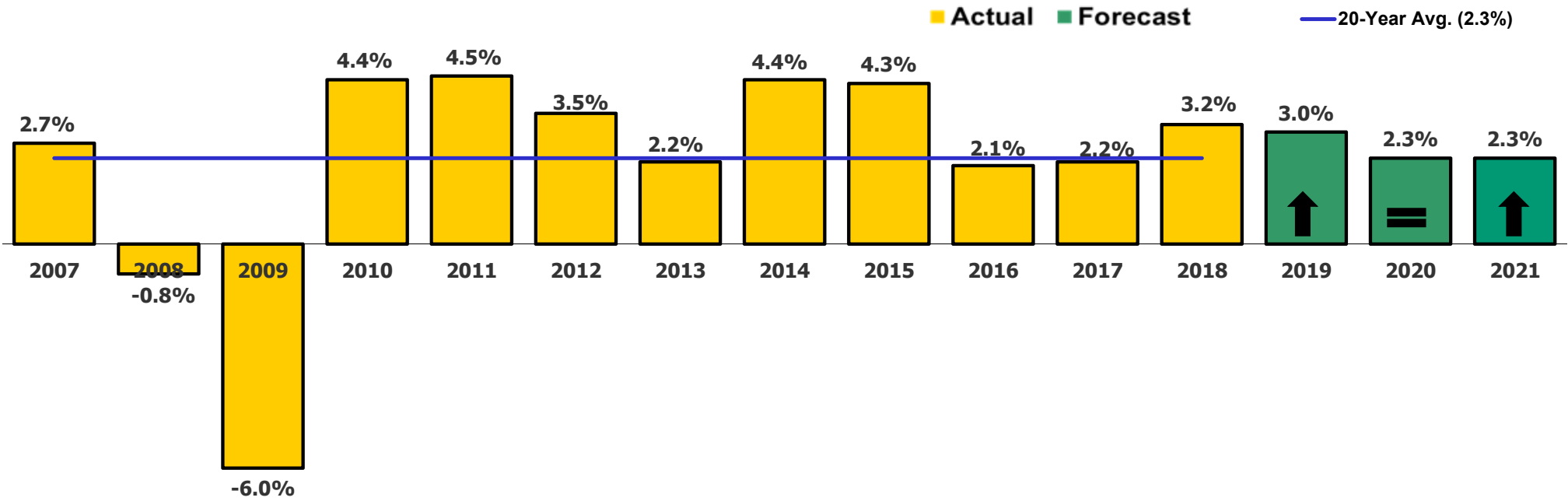
ULI Real Estate Economic Forecast
Apartment Vacancy Rates



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 4.6%, 4.8%, and 4.9%, respectively, for 2019, 2020, and 2021.

Apartment Rental Rate Change



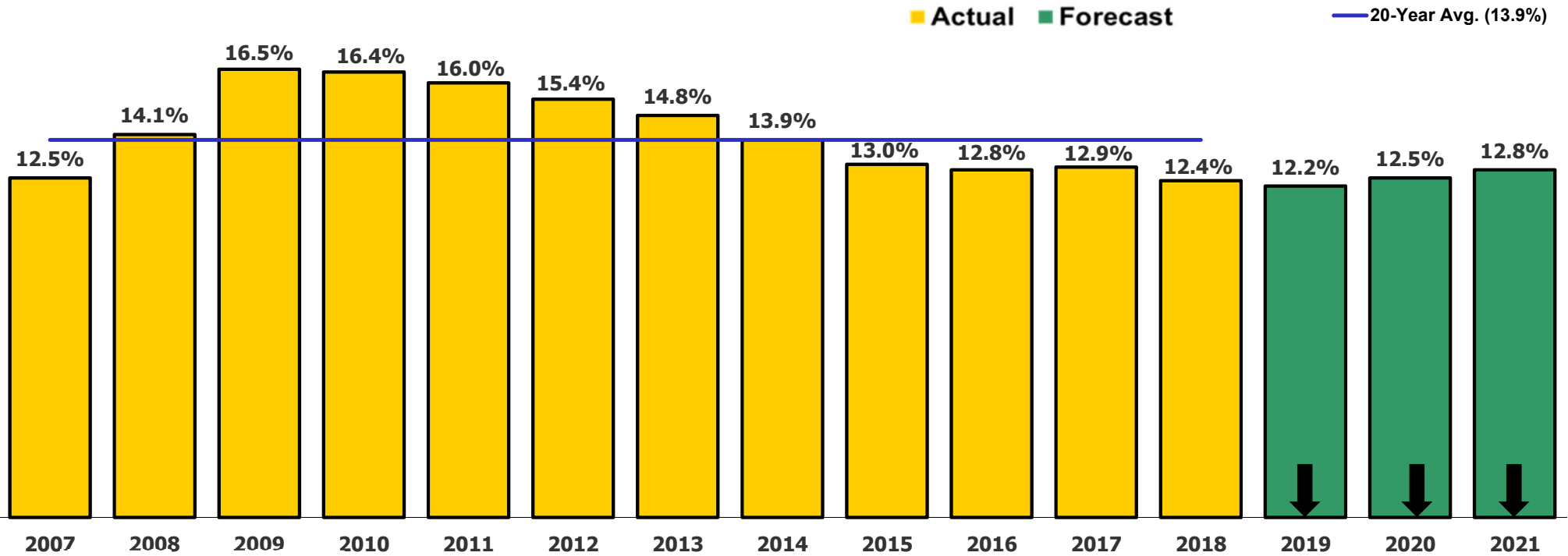
Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.6%, 2.3%, and 2.2%, respectively, for 2019, 2020, and 2021.

Office Sector Fundamentals

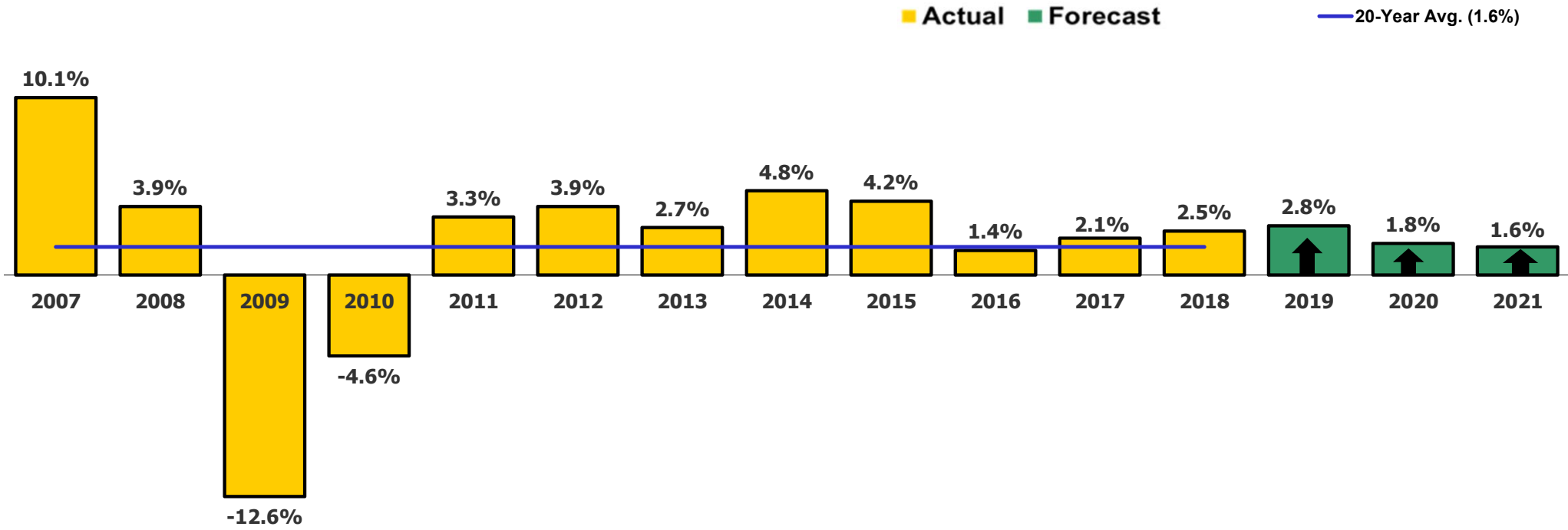
- The office vacancy rate was 12.4% at the end of '18, an 18-year low. Rates are forecast to edge down to 12.2% in '19 before reversing direction and increasing to 12.5% in '20 and 12.8% in '21. All of these rates remain below the 20-year average.
- Office rental rates increased 2.5% in 2018, above the 20-year average of 1.6%. Rental rate growth is expected to rise to 2.8% in '19, before falling to 1.8% in '20 and 1.6% in '21.
- Compared to 6 months ago, the forecasts for both office vacancy rates and office rental rate change are more optimistic.





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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 12.5%, 12.8%, and 13.0%, respectively, for 2019, 2020, and 2021.



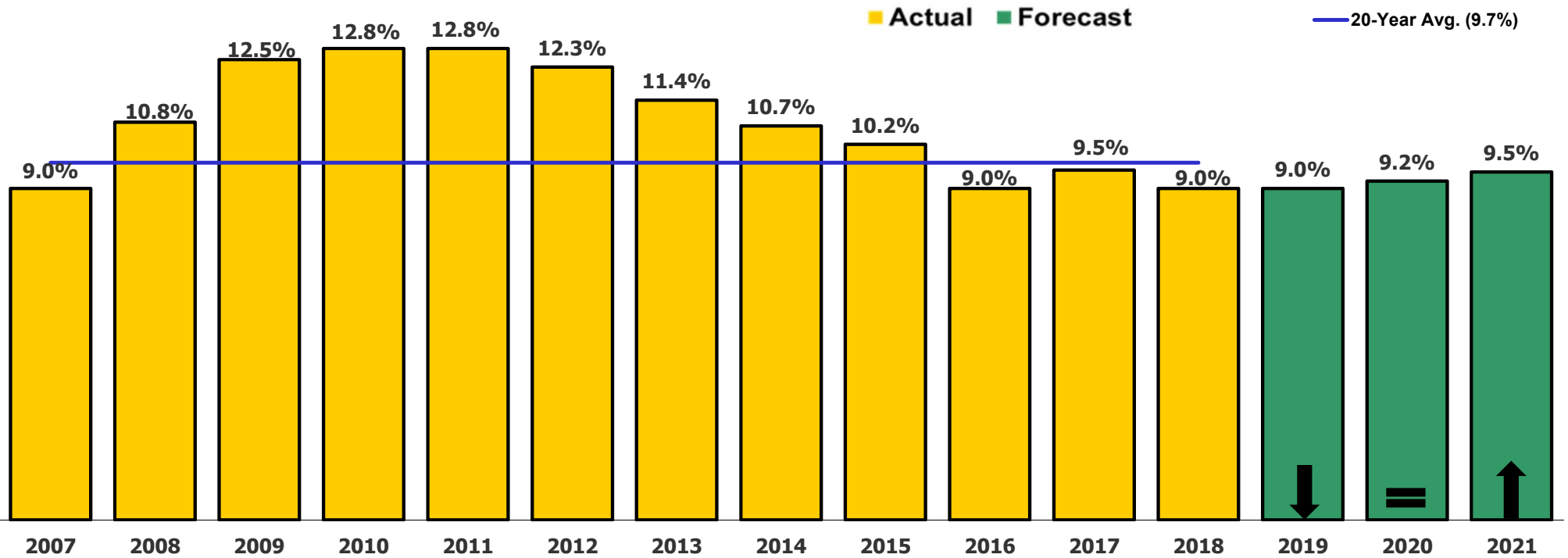
Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.4%, 1.5%, and 1.3%, respectively, for 2019, 2020, and 2021.

Retail Sector Fundamentals

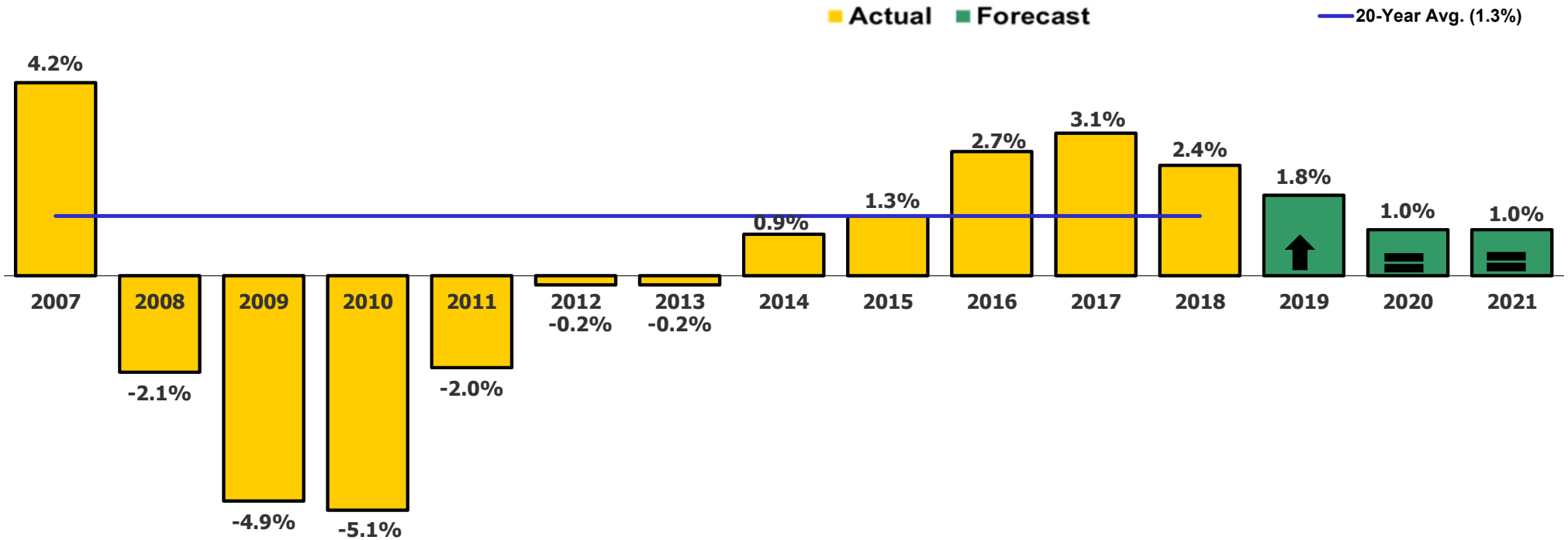
- Retail availability rates were at 9.0% in '18, the lowest post-recession rate, also seen in 2016. The forecast anticipates no change in '19, but slight increases the next two years, edging up to 9.2% in '20 and 9.5% in '21.
- Retail rental rate growth reached a post-recession high of 3.1% in 2017 before moderating to 2.4% in '18. The forecast expects growth to further moderate during the forecast period to 1.8% in '19, 1.0% in '20, and remain at 1.0% in '21.
- Compared to 6 months ago, the three-year average of the forecast for retail availability rates is the same, while the three-year average of the forecast for retail rental rate growth is slightly more optimistic.

Retail Availability Rates



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 9.1%, 9.2%, and 9.4% respectively, for 2019, 2020, and 2021.

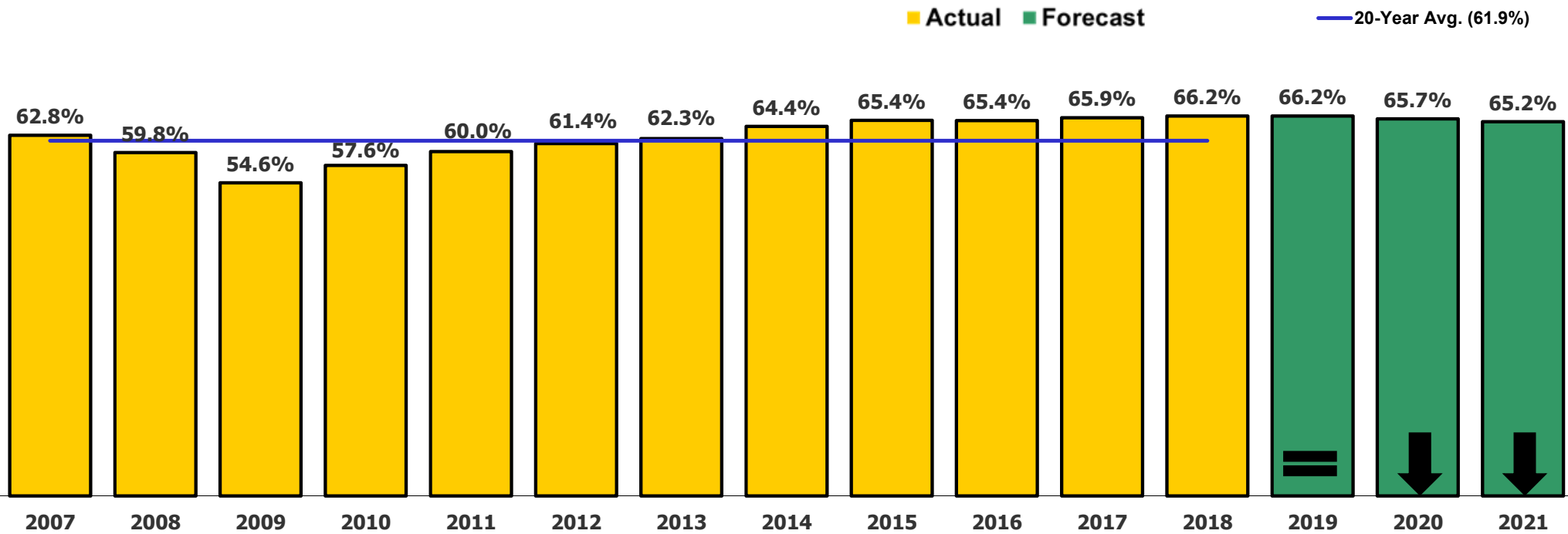


Sources: 1999-2018, CBRE; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 1.5%, 1.0%, and 1.0%, respectively, for 2019, 2020, and 2021.

Hotel Sector Fundamentals

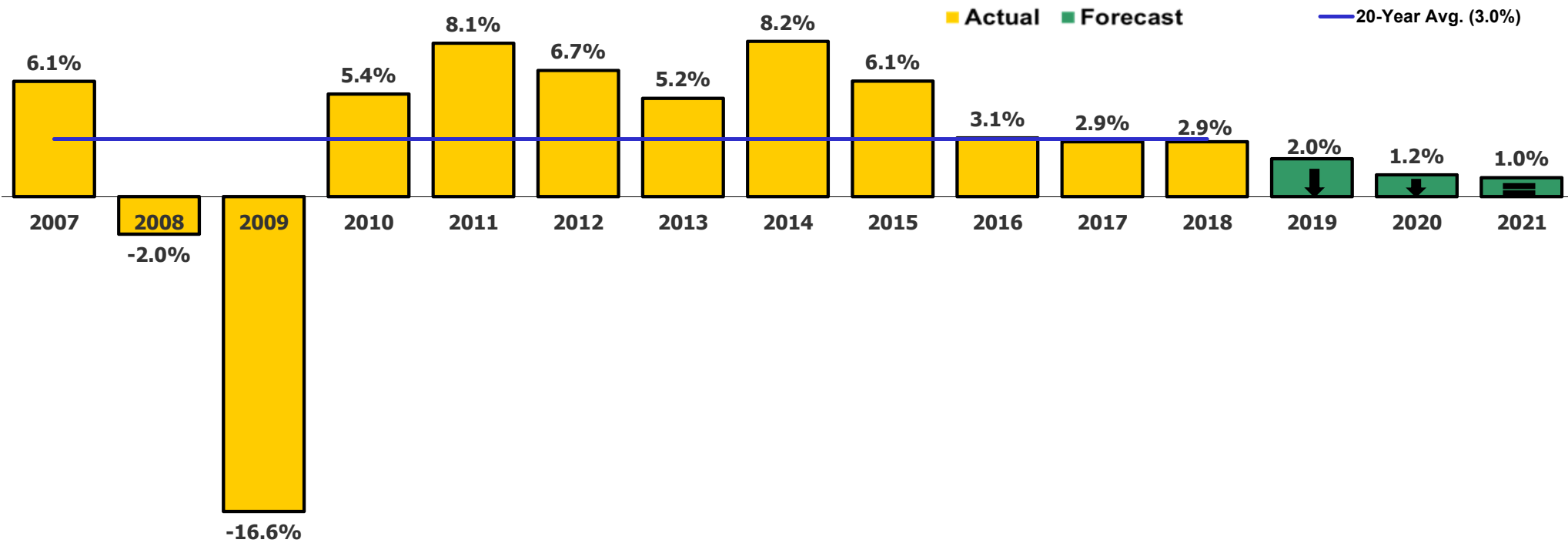
- Hotel occupancy rates, according to STR, have been steadily improving for nine years; occupancy rates came in at 66.2% in 2018, above the twenty-year average for the 6th year in a row. Rates are forecast to remain strong over the forecast years, staying level at 66.2% in '19 but moderating slightly to 65.7% in '20 and 65.2% 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 2.0% in '19, 1.2% in '20, and 1.0% in '21.
- Compared to the forecast of 6 months ago, the current forecast for occupancy rates is unchanged for '19, but less optimistic for both '20 and '21. The forecast for RevPAR growth is less optimistic for '19 and '20, and unchanged for '21.



Sources: 1999-2018, (December, 12-month rolling average), STR; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 66.2%, 65.9%, and 65.7%, respectively, for 2019, 2020, and 2021.

Hotel Revenue per Available Room (RevPAR) Change



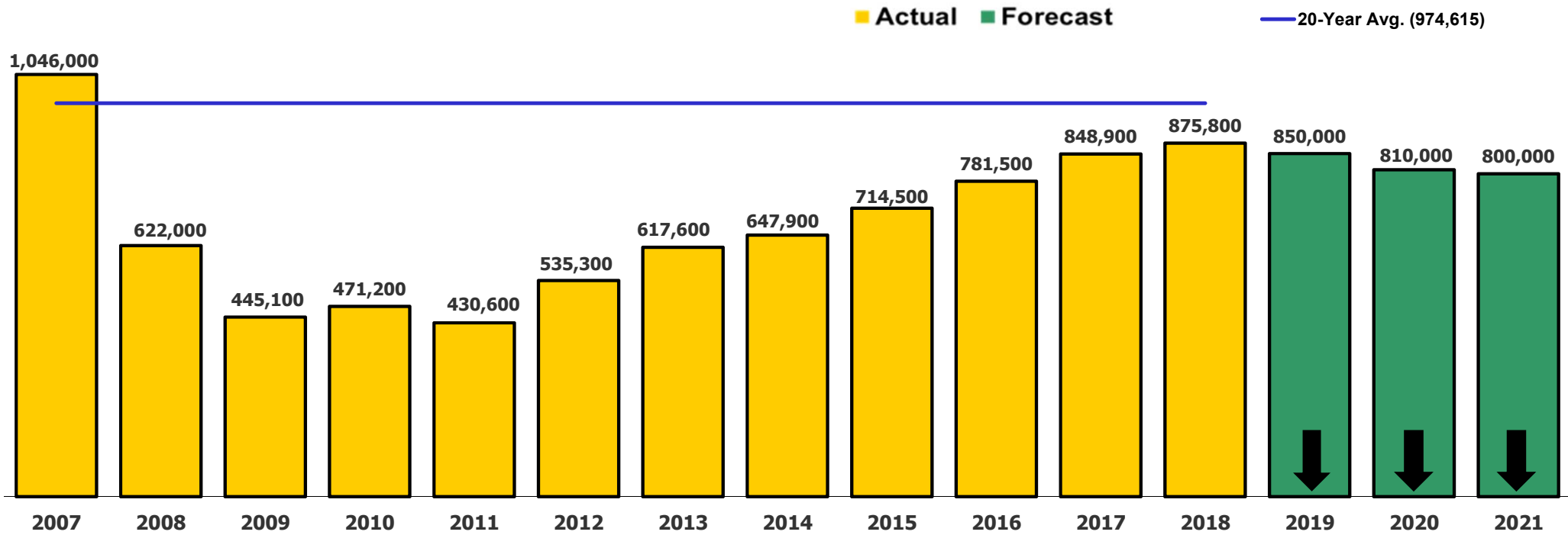
Sources: 1999-2018, (December, 12-month rolling average), STR; 2019-2021, ULI Real Estate Economic Forecast.

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 2.5%, 2.0%, and 1.0%, respectively, for 2019, 2020, and 2021.

Housing Sector

- The single-family housing sector experienced positive growth in starts for the seventh straight year in 2018. This trend is expected to reverse in 2019, decreasing to 850,000 in '19 and further moderating to 810,000 in '20 and 800,000 in '21.
- According to the FHFA, existing home prices increased an average of 5.9% 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, 2.5% in '20, and 3.0% in '21.
- Compared to six months ago, the three-year averages of the forecasts for housing starts and for existing home price growth are less optimistic.

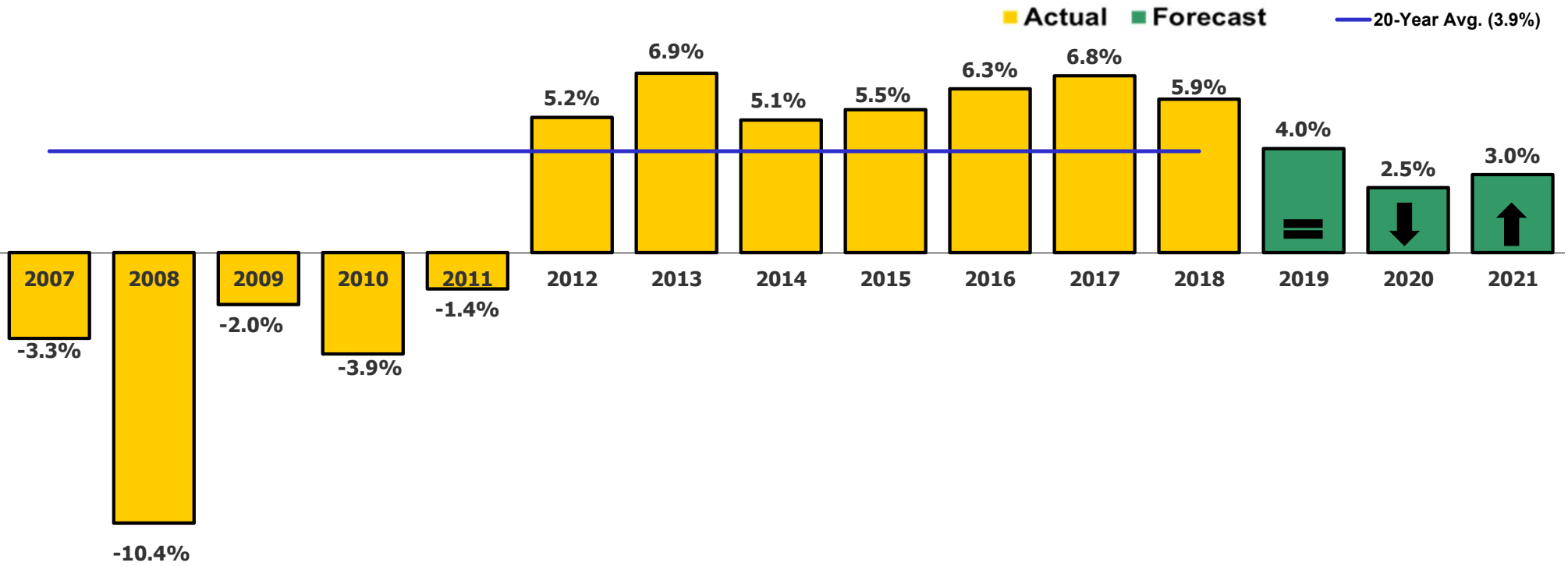
Single-Family Housing Starts



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 900,000, 888,537, and 850,000, respectively, for 2019, 2020, and 2021.

Average Home Price Change



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

Note: The previous ULI Real Estate Economic Forecast (released in April, 2019) projected 4.0%, 3.2%, and 2.8% respectively, for 2019, 2020, and 2021.

Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Lead Economist/Analyst	Title
Aberdeen Standard Investments	Carlos Ortea	Head of Real Estate Investment Research - Americas
Alvarez & Marsal	Steven Laposa	Senior Advisor
Bentall Green Oak	Douglas Poutasse	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 U.S. Investment Strategy, Alternatives
Eigen 10 Advisors, LLC	Paige Mueller	Managing Director
Everest Healthcare Properties, LLC	David J. Lynn	CEO, President and Founder
	James Emert	Analyst

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Organization	Lead Economist/Analyst	Title
Green Street Advisors	Peter Rothmund	Senior Analyst
Harrison Street Real Estate	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	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	William Pattison	Head of Real Estate Research
	Adam Ruggiero	Head of Client Solutions
NAREIT	Calvin Schnure	Senior Vice President, Research & Economic Analysis
National Association of REALTORS	Lawrence Yun	Chief Economist

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Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Lead Economist/Analyst	Title
Oxford Economics	Aran Ryan	Director, Lodging Analytics
PGIM Real Estate	Lee Menifee	Managing Director, Head of Americas Investment Research
PNC Financial Services Group	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
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

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

October 2019

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