ULI Real Estate Economic Forecast

A SURVEY OF LEADING REAL ESTATE ECONOMISTS/ANALYSTS

MAY 2021

ULI Center For Real Estate Economics And Capital Markets | uli.org/economicforecast

ULI Real Estate Economic Forecast

- Three-year forecast (’21 -’23) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 42 economists/analysts at 39 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 19th survey; completed April 23 – May 7, 2021.
- A semi-annual survey; next release planned for October 2021.
- 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

Forecasts vs. Long-Term Averages

2021 Forecast

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

2023 Forecast

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

Key Findings

- Commercial real estate transaction volume fell by almost 30% in 2020 from a post-Great Financial Crisis peak in 2019 of $598 billion to $427 billion, the lowest volume in seven years but decidedly above the declines of the GFC. Volume is expected to recover relatively quickly over the forecast period with $500 billion in ‘21, $550 billion in ‘22 and $590 billion in ‘23.
- Price growth in 2020 moderated somewhat but remained positive at 5.2%. Price growth is expected to remain positive during the forecast period, although further moderating in 2021 to 4.2% and plateauing at 5% in ‘22 and ‘23.
- Total returns for institutional-quality real estate investments were positive in 2020 but, at 1.6%, the lowest in 11 years. Total returns are forecast to increase over the forecast period, returning by ‘23 to the moderate rates of the years immediately before the pandemic. The forecast is for returns of 4.5%, 5.9% and 6.5%, in ‘21, ‘22 and ‘23 respectively. By property type, 2021 returns are forecast to range from industrial’s 12% to retail’s -1%. In ‘23, returns are forecast to range from industrial’s 8.2% to retail’s 5.2%.
- Change in vacancy and availability rates differ by property type. In 2021, industrial availability and apartment vacancy are forecast to be essentially unchanged, while retail availability is forecast to increase 60 basis points and office vacancy is forecast to move up 150 basis points. In ’22 and ‘23, all sectors are expected to show marginal improvement (20 basis points or less), with the exception of the office sectors which is forecast to improve by 70 basis points in ‘23.
- Commercial property rent growth differs by property type, as well. In 2021, industrial and apartment rent growth is forecast to be 4% and 1.7%, respectively, while retail and office are forecast at -2%, and -2.9%, respectively. In ‘22, industrial and multifamily sectors continue growth at 3.7% and 3% respectively, while growth for retail and office is essentially flat. By ‘23, positive rental growth is forecast for all sectors, ranging from 3.1% for both the industrial and apartment sectors to 1.5% and 2% in the retail and office sectors, respectively.
- Housing starts exceeded the 20-year average in 2020 for the first time since the GFC. Housing starts are expected to continue to increase to 1.1 million in ’21 and 1.2 million in ‘22 and remain at that level in ‘23.

Economy

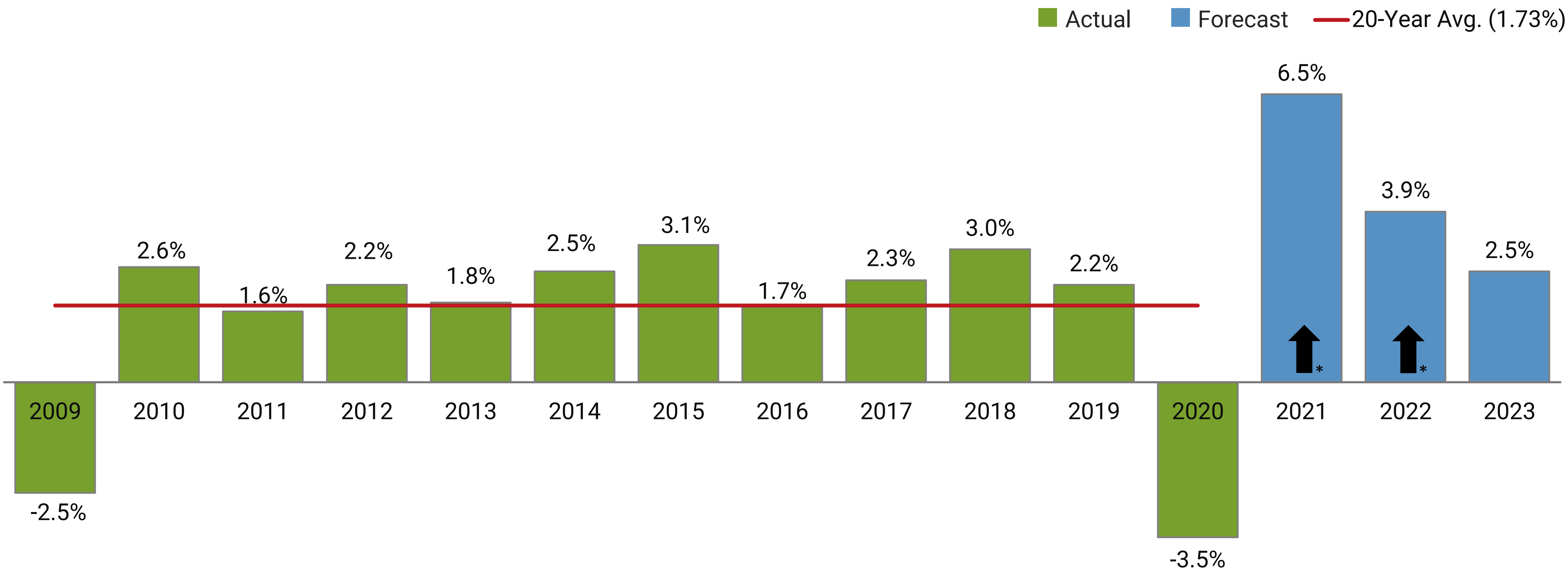
- The COVID-19 pandemic brought broad segments of the economy to a halt for various periods of time in 2020. The economists/analysts forecast strong recovery activity in ’21, ’22, ‘23.

- GDP growth was down 3.5% in 2020, the first economic contraction since 2009 and a more severe one. Recovery, conversely, is expected to move dramatically faster. Bounce-back in growth of 6.5% is expected in ’21, with continued growth of 3.9% in ’22, both exceeding annual growth rates during the ten years from 2010-2019. Growth is forecast to continue in ‘23 at 2.5%, within range of the highest annual growth rates during that ten-year period.

- Net employment growth was negative 9.42 million in 2020. A three-year recovery process is forecast with growth of 5.5 million jobs in 2021, almost 60% of jobs lost, and growth of 3.0 million jobs in 2022, an additional 30% of jobs lost. With the forecast of further growth of 2.1 million jobs in 2023, the three-year job growth is then expected to exceed the total lost. But net of the welcome replacement numbers, new job growth is lower at that point than annual job growth from 2010-2019.

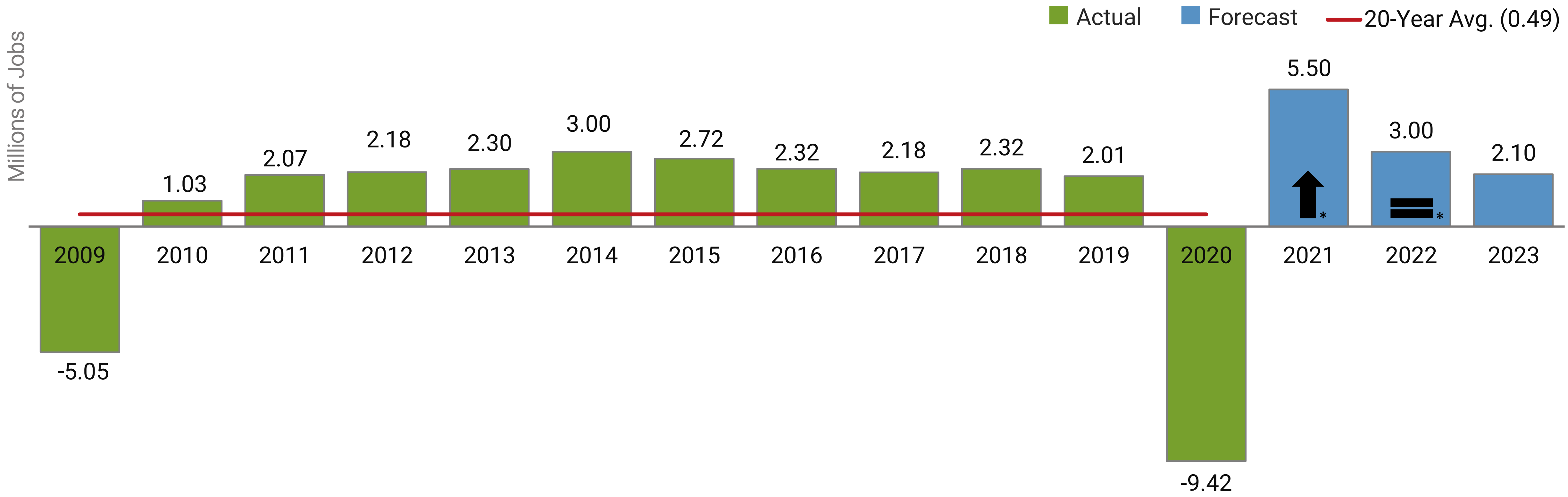
- The unemployment rate is expected to be 5.0% at the end of 2021, declining to 4.1% at the end of ‘22 and then to 4.0% in ’22, approaching the low unemployment rate of 3.6% in 2019.

Real GDP Growth



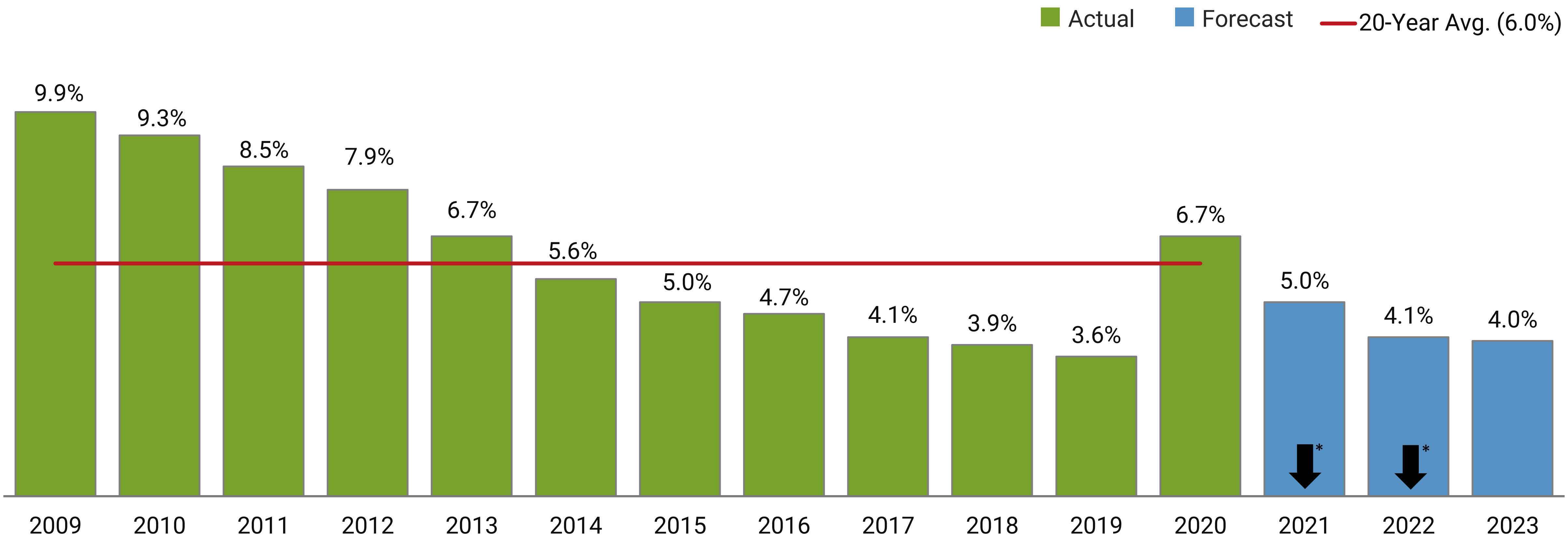
Sources: 2001-2020, Bureau of Economic Analysis; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 3.6% for 2021 and 3.2% for 2022.

Employment Growth (Millions)



Sources: 2001-2020, Bureau of Labor Statistics; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 3.5M for 2021 and 3.0M for 2022.

Unemployment Rate



Sources: 2001-2020, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 6.6% for 2021 and 5.5% for 2022

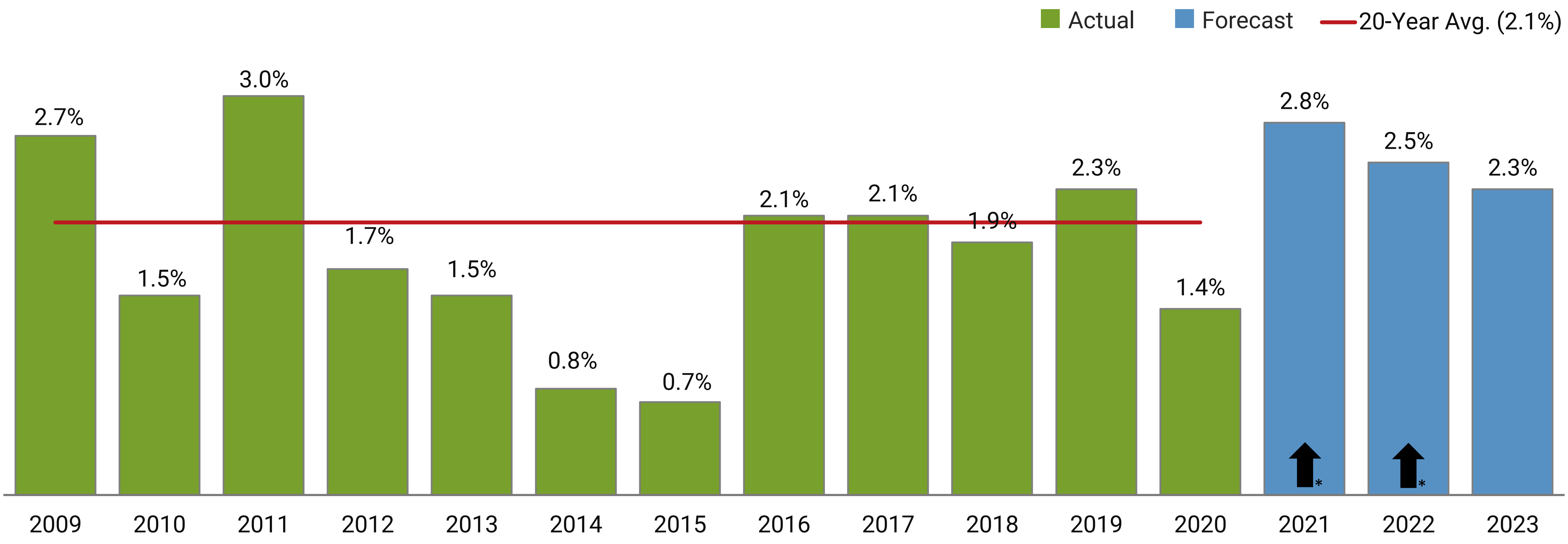
Inflation, Interest Rates, and Cap Rates

- The CPI inflation rate in 2020 was 1.4%, below the 20-year average of 2.1%. The forecast for 2021 is for inflation to exceed the long-term average at 2.8%, then moderate slightly to 2.5% to ‘22, and to 2.3% in ’23, but remaining above the long-term average.

- The ten-year treasury rate had averaged 2.3% per year from 2011 to 2019, before dropping to a low 0.93% in 2020. The rate is expected to rise consistently during the forecast period from 1.95% by the end of 2021 to 2.23% by the end of ’22 and 2.5% by the end of ‘23.

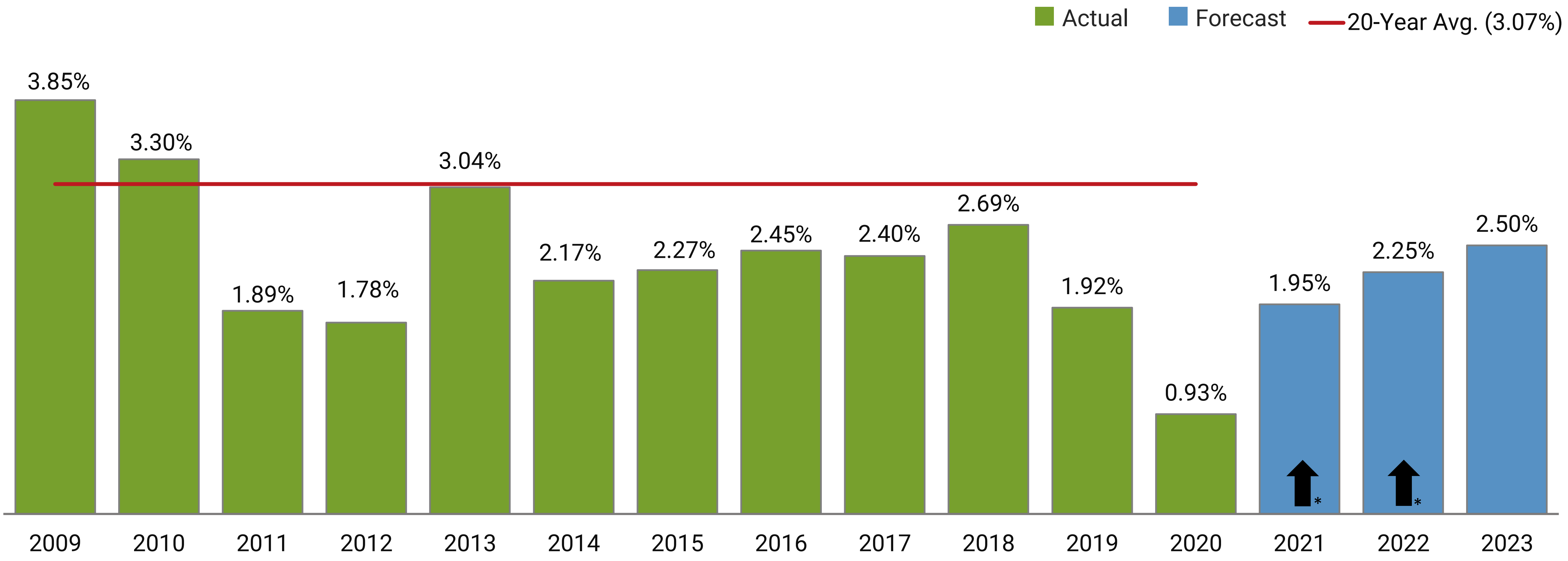
- Capitalization rates for institutional-quality investments (NCREIF cap rates) have steadily declined for 11 years and were at 4.4% in ‘20. Cap rates are expected to remain steady at 4.4% in ‘21 and inch up just slightly to 4.5% in ‘22 and 4.6% in ‘23.

Consumer Price Index Inflation Rate



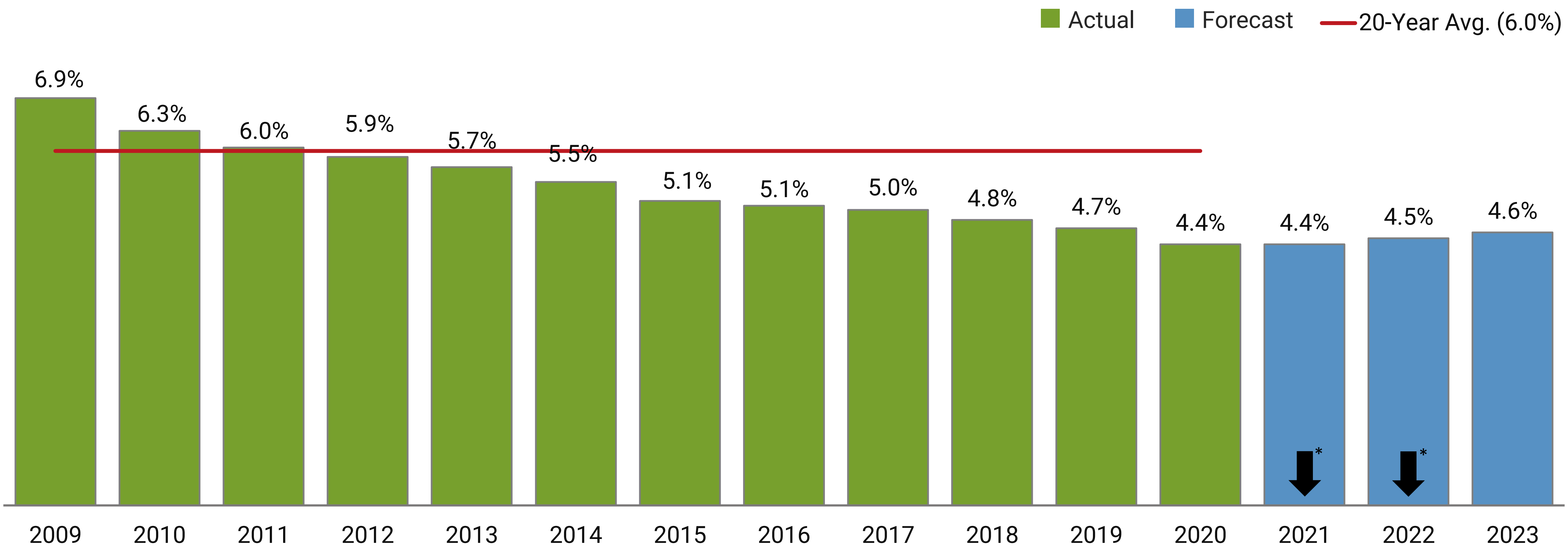
Sources: 2001-2020, (12-month change, as of December), Bureau of Labor Statistics; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 2.0% for 2021 and 2.2% for 2022.

Ten-Year Treasury Rate



Sources: 2001-2020 (YE), U.S. Federal Reserve; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 1.0% for 2021 and 1.5% for 2022

NCREIF Capitalization Rate



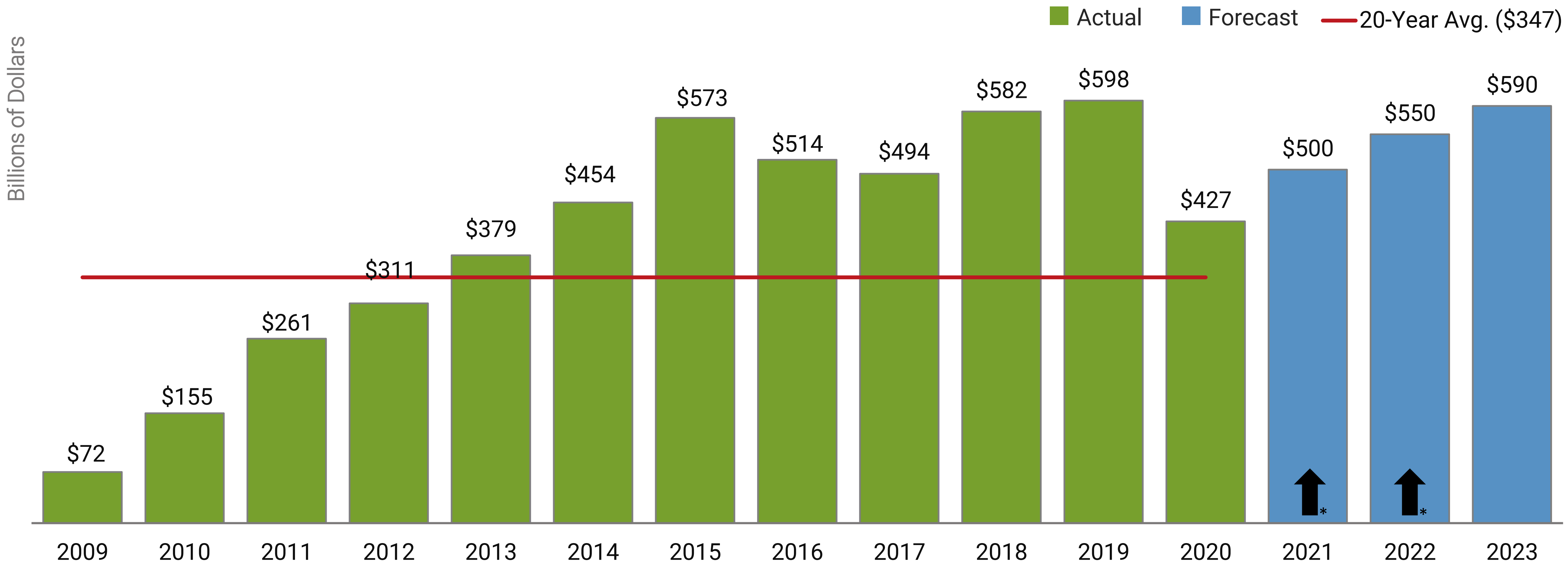
Sources: 2001-2020, Q4, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 4.8% for 2021 and 4.8% for 2022.

Real Estate Capital Markets

- Commercial real estate transaction volume reached $598 billion in 2019, a post-Great Financial Crisis peak. Volume fell by almost 30% in 2020 to $427 billion 2020, the lowest volume in seven years, but decidedly above the declines of the GFC. Volume is expected to recover relatively quickly over the forecast period with $500 billion in ‘21, $550 billion in ‘22 and $590 billion in ‘23.

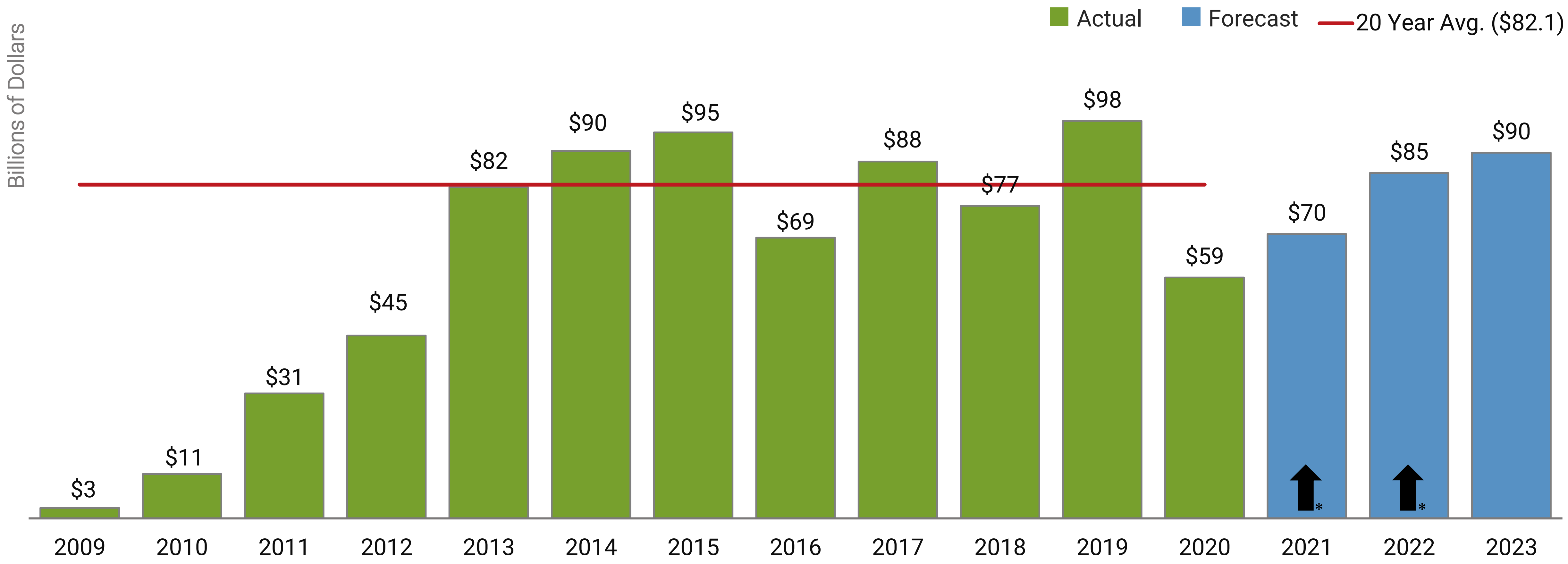
- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate, had rebounded since a low in 2009, but to a much lower level than pre-GFC levels (which peaked at $229 billion in 2007). The post-GFC peak was in 2019, at $98 billion. CMBS issuance fell by 40% in ‘20 to $59 billion but, as with transaction volume, decidedly above the declines of the GFC. Issuance is expected to rebound over the forecast period with $70 billion in ‘21, ‘$85 billion in ‘22 and $90 billion in ‘23.

Commercial Real Estate Transaction Volume



Sources: 2001-2020, Real Capital Analytics; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected $400B for 2021 and $500B for 2022.

Commercial Mortgage-Backed Securities (CMBS) Issuance



Sources: 2001-2020, GreenStreet News CMAlert; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected $60B for 2021 and $83B for 2022.

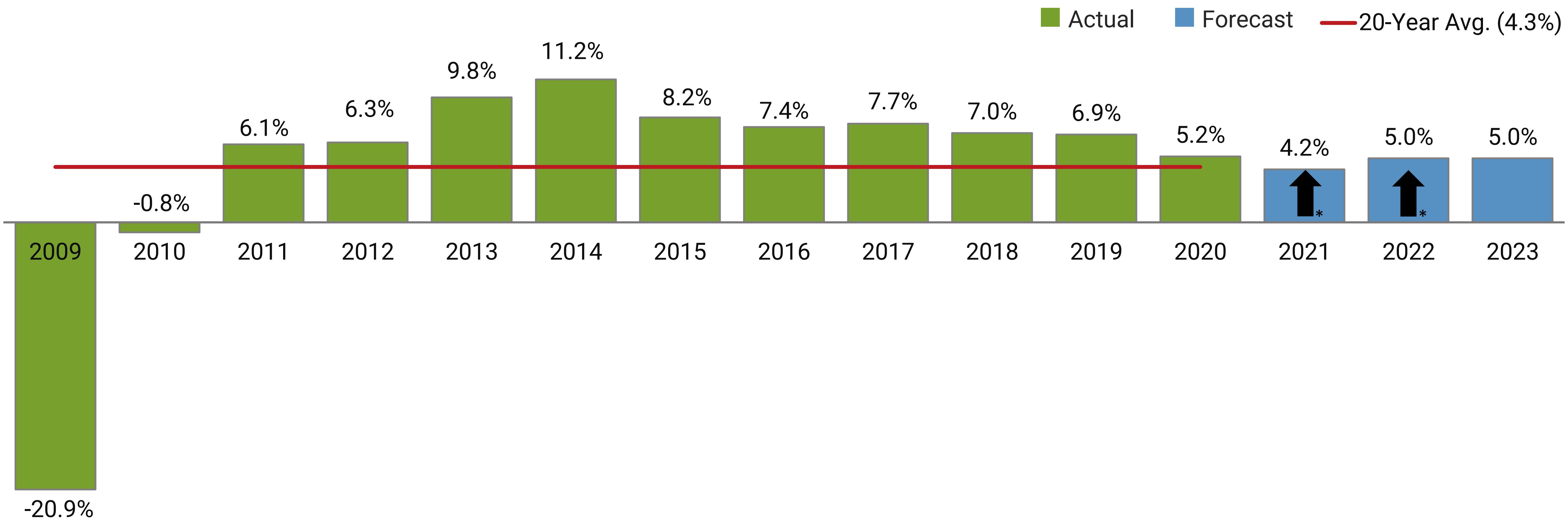
Real Estate Returns and Prices

- The RCA Commercial Property Price Index (CPPI) had experienced strong growth over the nine years from 2011 to 2019, staying consistently above 6 percent annually. Price growth in 2020 moderated somewhat but remained positive at 5.2%. Price growth is expected to remain positive during the forecast period, although further moderating in 2021 to 4.2% and plateauing at 5% in ‘22 and ‘23.

- Equity REIT total returns in 2020, according to NAREIT, fell by 8%. Positive returns are expected during the forecast period of 15%, 8% and 7% in ’21, ‘22 and ’23, respectively.

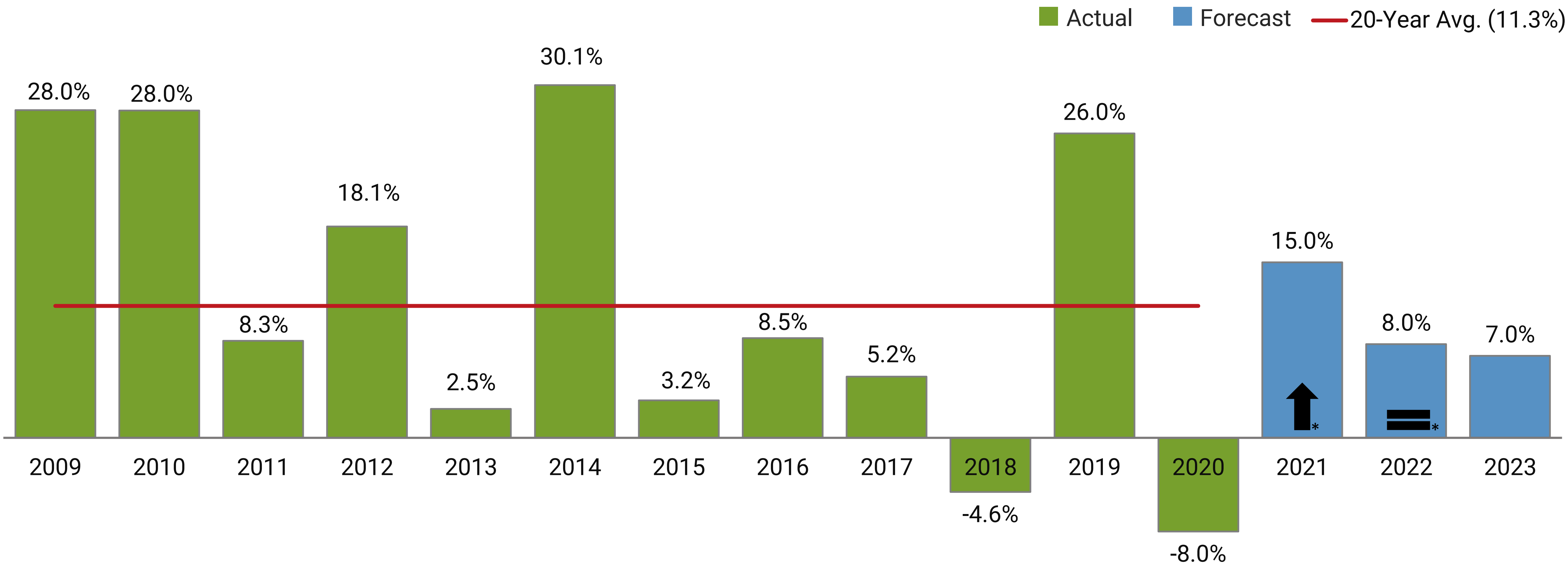
- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index (NPI), were positive in 2020 but, at 1.6%, the lowest in 11 years. Total returns are forecast to increase over the forecast period, returning by ‘23 to the moderate rates of the years immediately before the pandemic. The forecast is for returns of 4.5%, 5.9% and 6.5%, in ‘21, ‘22 and ‘23 respectively.

RCA Commercial Property Price Index (annual change)



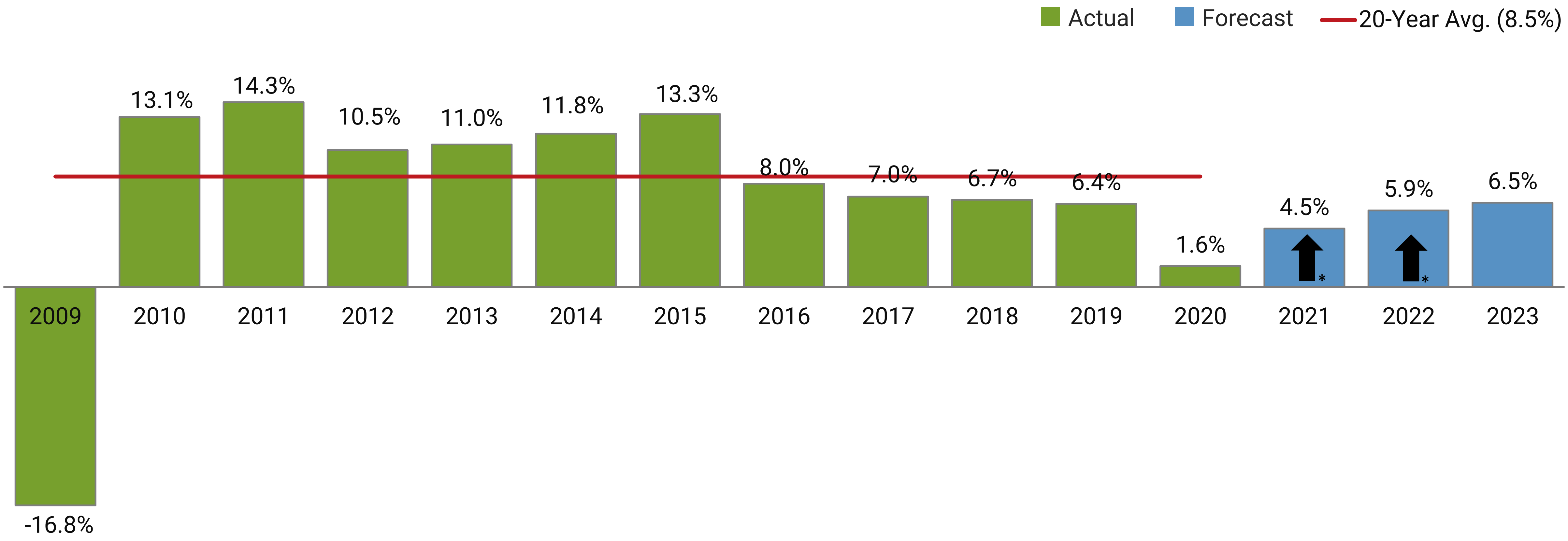
Sources: 2001-2020, Real Capital Analytics; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 0.0% for 2021 and 4.0% for 2022.

Equity REIT Total Annual Returns



Sources: 2001-2020, National Association of Real Estate Investment Trusts; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 6.5% for 2021 and 8.0% for 2022.

NCREIF Total Annual Returns



Sources: 2000-2020, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 3.0% for 2021 and 5.6% for 2022.

NCREIF Returns by Property Type

- NCREIF total returns in 2021 for the industrial sector are expected to increase relative to ’20 to 12%, becoming the 11th year of returns above the long-term average. After an 11-year low in ‘20, apartment returns in ‘21 are expected to increase to 5.6%, returning to the level immediately before the pandemic. After an 11-year low in ‘20, office sector returns are expected to minimally increase to 2.2%. After a substantial decline in ‘20, retail returns are expected to remain negative although at a more moderate -1%.

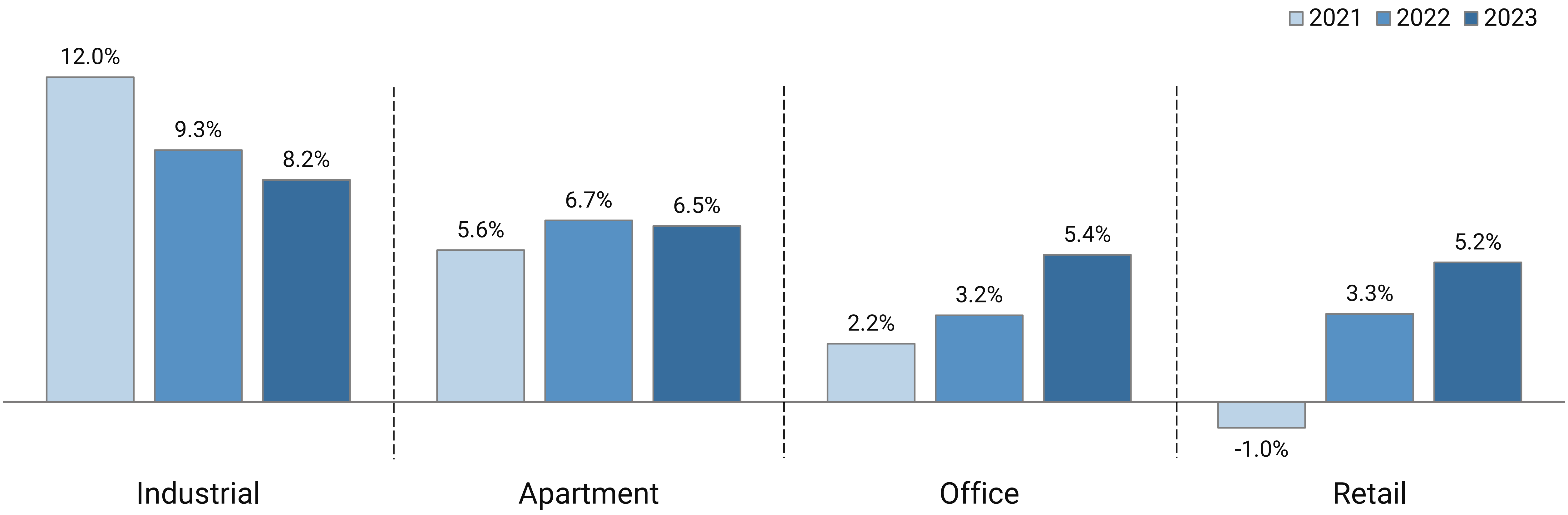
- Industrial total returns are forecast to moderate in ‘22 and ‘23, to 9.3% and 8.2%, respectively. Although these returns are stronger than in other sectors, they would be the lowest industrial returns in 14 years.

- Apartment returns are forecast to continue to increase in ‘22 to 6.7% and moderate just slightly to 6.5% in ‘23.

- Office total returns are forecast to remain low but increase to 3.2% in ‘22 and 5.4% in ‘23.

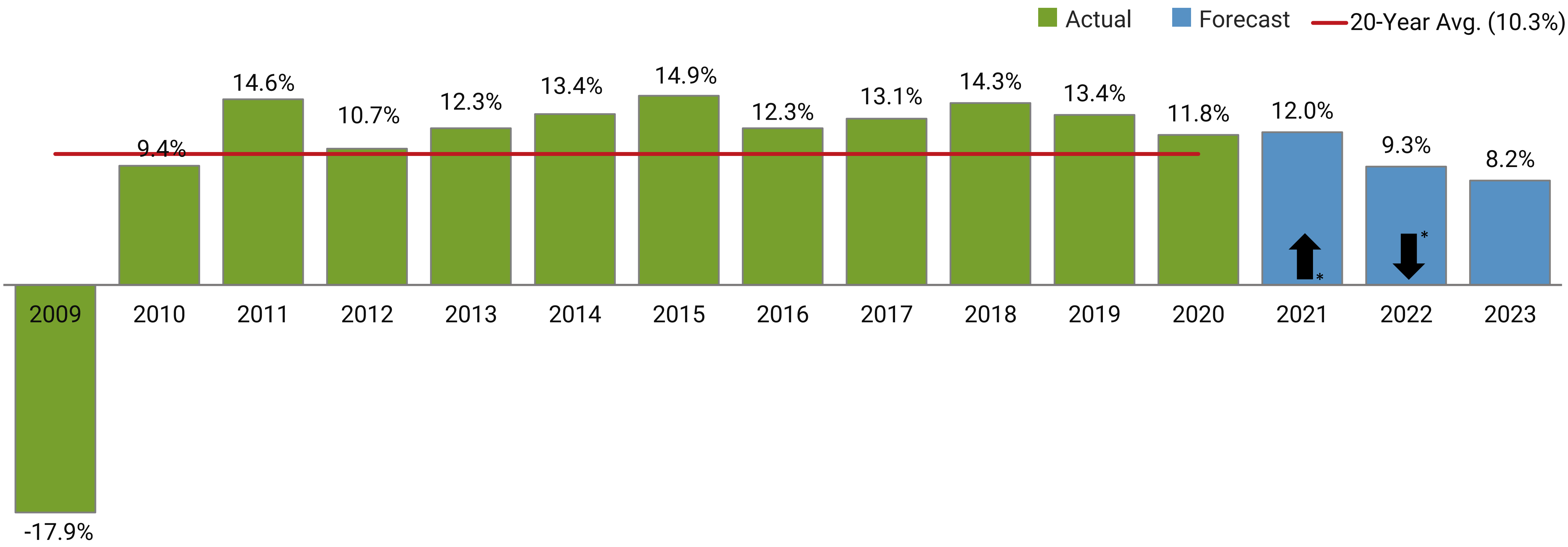
- Retail total returns are expected to turn positive in ‘22 at 3.3% and increase to 5.2% by ‘23.

NCREIF Property Types Total Returns



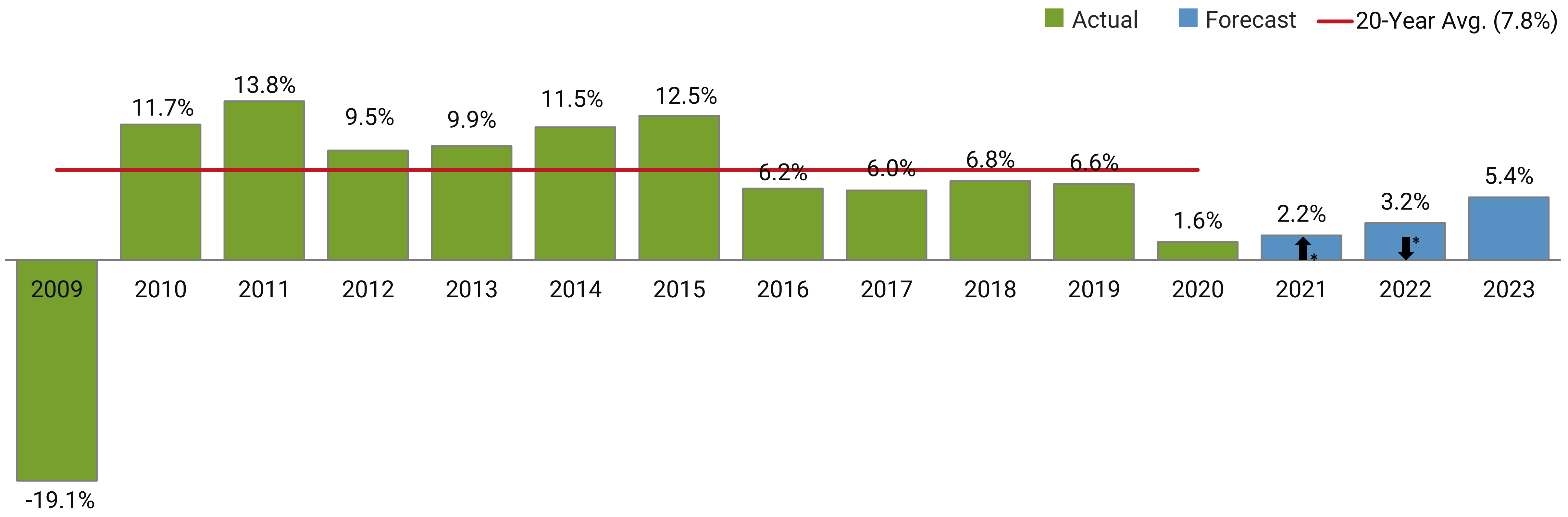
Source: 2021-2023, ULI Real Estate Economic Forecast.

NCREIF Industrial Total Annual Returns



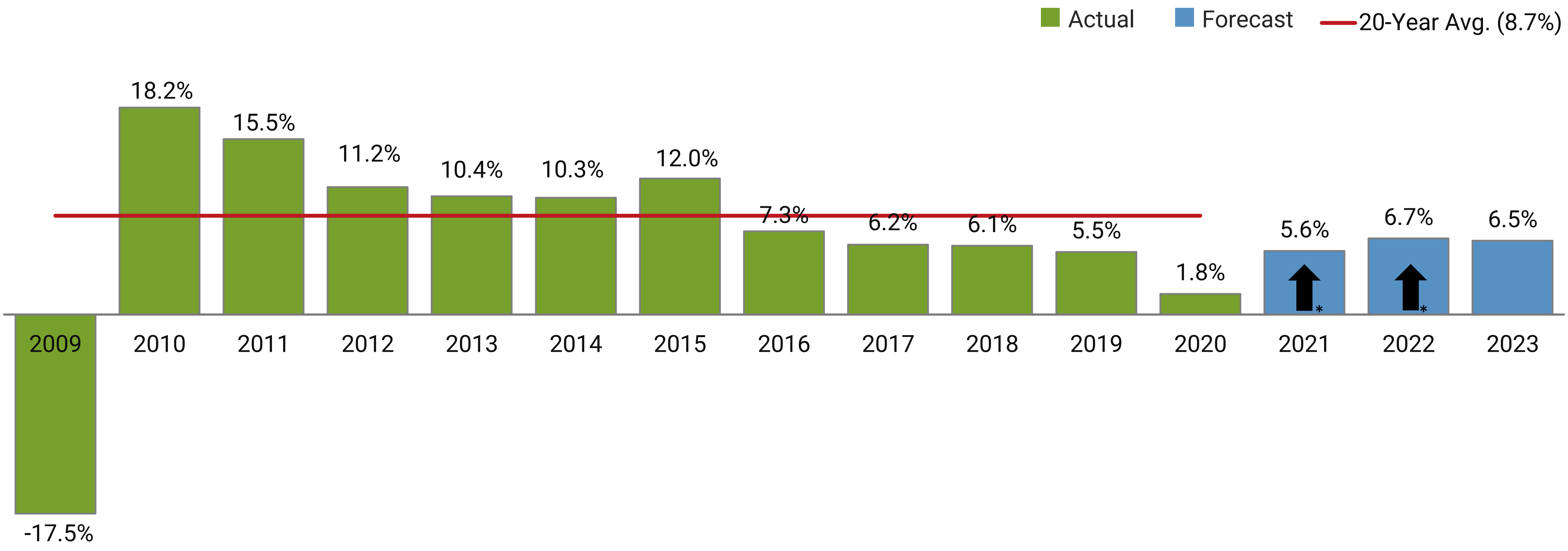
Sources: 2000-2020, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 6.2% for 2021 and 10.0% for 2022.

NCREIF Office Total Annual Returns



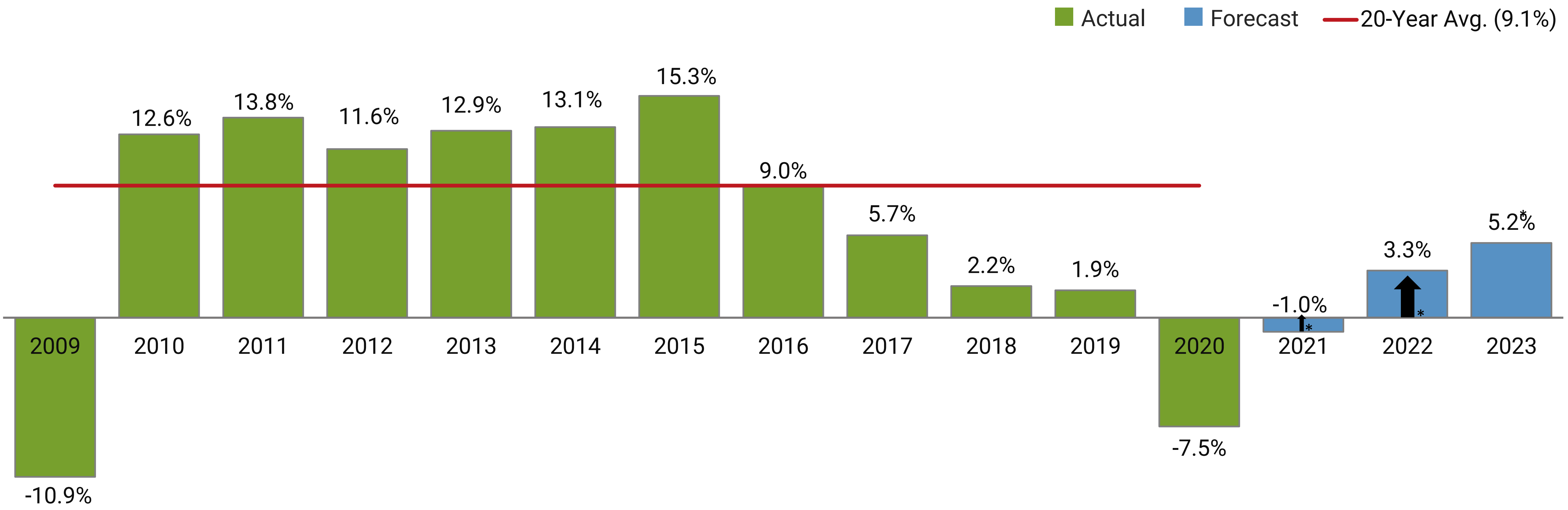
Sources: 2000-2020, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Forecast (released in October, 2020) 0.3% for 2021 and 4.3% for 2022.

NCREIF Apartment Total Annual Returns



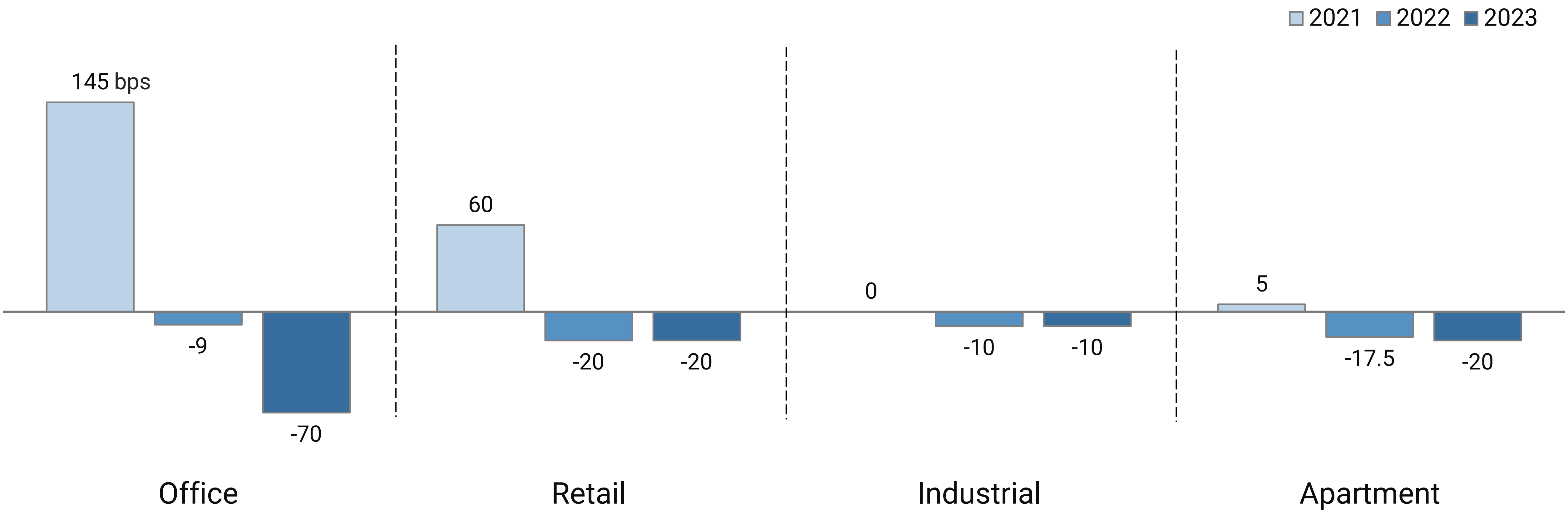
Sources: 2000-2020, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 4.0% for 2021 and 6.0% for 2022.

NCREIF Retail Total Annual Returns



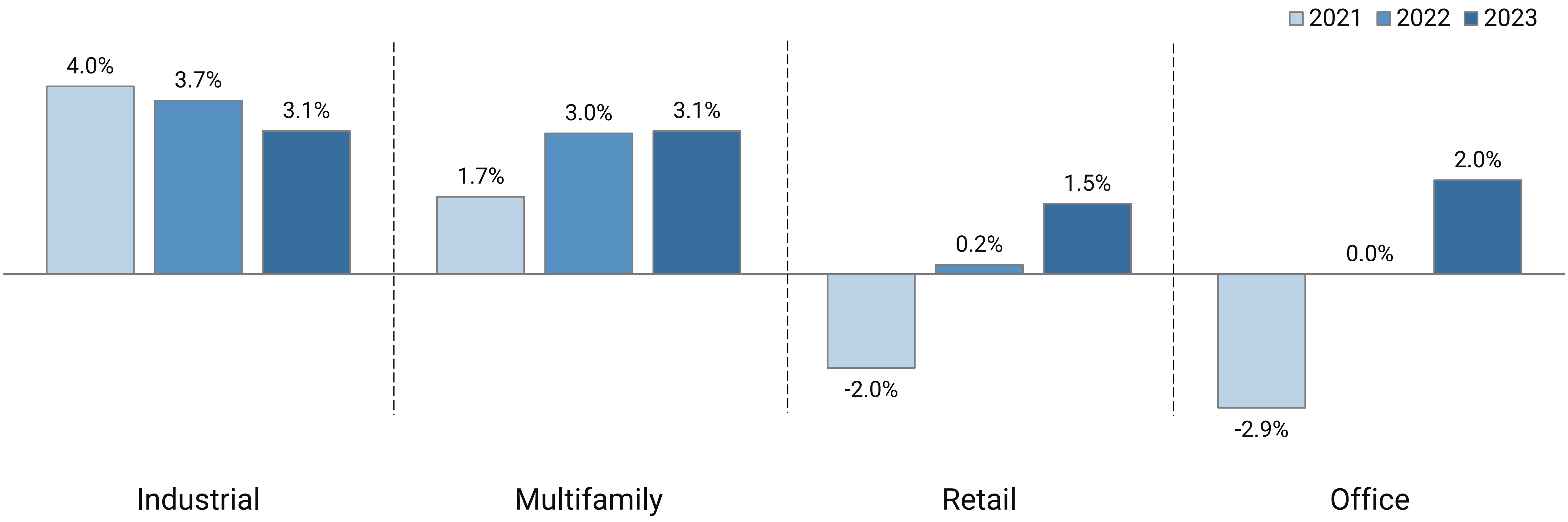
Sources: 2000-2020, National Council of Real Estate Investment Fiduciaries (NCREIF); 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected -4.0% for 2021 and 2.0% for 2022.

Vacancy Rate Change (bps)



Source: 2021-2023, ULI Real Estate Economic Forecast.

Rental Rate Growth



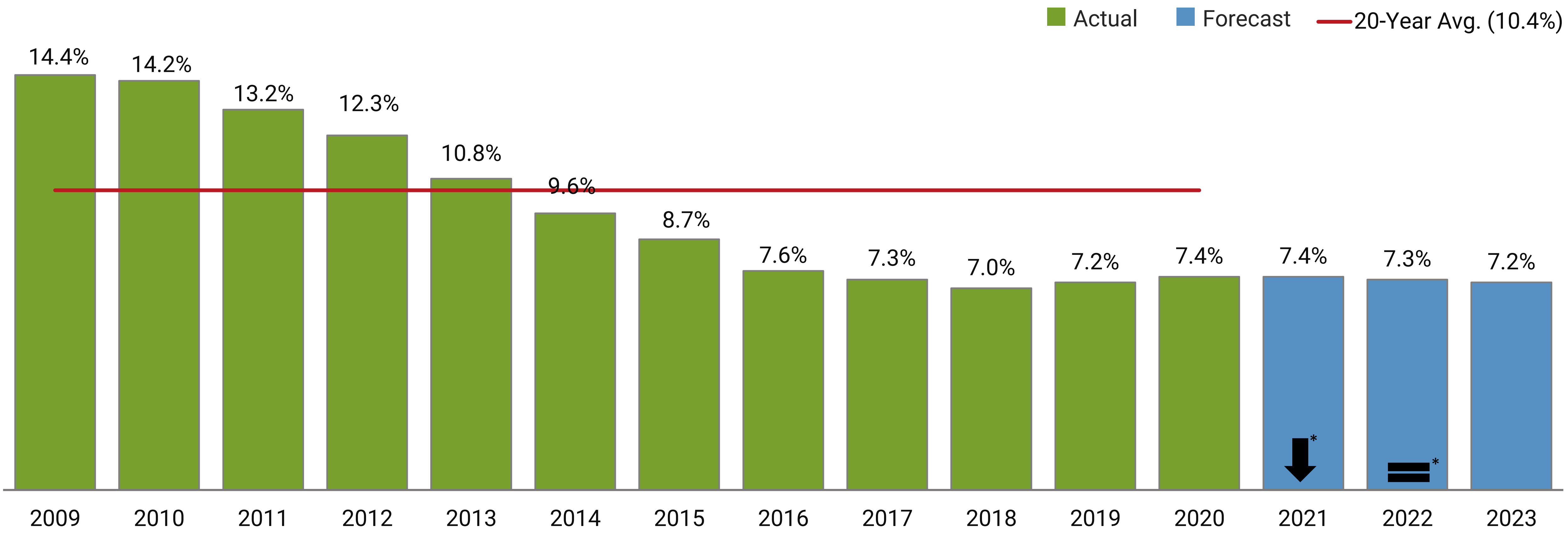
Source: 2021-2023, ULI Real Estate Economic Forecast.

Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector declined for the ninth straight year in 2018, to 7.0%, before notching up to 7.2% in 2019 and 7.4% in 2020 but staying well-below the 20-year average of 10.4%. The forecast indicates a plateau in ‘21 at 7.4% before notching down again to 7.3% and 7.2% in ‘22 and ‘23, respectively.

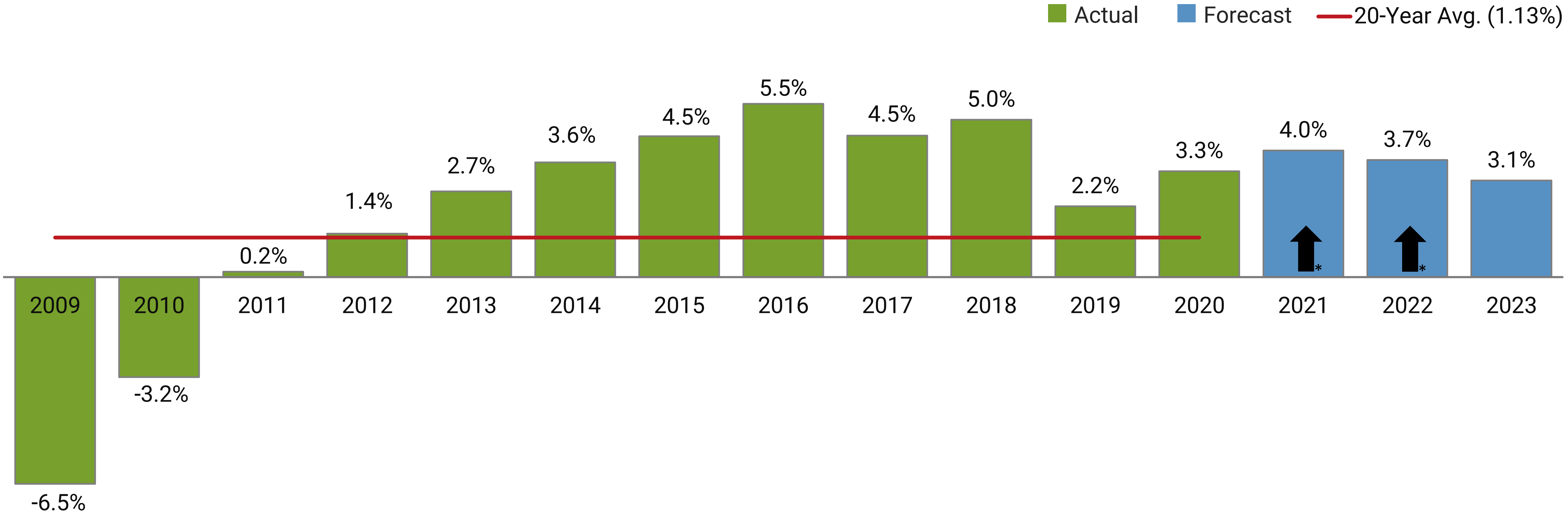
- Warehouse rental rate growth in the last eight years has been substantially above the long-term average of 1.1%. Rent growth is expected to continue above that average at 4%, 3.7% , and 3.1%, respectively in ‘21, ‘22, and ’23.

Industrial/Warehouse Availability Rates



Sources: 2001-2020 (Q4), CBRE; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 7.6% for 2021 and 7.3% for 2022.

》Industrial/Warehouse Rental Rate Change



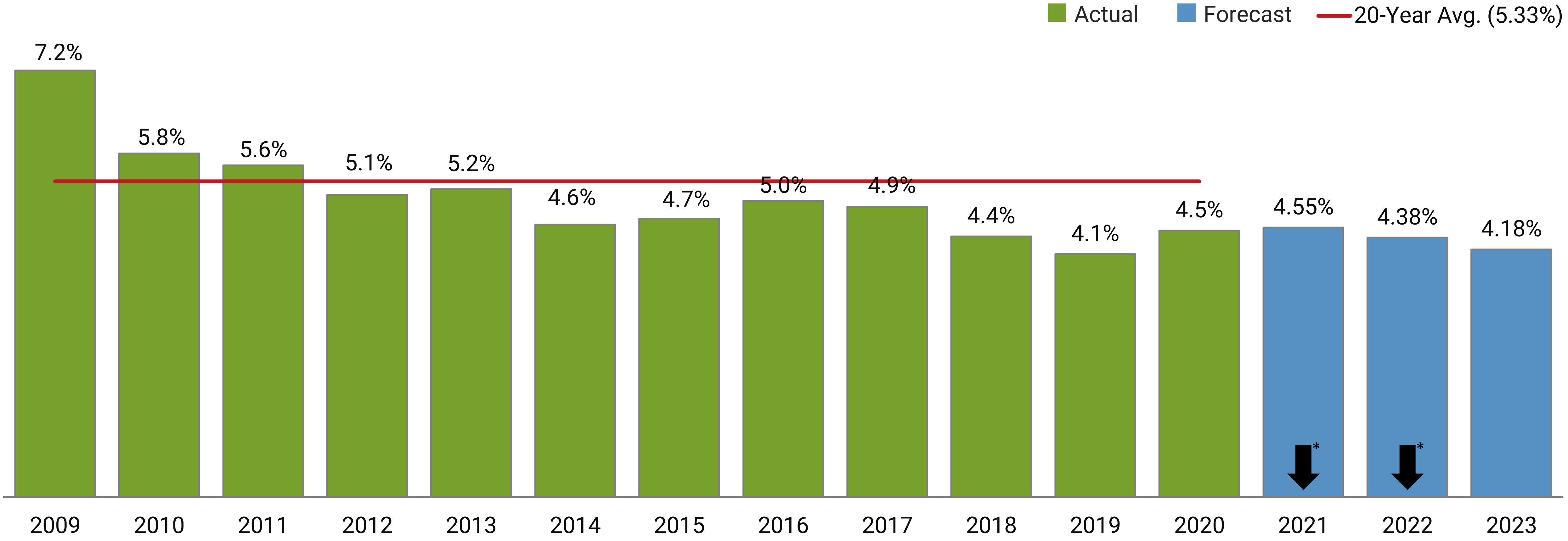
Sources: 2000-2020, CBRE; 2021-2023, ULI Real Estate Economic Forecast. Please note that the industrial historic forecast rent series has changed from TW Rents to EA Asking Rents
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 2.1% for 2021 and 3.3% for 2022.

Apartment Sector Fundamentals

- Even with continued strong construction activity over the past decade, the apartment sector continued to perform very well—vacancy rates decreased fairly steadily from 7.2% in 2009 to 4.1% in ‘19. Vacancy rates increased only slightly during the pandemic year of 2020 to 4.5%. Vacancy rates are expected to remain relatively stable in ’21 at 4.6%, before reversing direction in ‘22 and declining to 4.2% by the end of ‘23.

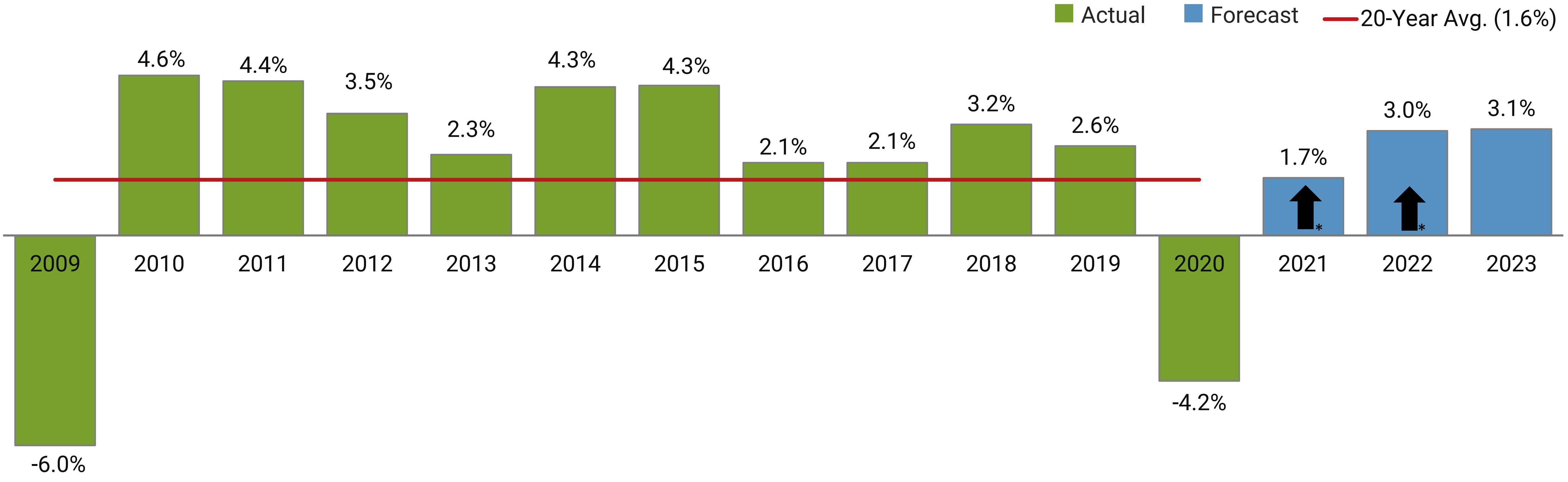
- Rental rate growth had been strong over the last decade with some annual growth rates exceeding 4%. Growth in the last two pre-pandemic years averaged 2.9%, remaining above the 20-year average. Rental rate growth fell by -4.2% in 2020. The ‘21 forecast is for positive growth of 1.7% with stronger growth of 3% and 3.1%, respectively, in ‘22 and ‘23.

Apartment Vacancy Rates



Sources: 2001-2020 (Q4), CBRE; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 5.1% for 2021 and 4.6% for 2022.

Apartment Rental Rate Change



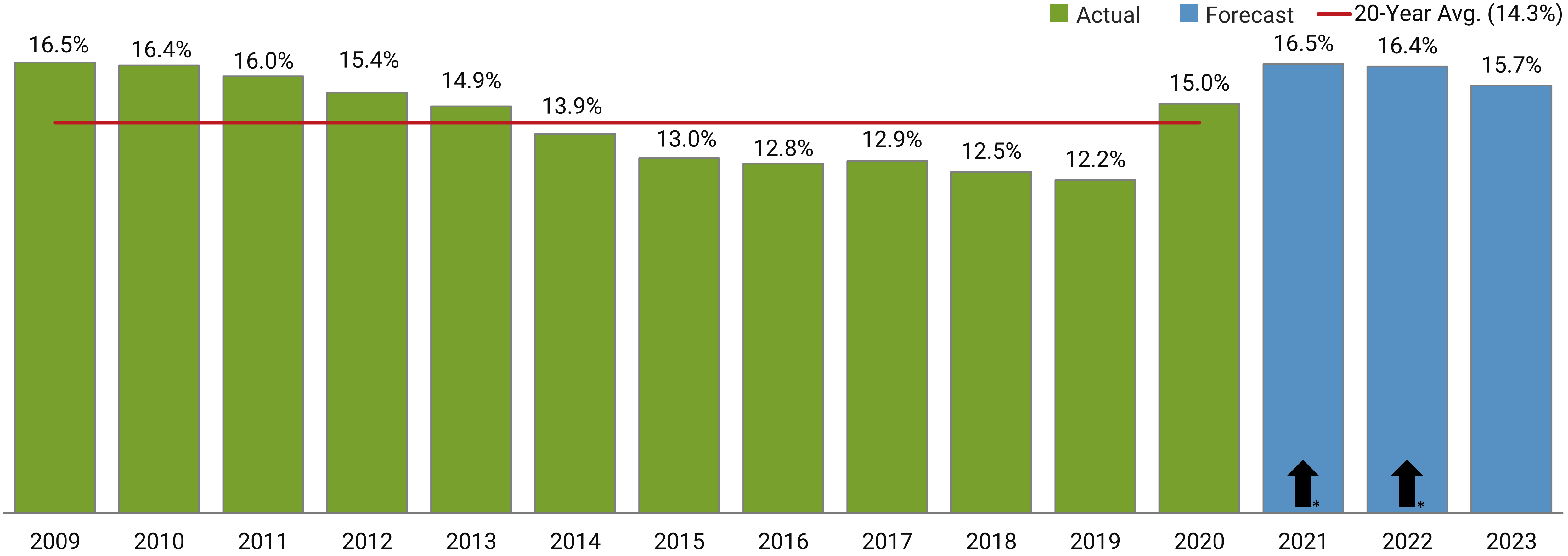
Sources: 2000-2020, CBRE; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 0.1% for 2021 and 2.5% for 2022.

Office Sector Fundamentals

- Office vacancy rates reached a post-GFC low of 12.2% in 2019, below the 20-year average of 14.3%. Vacancy rates rose 280 basis points in ‘20 to 15%. Rates are expected to increase by an additional 150 basis points in ‘21 to 16.5% and then remain elevated but decline slightly over the next two years, down to 15.7% by the end of ‘23.

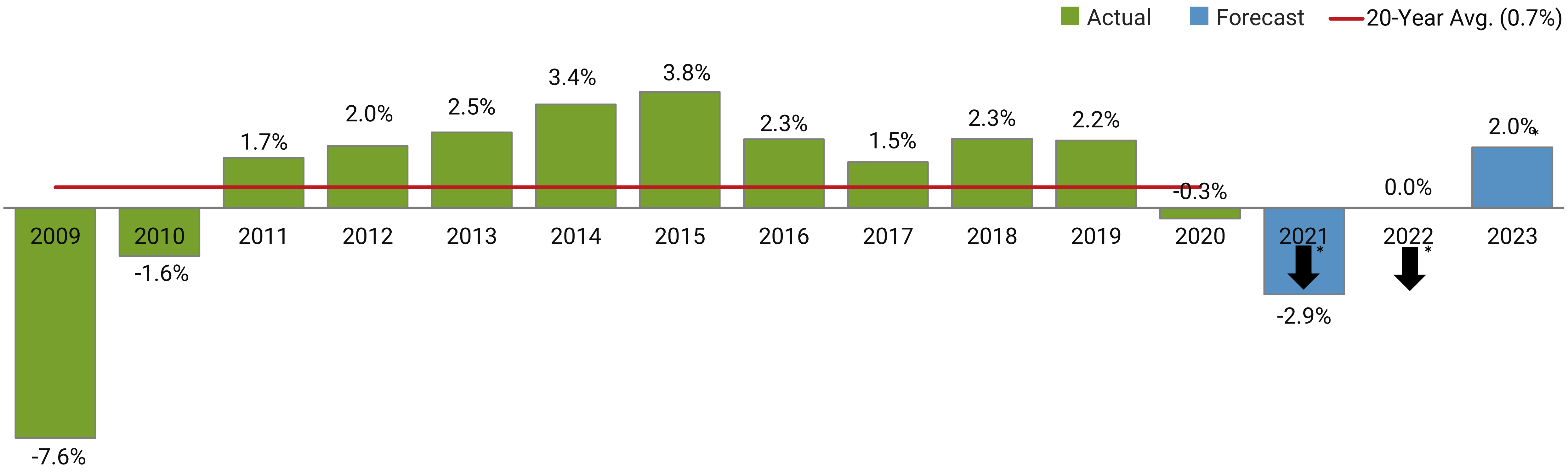
- Growth in office rental rates had averaged 2.1% in the four years prior to the pandemic. In ’20, rent growth declined by -0.3%. A continued decline of -2.9% is forecast for ’21 and no change is expected in ’22. Growth is expected to be positive again in ‘23 at 2%.

Office Vacancy Rates



Sources: 2001-2020 (Q4), CBRE; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 15.1% for 2021 and 14.8% for 2022.

》 Office Rental Rate Change



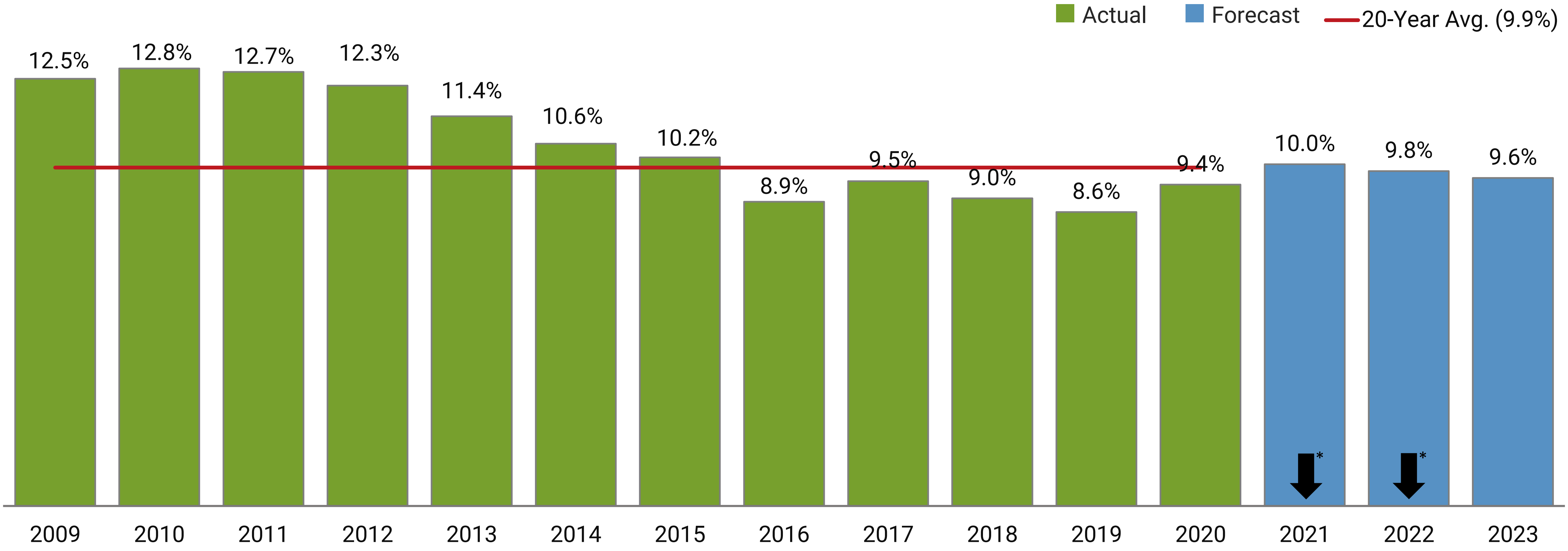
Sources: 2000-2020, CBRE; 2021-2023, ULI Real Estate Economic Forecast. Please note that the office historic forecast rent series has changed from TW Rents to EA Asking Rents.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected -1.0% for 2021 and 1.9% for 2022.

Retail Sector Fundamentals

- Retail availability rates were at 8.6% in ‘19, the lowest post-GFC rate. Despite the severe pandemic restrictions on retail, availability rates increased a relatively modest 80 basis points in 2020. Availability rates are forecast to rise an additional 60 basis points in ‘21 to 10%, and then remain elevated but decline slightly over the next two years, down to 9.6% by the end of ‘23.

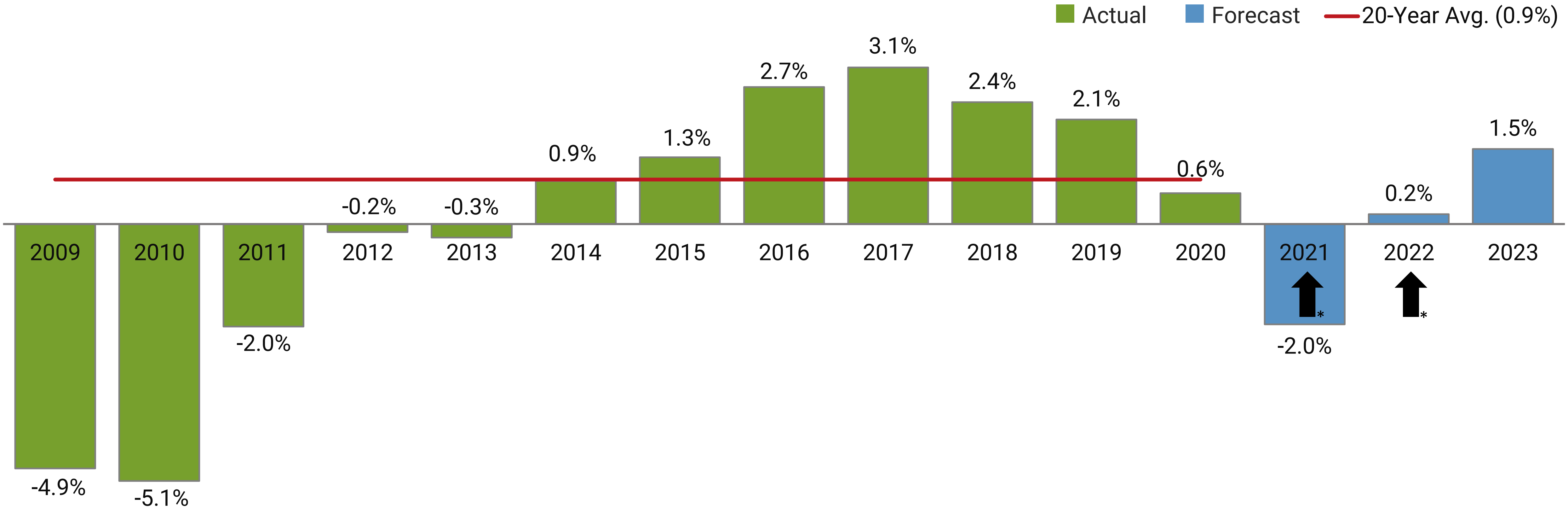
- Retail rental rate growth reached a post-recession high of 3.1% in 2017 before moderating to 2.1% in ’19. Growth was minimally positive in 2020 at 0.6%. The forecast indicates a change in retail rents of -2% in 2021 and a return to minimally positive growth of 0.2% in ’22. Relatively stronger growth of 1.5% is forecast for ’23, returning rents close to ‘20 levels.

›› Retail Availability Rates



Sources: 2001-2020 (Q4), CBRE; 2021-2023 (YE), ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 11.3% for 2021 and 11.3% for 2022.

Retail Rental Rate Change



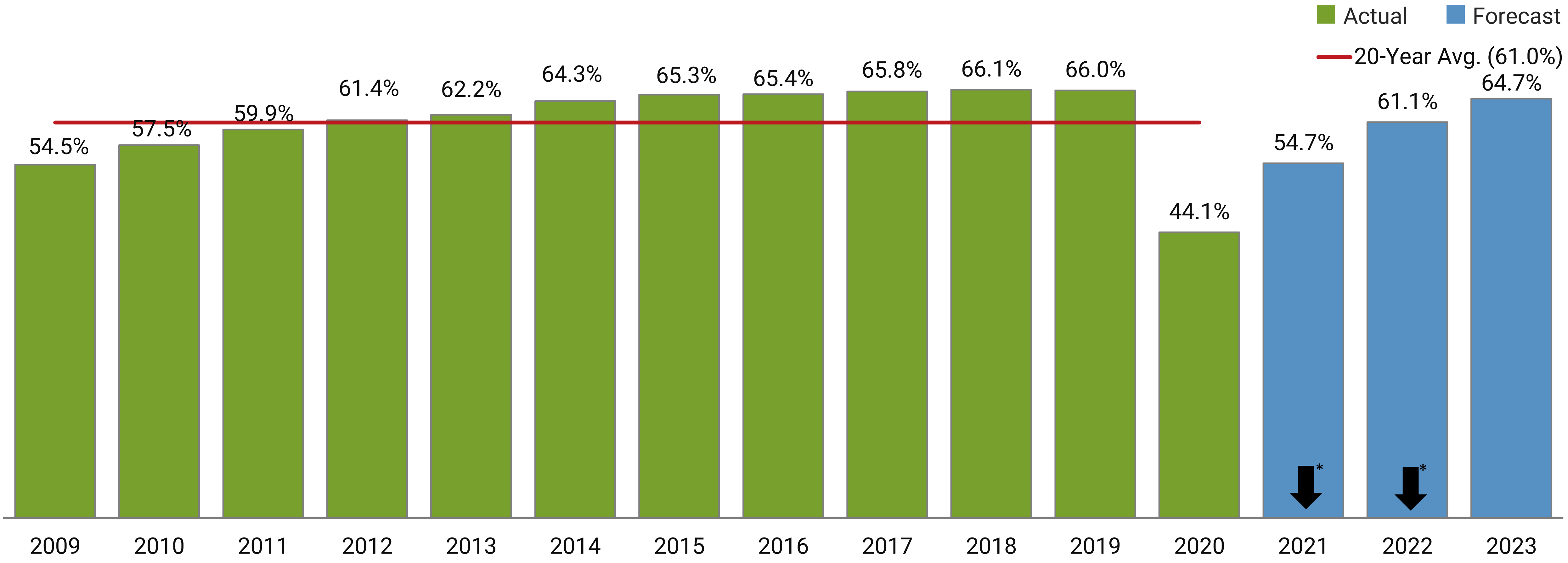
Sources: 2000-2020 (Q4), CBRE; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected -2.8% for 2021 and 0.0% for 2022.

Hotel Sector Fundamentals

- Hotel occupancy rates, according to STR, were steadily improving over the last ten years, coming in at 66% in 2019, above the twenty-year average. Occupancy in the pandemic year of ‘20 fell to 44.1%. Continual improvement, although not full recovery, is expected during the forecast period, with occupancy rates of 54.7%, 61.1%, and 64.7%, respectively in ‘21, ‘22’, and ‘23.

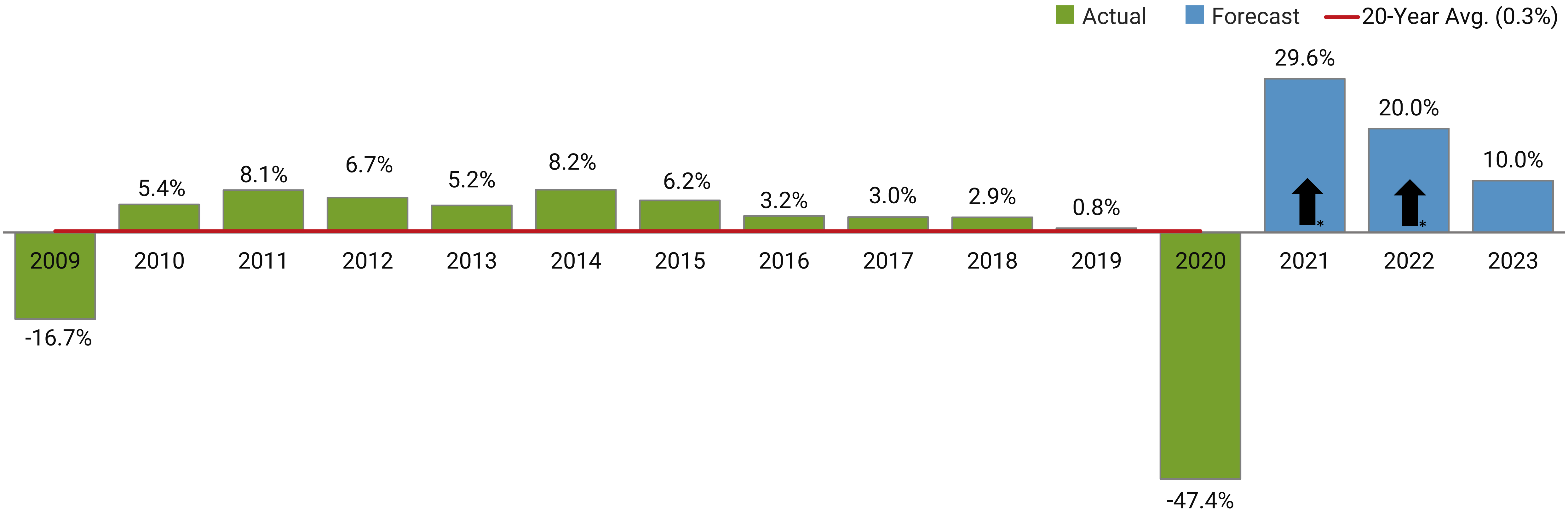
- Following four years of already slowing hotel revenue per available room (RevPAR) growth, the RevPAR growth rate dropped by -47.4% 2020. RevPAR is expected to begin recovery in ‘21 at positive 29.6%, and continue in ‘22 at 20%, and 10% in ‘23. Given the steep decline in ‘20, these growth rates will not yet be sufficient to bring RevPAR fully back to 2019 levels.

Hotel Occupancy Rates



Sources: 2000-2020 (December, 12 month rolling average), STR; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 57.1% for 2021 and 62.1% for 2022.

Hotel Revenue per Available Room (RevPAR) Change

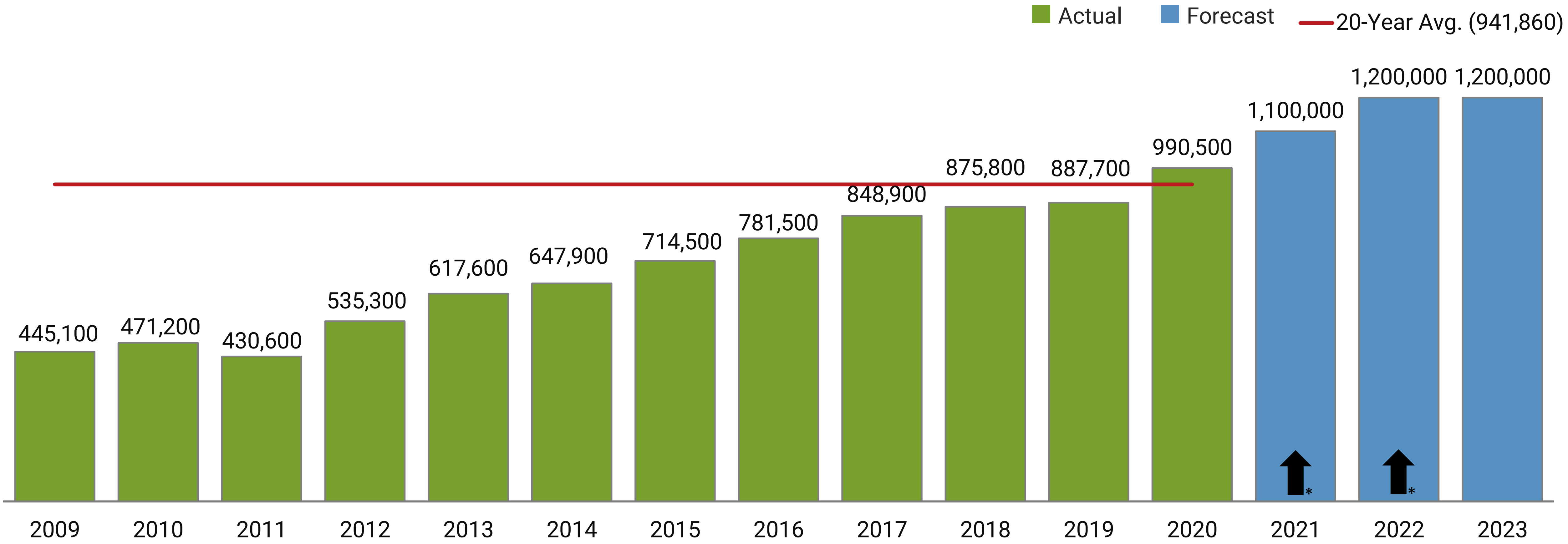


Sources: 2000-2020 (December, 12-month rolling average) STR; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 15.0% for 2021 and 10.0% for 2022.

Housing Sector

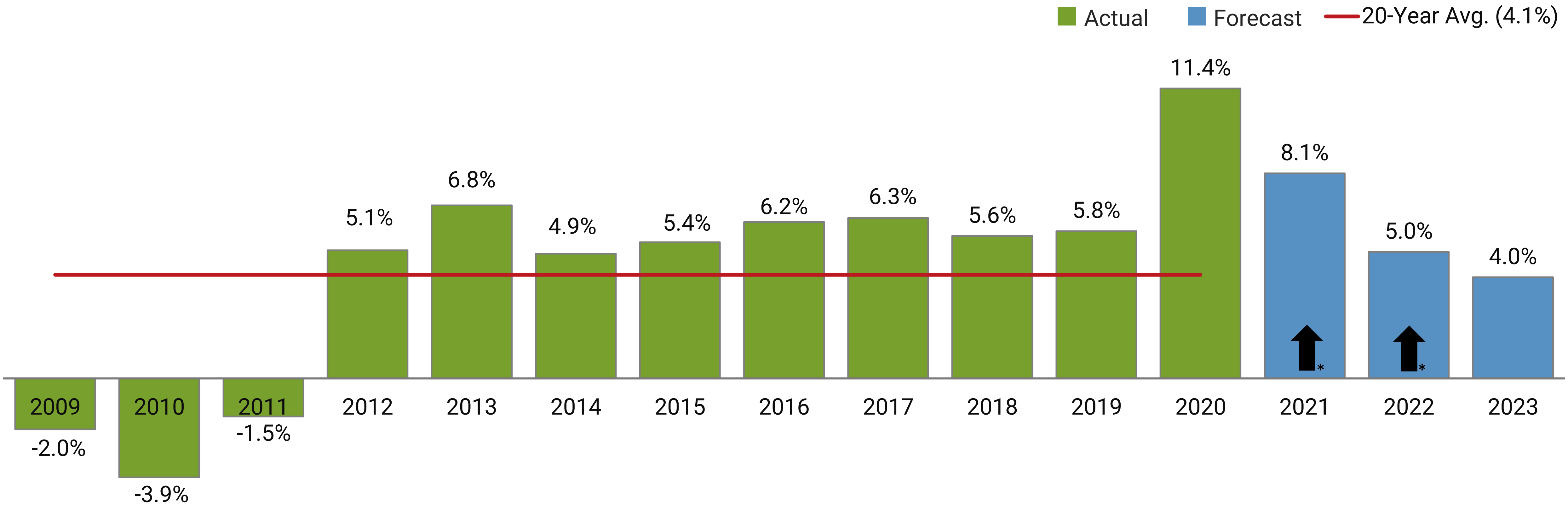
- Single-family housing starts experienced positive growth for the ninth straight year in 2020, exceeding the 20-year average in that pandemic year for the first time since the GFC. Housing starts are expected to continue to increase to 1.1 million in ’21 and 1.2 million in ‘22, and remain at that level in ‘23.
- According to the FHFA, existing home prices increased an average of 11.4% in 2020, roughly double the strong growth rates of the eight years prior. Price growth is expected to continue at elevated levels in ‘21, with 8.1% price growth. Price growth is expected to moderate in ‘22 at 5% and in ‘23 at 4%.

Single-Family Housing Starts



Sources: 2001-2020, (structures with 1 unit, as of December), U.S. Census; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2020) projected 940,000 for 2021 and 975,000 for 2022.

Average Home Price Change



Sources: 2000-2020, (seasonally adjusted, as of December), Federal Housing Finance Agency; 2021-2023, ULI Real Estate Economic Forecast.
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 3.8% for 2021 and 3.5% for 2022.

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
AEW Capital Management	Michael Acton	Managing Director
Berkshire Residential Investments	Gleb Nechayev	Head of Research, Chief Economist
Boyd Watterson	Rank Dawson	VP Investment Strategy
Bozzuto	Mark Franceski	Vice President, Research
Capital Economics	Kiran Raichura	Senior Property Economist
Clarion Partners	Tim Wang	Managing Director and Head of Investment Research
CoreLogic	Frank Nothaft	Executive, Chief Economist
CoStar Group	John B Affleck	Vice President, Market Analytics
Cushman & Wakefield	Rebecca Rockey	Global Head of Economic Analysis & Forecasting
DWS	Kevin White	Head of Americas Real Estate Research
Eigen10 Advisors, LLC	Paige Mueller	Managing Director
GID	Suzanne Mulvee	SVP Research & Strategy
Green Street	Jared Giles	Senior Associate

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Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Lead Economist/Analyst	Title
Harrison Street	Thomas Errath	Managing Director
Heitman	Mary Ludgin	Senior Managing Director, Director of Global Investment Research
JLL	Ryan Severino	Chief Economist
JP Morgan Asset Management	Aric Chang	Executive Director, Real Estate Research
Laposa Realty Advisors, LLC	Steven Laposa	Principal
LaSalle Investment Management	Richard Kleinman	Head of US Research and Strategy
Linneman Associates	Peter Linneman	Principal
Marcus & Millichap	John Chang	Sr Vice President, National Director Research Services
	Peter Tindall	Vice President, Director of Research Operations
MetLife Investment Management	William Pattison	Head of Research
Moody's Analytics	Victor Calanog	Head of CRE Economics
Morgan Stanley	Margaret Harbaugh	Executive Director
Nareit	Calvin Schnure	Senior Economist
National Association of Realtors(r)	Lawrence Yun	Chief Economist

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Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Lead Economist/Analyst	Title
Newmark	Alexander Paul	Senior Managing Director
Oxford Economics	Aran Ryan	Tourism Economics, Director of Lodging Analytics
PGIM Real Estate	Lee Menifee	Managing Director, Head of Americas Investment Research
PwC, LLP	Andrew Warren	Director, Real Estate Research
Rosen Consulting Group	Ken Rosen	Chairman
	Randall Sakamoto	President
RCLCO Financial Advisors	William Maher	Director, Strategy & Research
Red Shoe Economics, LLC	Kiernan Conway	CCIM Chief Economist
RERC, a SitusAMC Company	Ken Riggs	Vice Chairman
	Jodi Airhart	Senior Vice President
Stockbridge Associates	George Casey	CEO
Trepp, LLC	Matthew Anderson	Managing Director
UT Austin, McCombs School of Business	Mark Roberts	Executive Director
White Oak Global Advisors	Dr. David James Lynn	President and Chief Investment Officer

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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