

ULI Real Estate Economic Forecast

A SURVEY OF LEADING REAL ESTATE ECONOMISTS/ANALYSTS

APRIL 2022

ULI Center For Real Estate Economics And Capital Markets

ULI Real Estate Economic Forecast

- Three-year forecast ('22 -'24) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 47 economists/analysts at 36 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 21st survey; completed March 24 – April 13, 2021.
- A semi-annual survey; next release planned for October 2022.
- 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

2022 Forecast

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

2024 Forecast

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

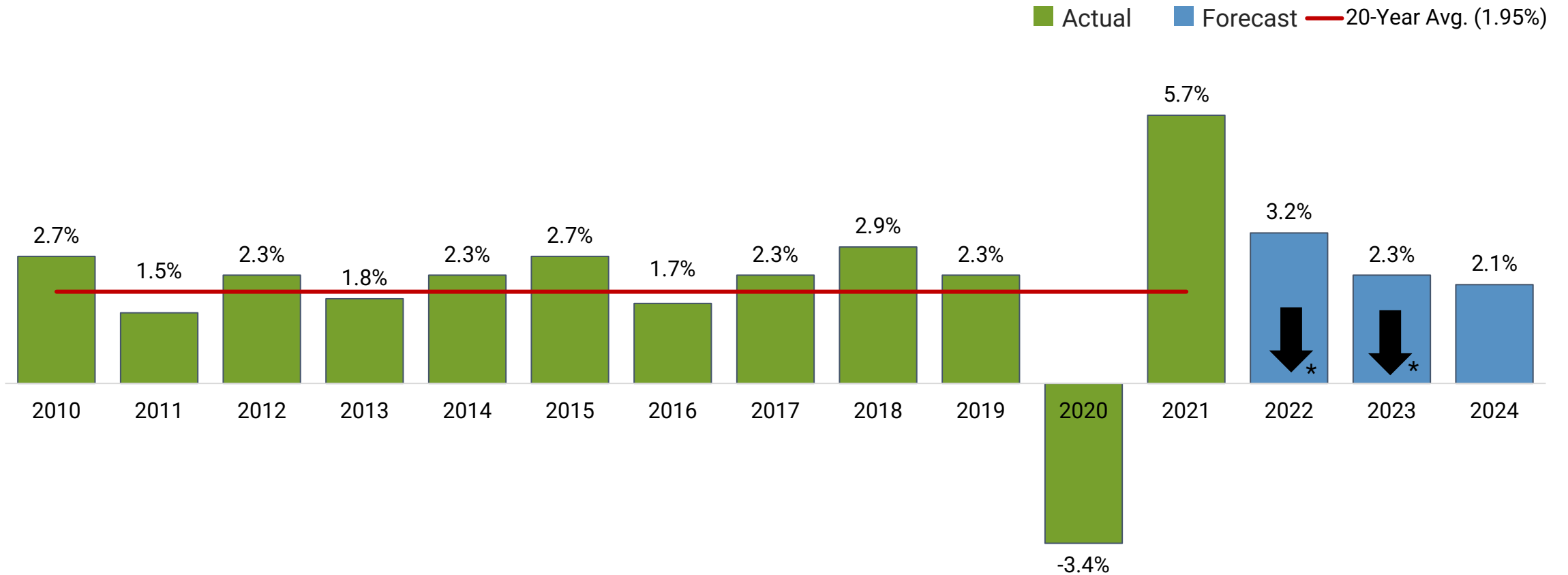
Key Findings

- Commercial real estate transaction volume reached an historic high of \$846 billion in '21, almost double the pandemic-year low of \$431 billion in '20. Levels are expected to moderate during the forecast period but still exceed pre-pandemic highs, with \$800 billion in '22, \$725 billion in '23 and \$750 billion in '24.
- Price growth increased by 19.5% in '21, almost triple the price growth in each of the five previous years when growth in those years was already above their long-term average. Price growth in '22 is expected to moderate to a strong 10%, before moderating further to 6.0% in '23 and 5.9% in '24.
- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index (NPI), were a strong 17.7% in '21. Total returns are expected to moderate over the forecast period, to 10.0% in '22, 8.0% in '23, and in '24 return to levels similar to, or just exceeding, returns in the three pre-pandemic years with 7.0% total returns. By property type, 2022 returns are forecast to range from industrial's 20% to retail's 5.4%. In '24, returns are forecast to range from industrial's 9.8% to office's 5.3%.
- Change in vacancy and availability rates is expected to be minimal in the forecast period across property types. Industrial availability will remain low and essentially plateau, apartment vacancies will remain tight and only inch up, and retail vacancies will remain steady at slightly below their long-term average. Office vacancy rates are expected to stay elevated and plateau at above their long-term average.
- Commercial property rent growth differs by property type. Industrial and apartment rent growth are both expected to be strong during the forecast period, with annual growth averaging 5.5% and 5.3%, respectively. Both sectors will experience the strongest growth in '22 and then moderating growth in the subsequent two years. Average annual retail rent growth is forecast at 2.0% during the forecast period, steady throughout the three years, and office rent growth is forecast at an annual average of 1.4%, with most growth occurring in '23 and '24.
- Housing starts are expected to increase in the first two forecast years to 1.20 million in '22 and 1.25 million in '23, continuing the consistent annual growth of the last decade. Housing starts will decline somewhat in '24 to 1.1 million but remain at a welcome level above the 20-year average.

» Economy

- The economists/analysts expect continued strong economic expansion in '22, although at a more moderate rate than in '21, with further moderated growth in '23 and '24. Employment growth, expected to be strong in '22, is projected to slow over the forecast period, while the unemployment rate reflects a tight labor market in all three years of the forecast period.
- GDP growth bounced back quickly in '21 from the pandemic-induced economic contraction in '20, rising 5.7%. Growth will remain strong but moderate in '22 to 3.2%, still exceeding annual growth rates during the ten years from 2010-2019. Growth will continue to moderate in '23, and '24, with an annual average of growth of 2.2%, comparable to the average growth in the pre-pandemic decade.
- Employment growth staged a significant, but not complete, recovery in '21 with 6.74 million jobs from the loss of 9.29 million jobs in '20. Full recovery and growth is expected in '22 with an additional 4.10 million jobs. Growth will continue to moderate in '23 and '24, to 1.87 and 1.15 million jobs, respectively; this is lower annual growth than that in 2011-2019.
- The unemployment rate is expected to be 3.5% at the end of both '22 and '23 and then notch up to 3.6% in '24, similar to the low unemployment rate of 3.6% in 2019.

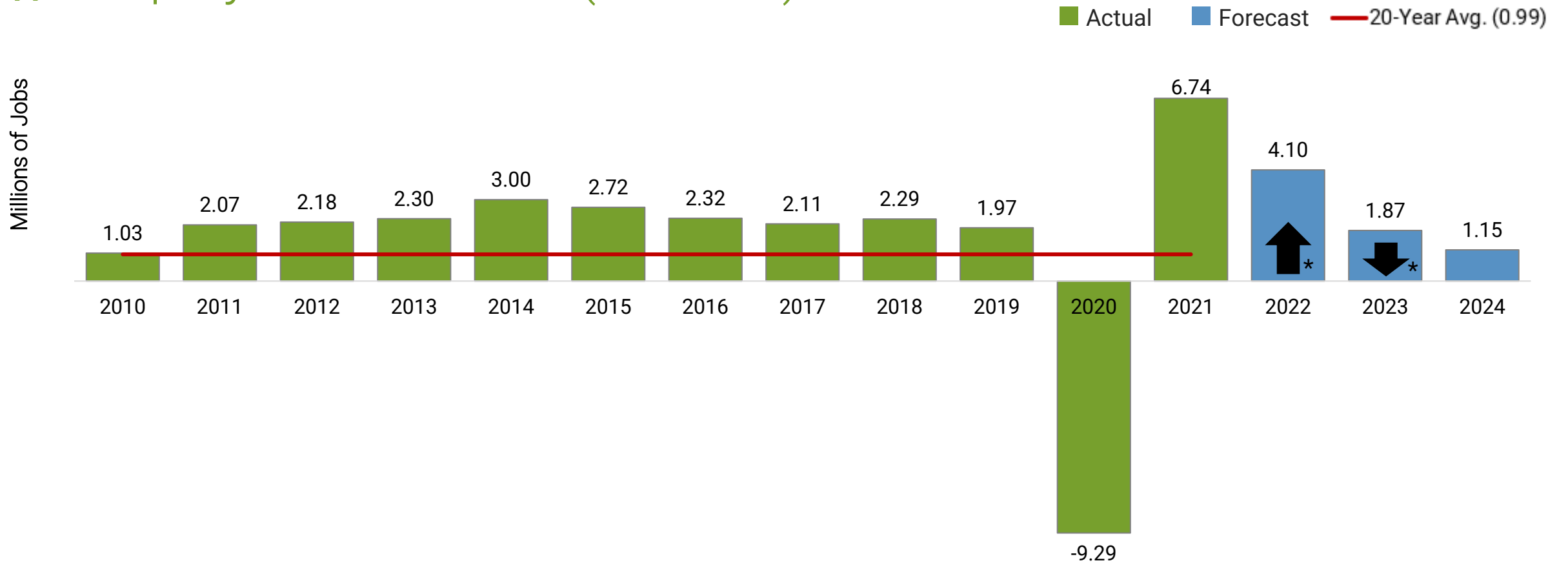
» Real GDP Growth



Sources: 2002-2021, Bureau of Economic Analysis; 2022-2024, 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 4.0% for 2022 and 2.5% for 2023.

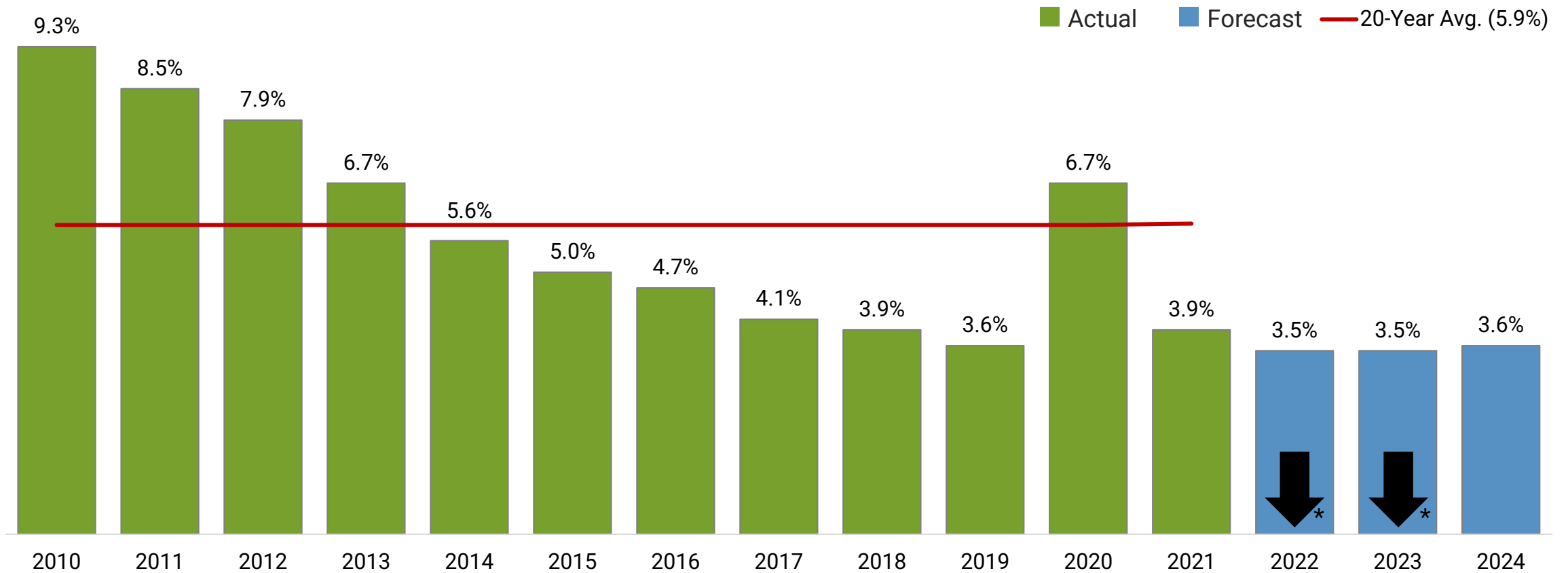
» Employment Growth (Millions)



Sources: 2002-2021, Bureau of Labor Statistics; 2022-2024, 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 3.7M for 2022 and 2.2M for 2023.

» Unemployment Rate



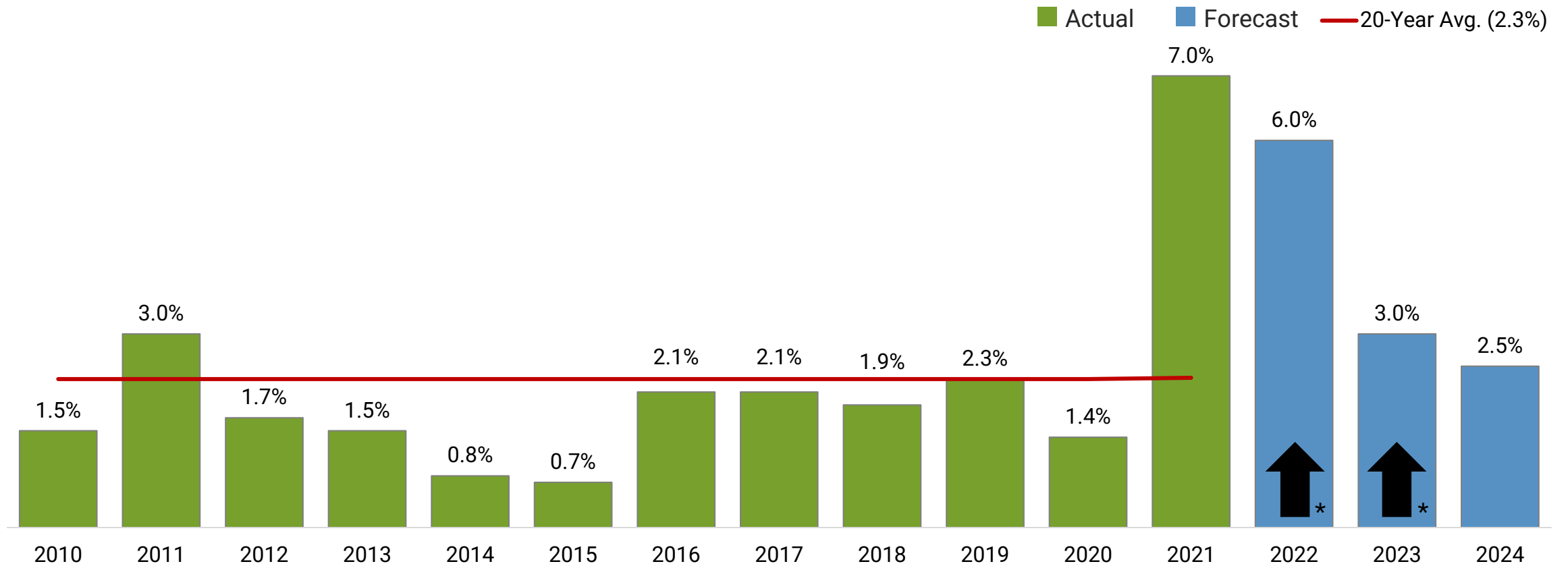
Sources: 2002-2021, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2022-2024 (YE), ULI Real Estate Economic Forecast.

*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 4.0% for 2022 and 3.8% for 2023.

» Inflation, Interest Rates, and Cap Rates

- The CPI inflation rate in 2021 was 7.0%, more than three times higher than the 20-year average of 2.3%. The forecast for 2022 is for the inflation rate to remain elevated but moderate somewhat to 6.0%, drop in '23 to 3.0% and then further decline to 2.5% in '24, just above the long-term average.
- The ten-year treasury rate averaged 2.10% per year from '11 to '21, below the long-term average of 2.90% and with particularly low rates in '20 and '21. The rate is expected to rise by 118 basis points in '22 to 2.70%, increase again in '23 to 3.0% and plateau at that rate in '24.
- Capitalization rates for institutional-quality investments (NCREIF cap rates) have steadily declined for 12 years, including the pandemic year, and were at 4.0% in '21. Cap rates are expected to remain at 4.0% in '22, move up to 4.3% in '23 and plateau there in '24.

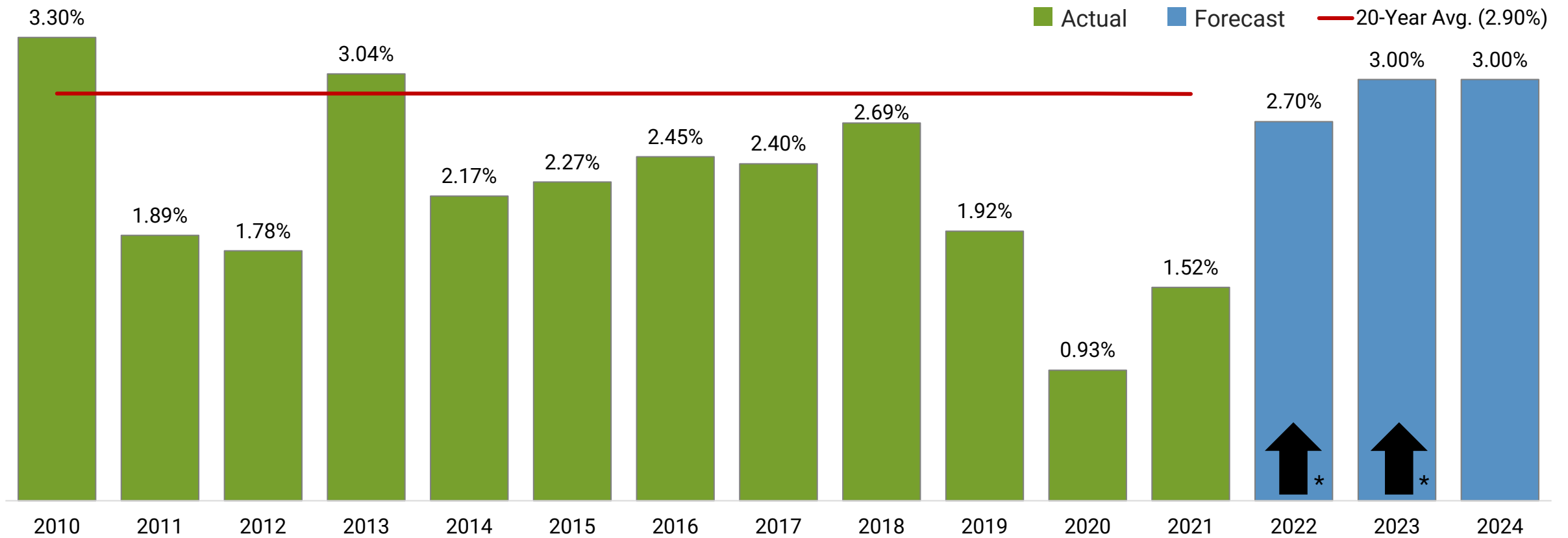
» Consumer Price Index Inflation Rate



Sources: 2002-2021, (12-month change, as of December), Bureau of Labor Statistics; 2022-2024 (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 3.0% for 2022 and 2.4% for 2023.

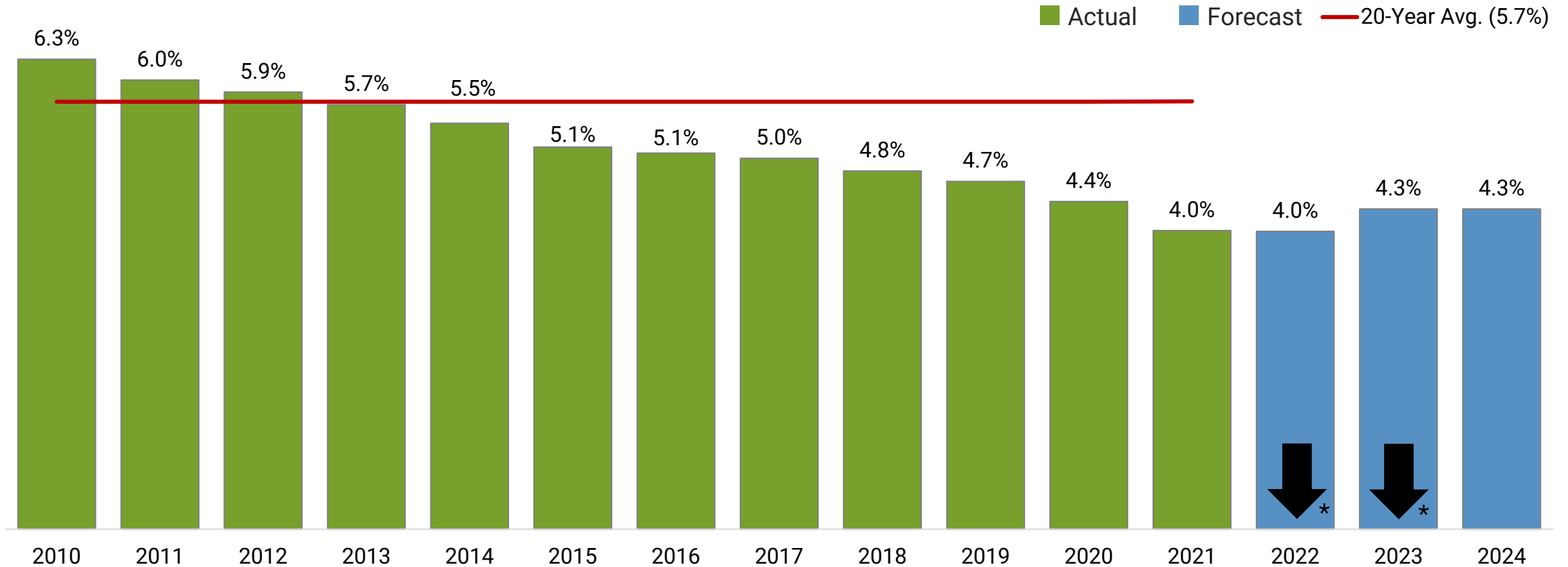
» Ten-Year Treasury Rate



Sources: 2002-2021 (YE), U.S. Federal Reserve; 2022-2024 (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 2.00% for 2022 and 2.25% for 2023.

» NCREIF Capitalization Rate



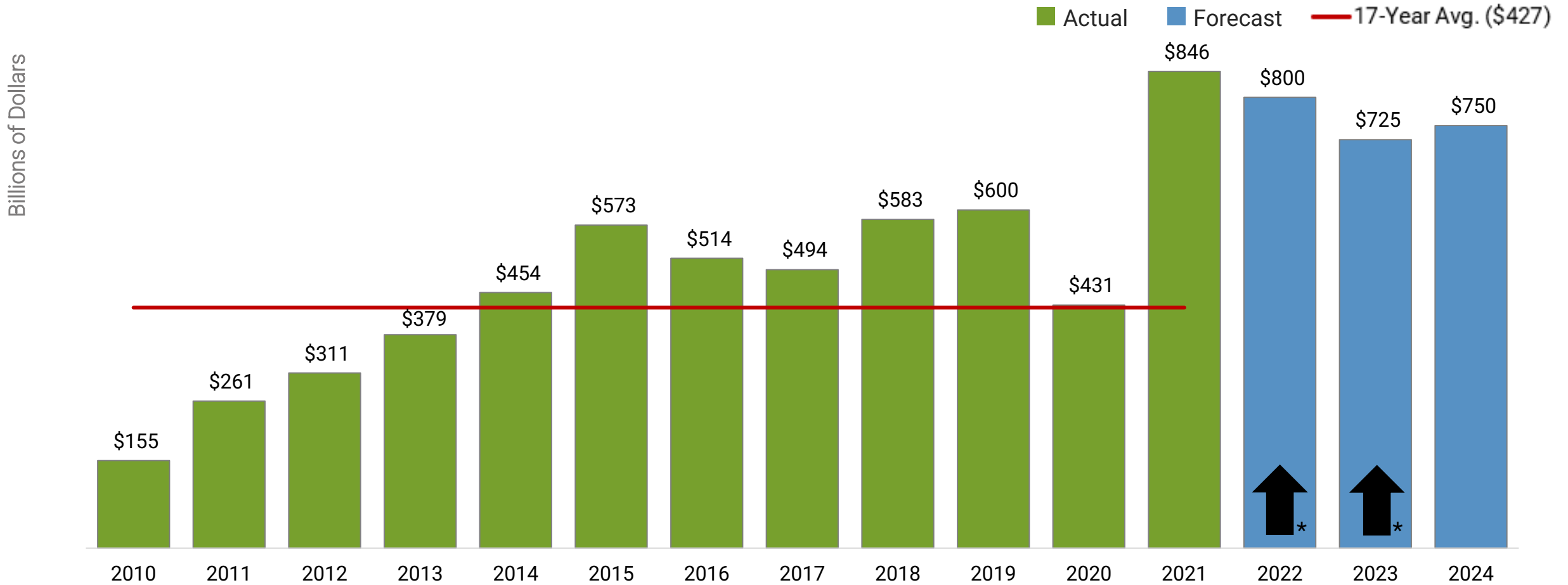
Sources: 2002-2021, Q4, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024 (YE), ULI Real Estate Economic Forecast.

*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 4.3% for 2022 and 4.4% for 2023.

» Real Estate Capital Markets

- Commercial real estate transaction volume reached an historic high of \$846 billion in '21, almost double the pandemic-year low of \$431 billion in '20. (Note that the pandemic low was in a single-year and relatively mild compared to the impact of the GFC). Levels are expected to moderate during the forecast period but still exceed pre-pandemic high points, with \$800 billion in '22, \$725 billion in '23 and \$750 billion in '24.
- Issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate, reached a post-GFC high in 2021 of \$111 billion, more than double the pandemic low of \$54 billion in '20. (Note that prior to the pandemic, CMBS issuance had rebounded from a low in 2009, but to a much lower level than pre-GFC levels; the peak had been \$228 billion in 2007). Levels are expected to moderate during the forecast period but remain around pre-pandemic highs, averaging \$97 billion a year.

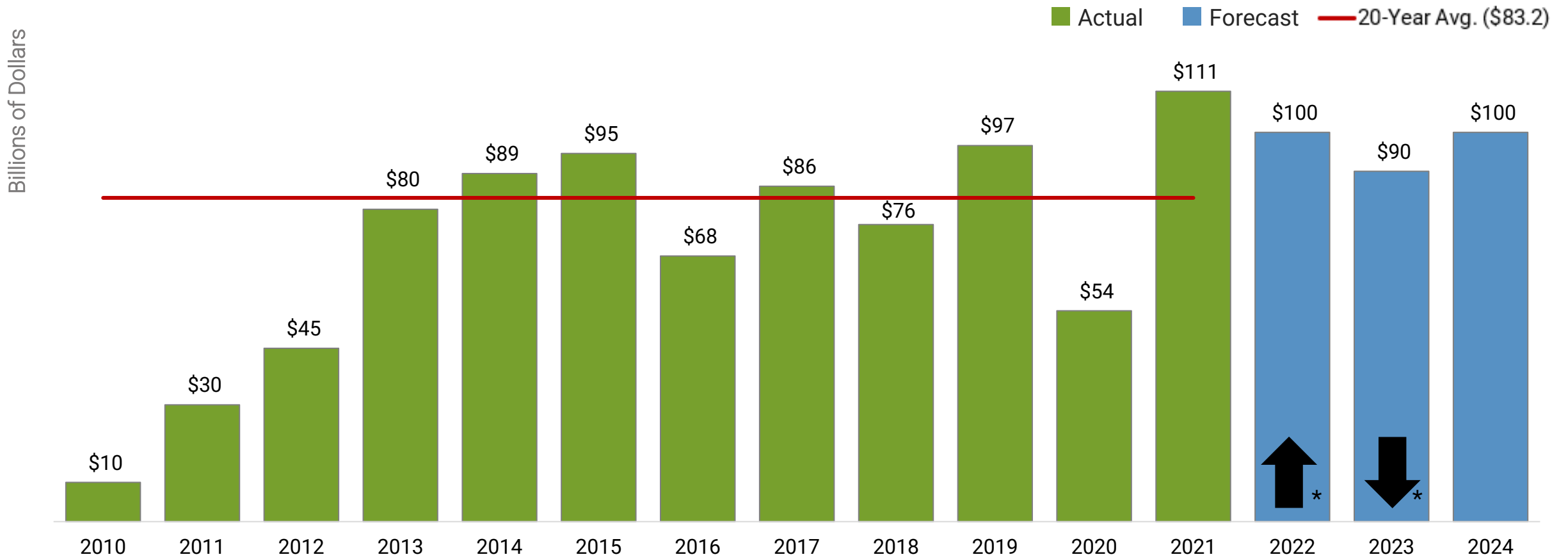
» Commercial Real Estate Transaction Volume



Sources: 2002-2021, Real Capital Analytics; 2022-2024, 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 \$600B for 2022 and \$600B for 2023.

» Commercial Mortgage-Backed Securities (CMBS) Issuance



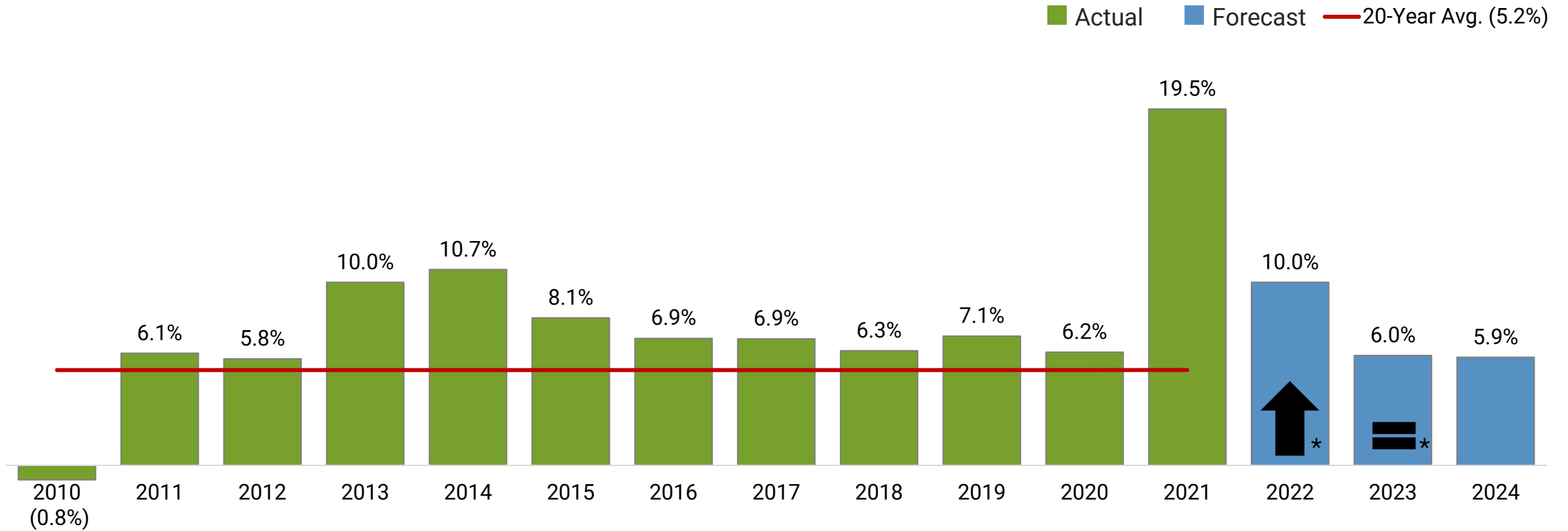
Sources: 2002-2021, Green Street, Commercial Mortgage Alert; 2022-2024, ULI Real Estate Economic Forecast.

*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 \$90B for 2022 and \$95B for 2023.

» Real Estate Returns and Prices

- The RCA Commercial Property Price Index (CPPI) increased by 19.5% in '21, almost triple the price growth in each of the five previous years; growth in those years was already above the long-term average. Price growth in '22 is expected to moderate to a strong 10%, before moderating further to 6.0% in '23 and 5.9% in '24.
- Equity REIT total returns in 2021, according to NAREIT, were a very strong 43.2%. Returns are expected to be moderate during the forecast period at 8.0%, 8.3% and 9.5 in '22 , '23, and '24, respectively.
- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index (NPI), were a strong 17.7% in '21. Total returns are expected to moderate over the forecast period, to 10.0% in '22 , 8.0% in '23, and in '24 return to levels similar to, or just exceeding, returns in the three pre-pandemic years with 7.0% total returns.

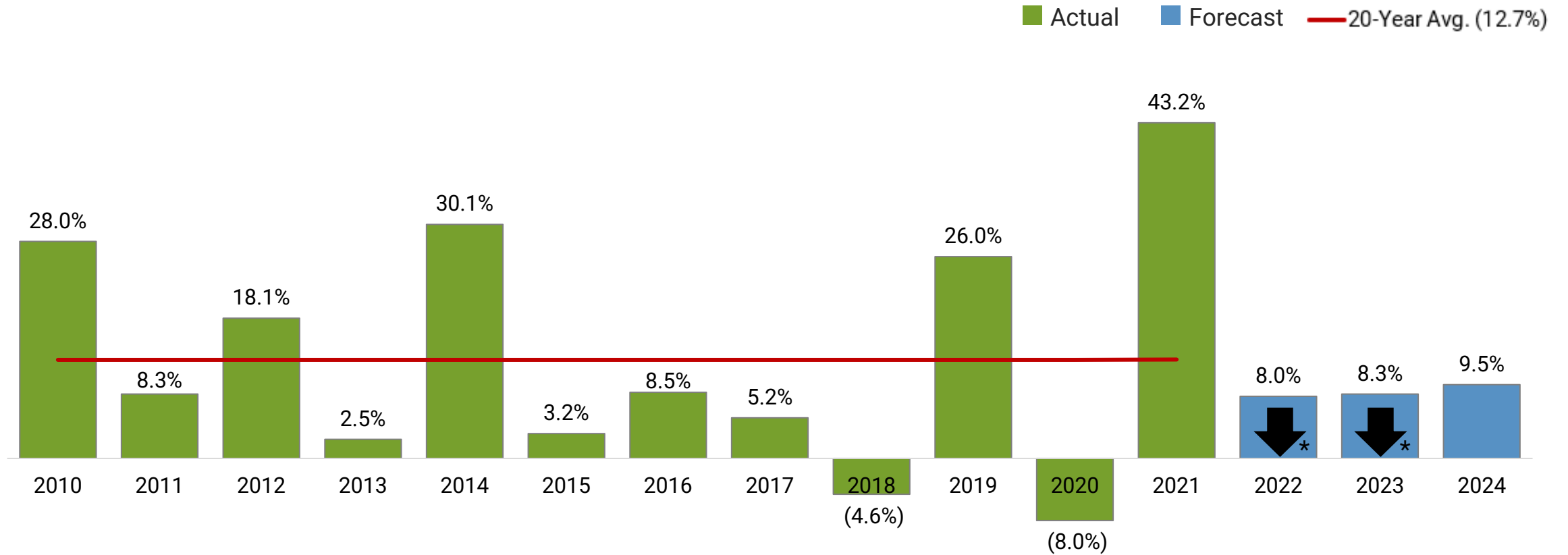
» RCA Commercial Property Price Index (annual change)



Sources: 2002-2021, Real Capital Analytics; 2022-2024, 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 7.0% for 2022 and 6.0% for 2023.

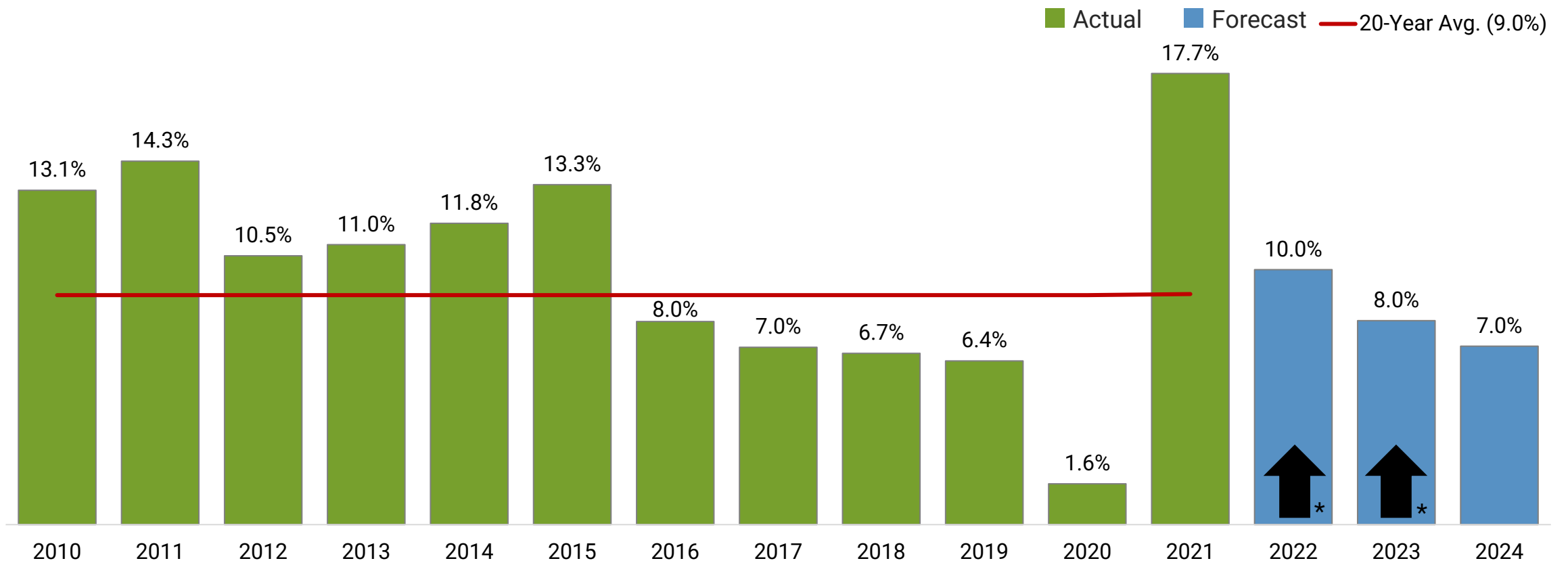
» Equity REIT Total Annual Returns



Sources: 2002-2021, National Association of Real Estate Investment Trusts; 2022-2024, 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 27.8% for 2022 and 10.0% for 2023.

» NCREIF Total Annual Returns



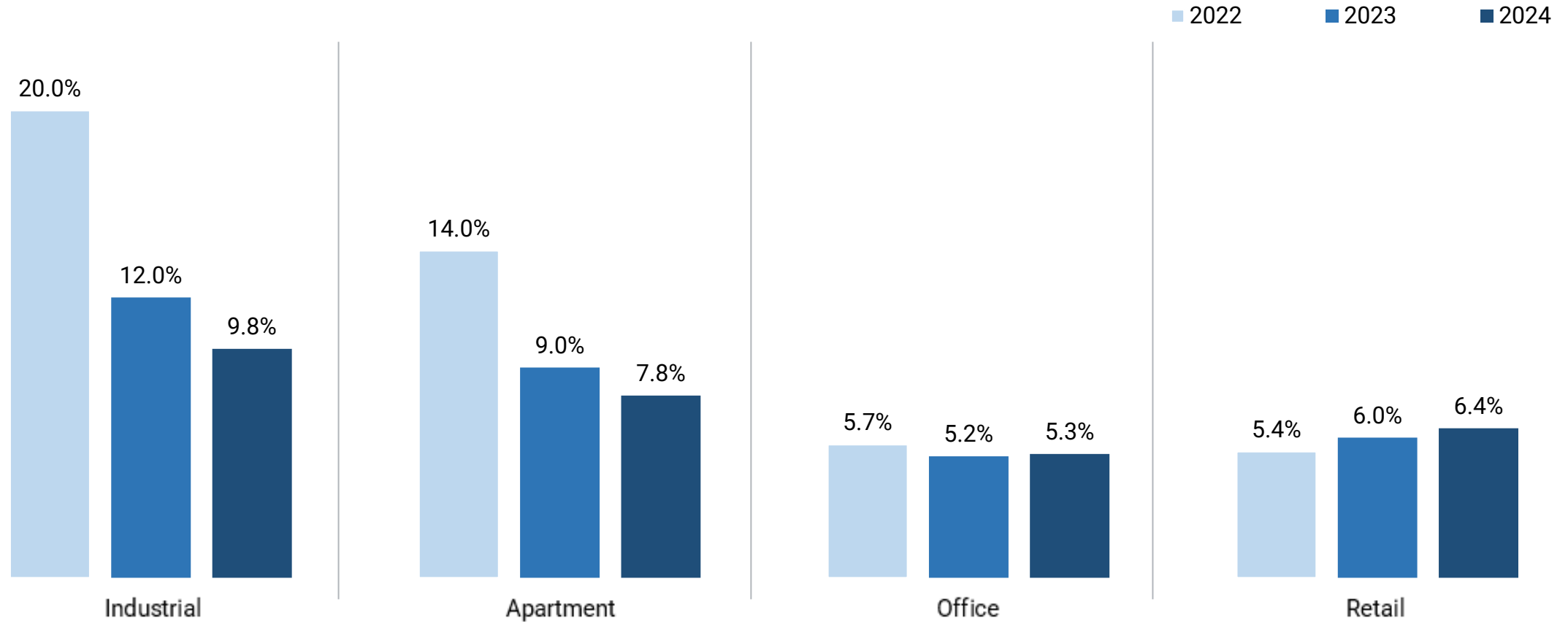
Sources: 2002-2021, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024, ULI Real Estate Economic Forecast.

*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 7.0% for 2022 and 7.0% for 2023.

» NCREIF Returns by Property Type

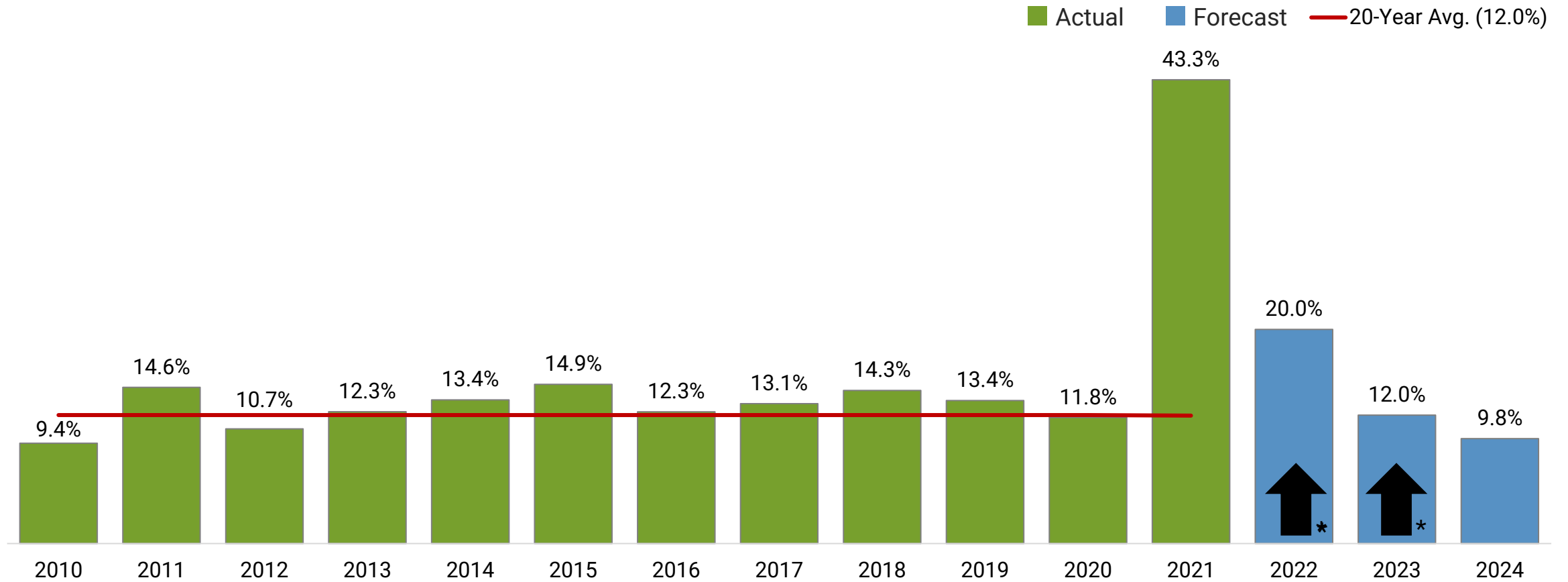
- NCREIF total returns in 2022 for the industrial sector are forecast to be a strong 20.0% after even stronger returns of 43% in '21. Similarly, apartment returns in '22 are expected to be strong at 14% moderating somewhat from 19.9% in '21. Expected industrial and apartment returns in '22 are significantly above their long-term averages.
- Office returns are expected to be 5.7% in '22, moderating slightly from returns in '21, while retail returns are expected to be 5.4% in '22, an increase from returns in '21. Still, both expected office and retail returns in '22 are below their long-term averages.
- Industrial total returns are forecast to further moderate in '23 and '24, declining to below their long-term average in '24 with 9.8% returns.
- Apartment total returns are forecast to further moderate in '23 and '24, dipping below their long-term average in '24 with 7.8%, but remaining higher than the returns in the four years prior to the pandemic.
- Office total returns are forecast to further moderate in '23 and essentially plateau at 5.3% in '24, remaining below the long-term average and below returns of the four years to the pandemic
- Retail total returns are expected to continue to increase in '23 and again in '24 to 6.4%, both years stronger than the two years prior to the pandemic but remaining below the long-term average.

» NCREIF Property Types Total Returns



Source: 2022-2024, ULI Real Estate Economic Forecast.

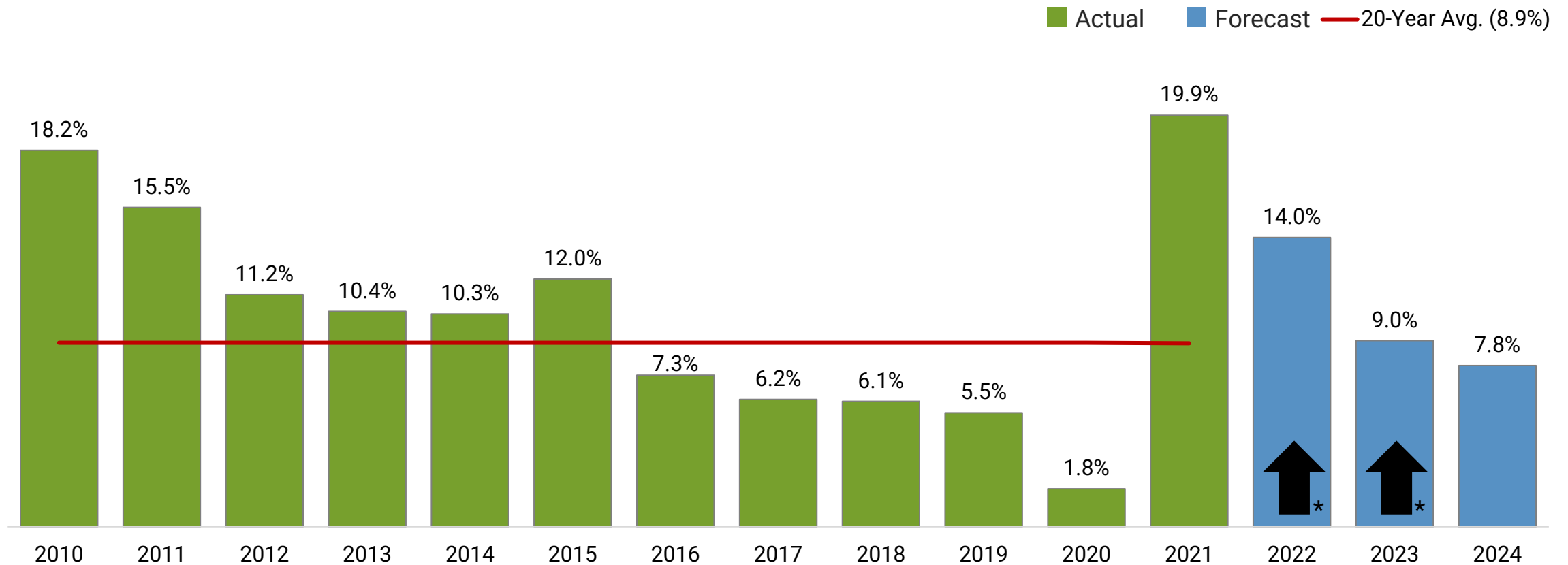
» NCREIF Industrial Total Annual Returns



Sources: 2002-2021, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024, 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 11.5% for 2022 and 10.0% for 2023.

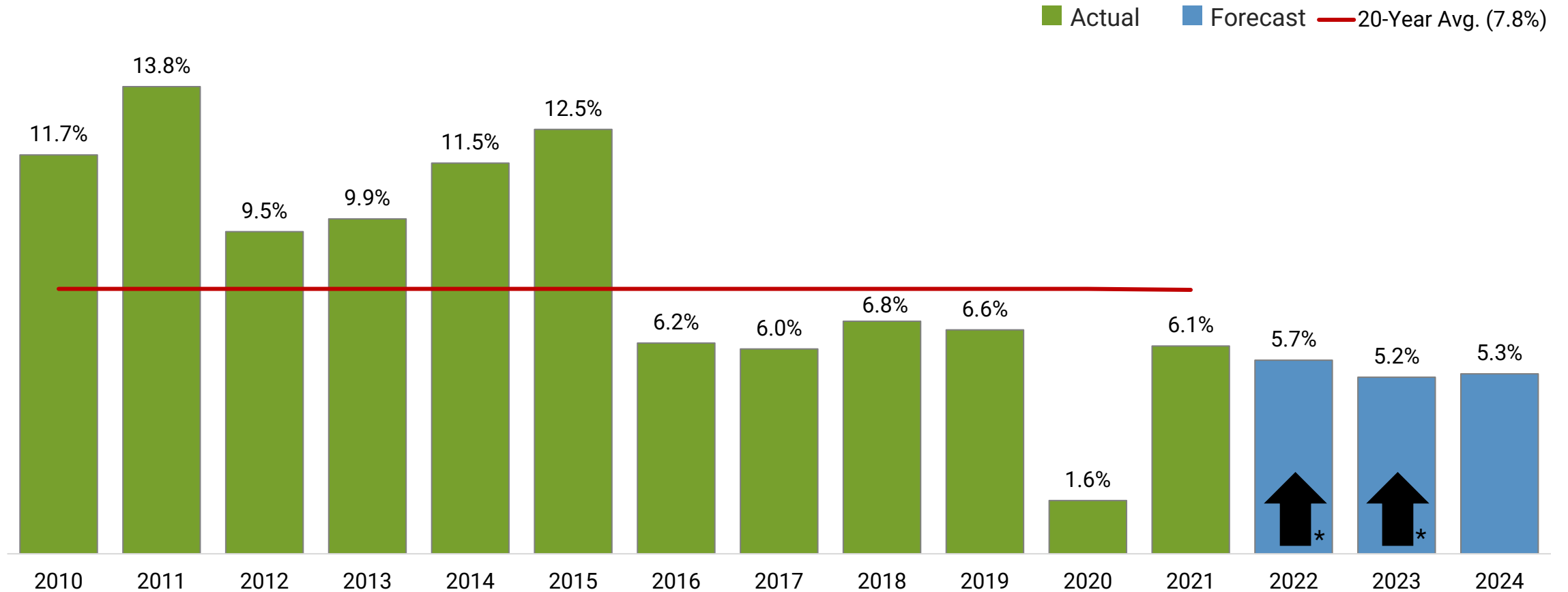
» NCREIF Apartment Total Annual Returns



Sources: 2002-2021, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024, 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 7.8% for 2022 and 7.0% for 2023.

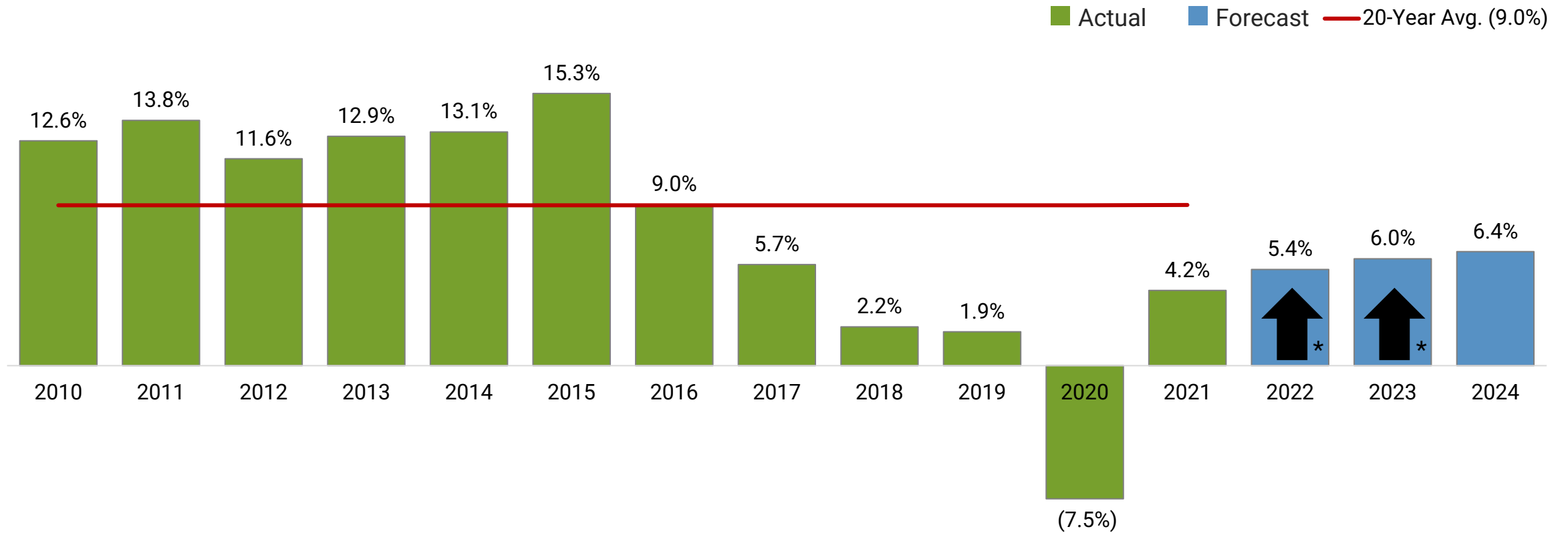
» NCREIF Office Total Annual Returns



Sources: 2002-2021, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024, 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, 2021) projected 4.4% for 2022 and 5.0% for 2023.

» NCREIF Retail Total Annual Returns



Sources: 2002-2021, National Council of Real Estate Investment Fiduciaries (NCREIF); 2022-2024, ULI Real Estate Economic Forecast.

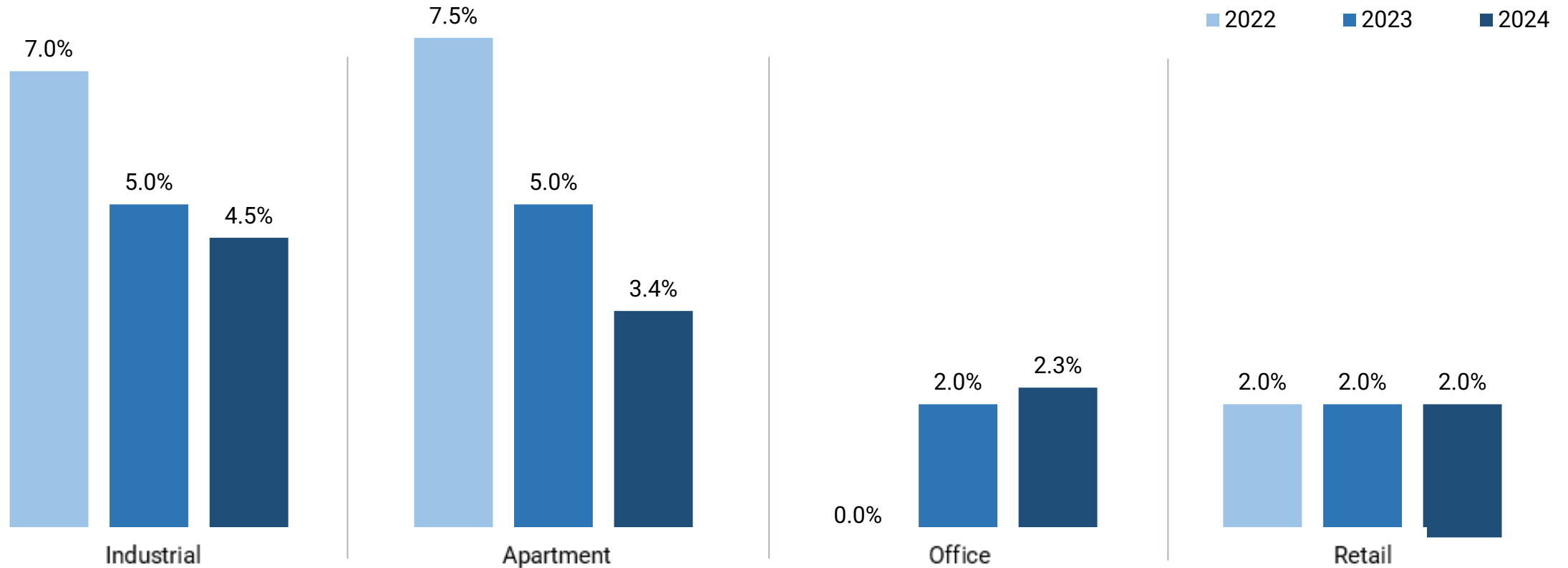
*Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 3.5% for 2022 and 4.3% for 2023.

» Vacancy Rate Change (bps)



Source: 2022-2024, ULI Real Estate Economic Forecast.

>> Rental Rate Growth

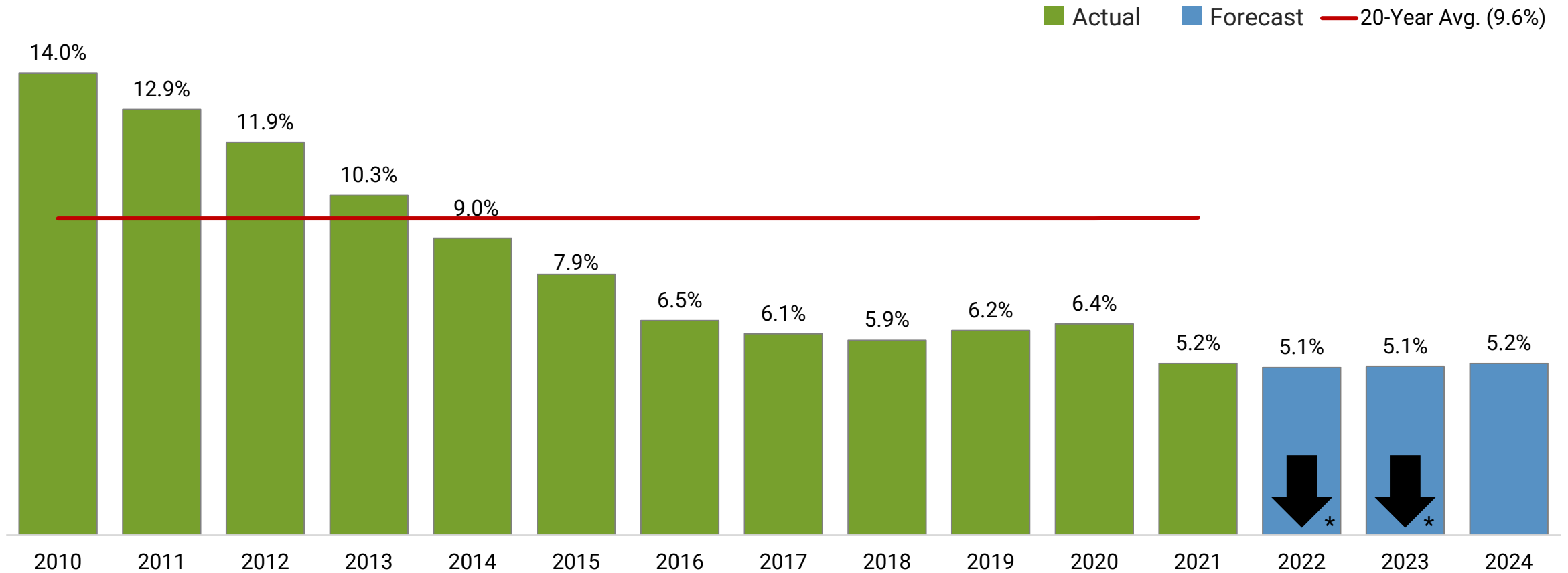


Source: 2022-2024, ULI Real Estate Economic Forecast.

» Industrial/Warehouse Sector Fundamentals

- A nine-year slide in the availability rate for the industrial/warehouse sector reached 5.9% in 2018 before notching up to 6.2% in 2019 and 6.4% in 2020, still staying well-below the 20-year average of 9.6%. Availability rates reversed direction again in '21, falling by 120 basis points to 5.2%. The forecast indicates that availability will remain low and essentially plateau during the forecast period, at 5.1% in '22 and '23 and 5.2% in '24.
- Industrial/warehouse rental rate growth in the last nine years has been substantially above the long-term average of 1.8% and reached a two-decade annual high of 6.8% in '21. Rent growth is expected to notch up further in '22 to 7.0% and continue at elevated, but moderating, rates in '23 and '24, at 5.0% and 4.5%, respectively.

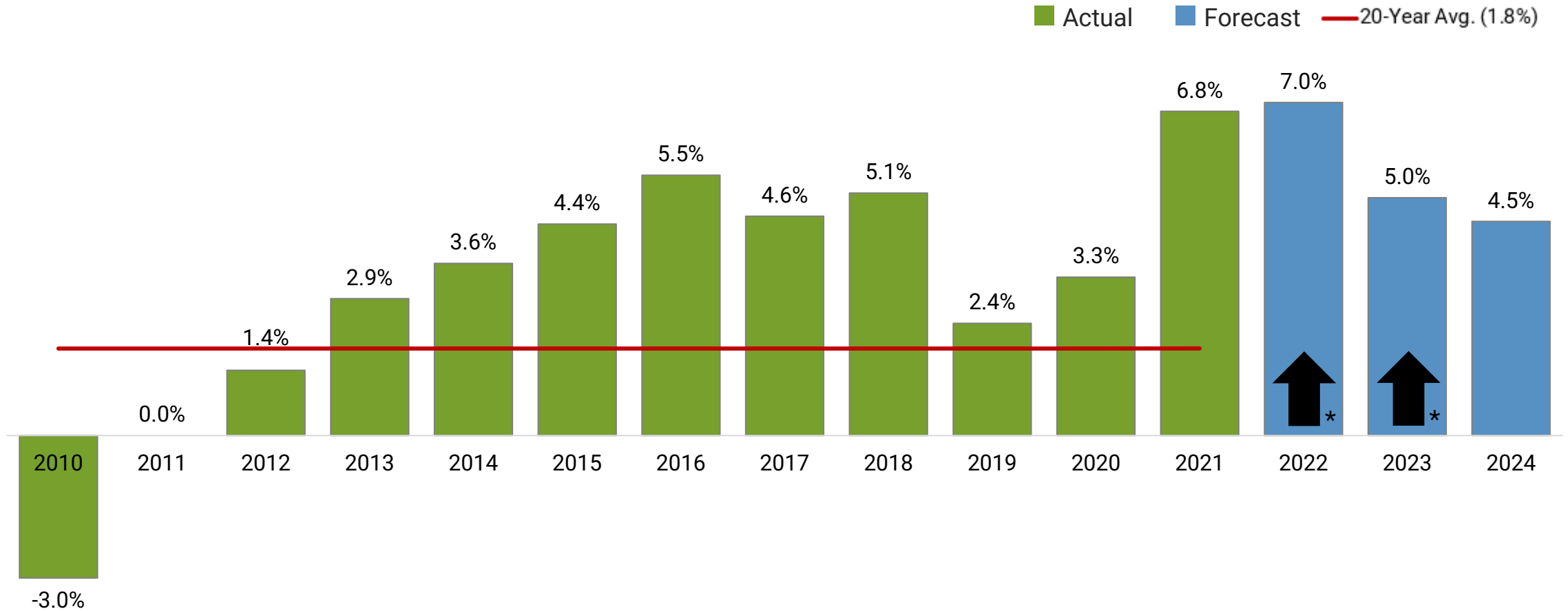
» Industrial/Warehouse Availability Rates



Sources: 2002-2021 (Q4), CBRE; 2022-2024 (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 6.2% for 2022 and 6.2% for 2023.

>> Industrial/Warehouse Rental Rate Change

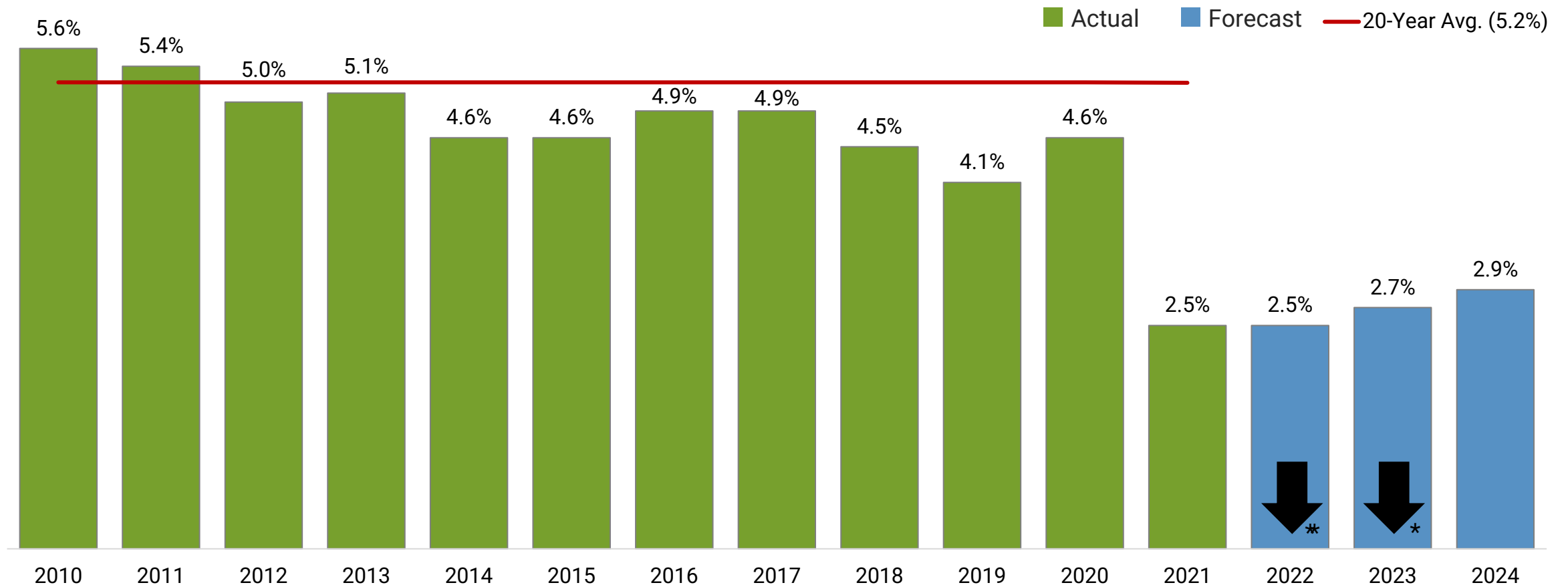


Sources: 2002-2021, CBRE; 2022-2024, ULI Real Estate Economic Forecast. Please note that the industrial historic forecast rent series has changed from TW Rents to EA Asking Rents
 *Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 4.3% for 2022 and 4.0% for 2023.

» Apartment Sector Fundamentals

- Even with strong construction activity over the past decade, the apartment sector continued to perform very well—vacancy rates decreased fairly steadily from 7.0% in 2009 to 4.1% in '19. Vacancy rates increased only slightly during the pandemic year of 2020 to 4.6%. Then, in '21, rates not only reversed direction but dropped by almost one-half to 2.5%. Vacancy rates are expected to remain tight but inch up over the forecast period, remaining at 2.5% in '22, and increasing to 2.7% in '23 and '2.9% in '24.
- Rental rate growth had been strong over the last decade with some annual growth rates exceeding 4% and growth in the last two pre-pandemic years averaging 2.8%, all above the 20-year average. Rental rate growth fell by 4.6% in 2020 before re-bounding in '21 with a 13.4% growth rate. Growth in '22 is expected to moderate from the high of '21 but remain elevated at 7.5%; growth rates in both '21 and '22 exceed that of any single year in the last two decades. Rental rate growth is expected to continue to remain strong while moderating in '23 to 5% and in '24 to 3.4%.

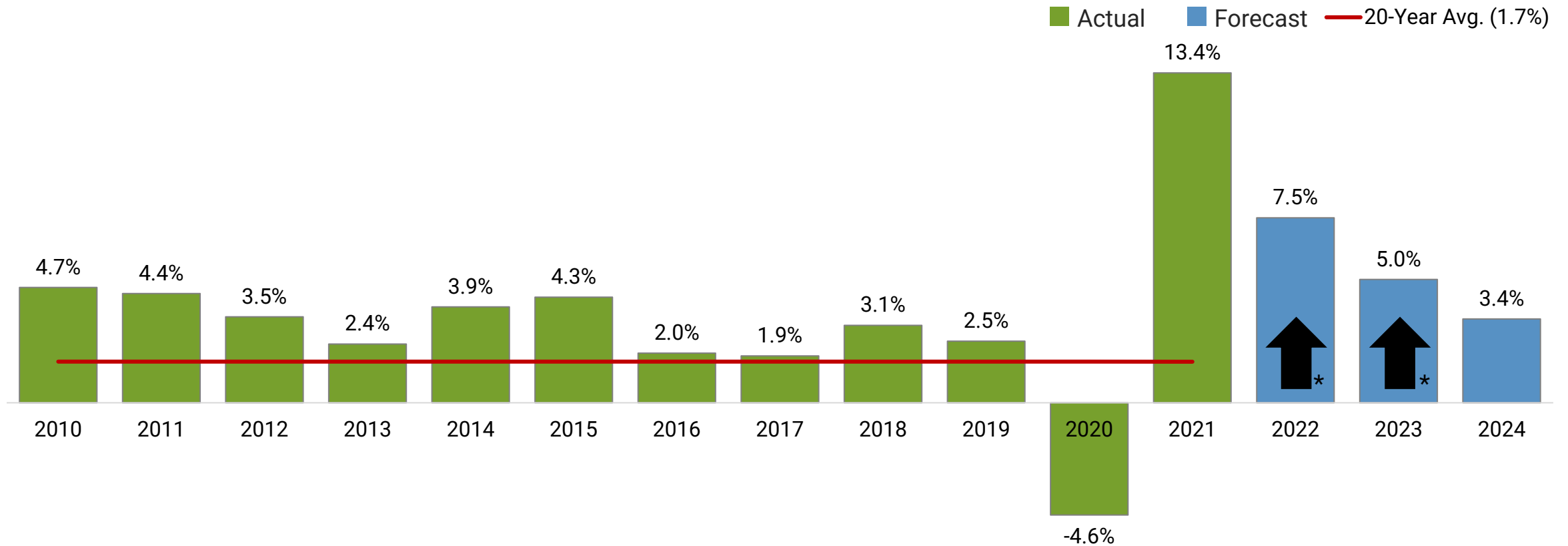
» Apartment Vacancy Rates



Sources: 2002-2021 (Q4), CBRE; 2022-2024 (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 4.1% for 2022 and 4.1% for 2023.

» Apartment Rental Rate Change



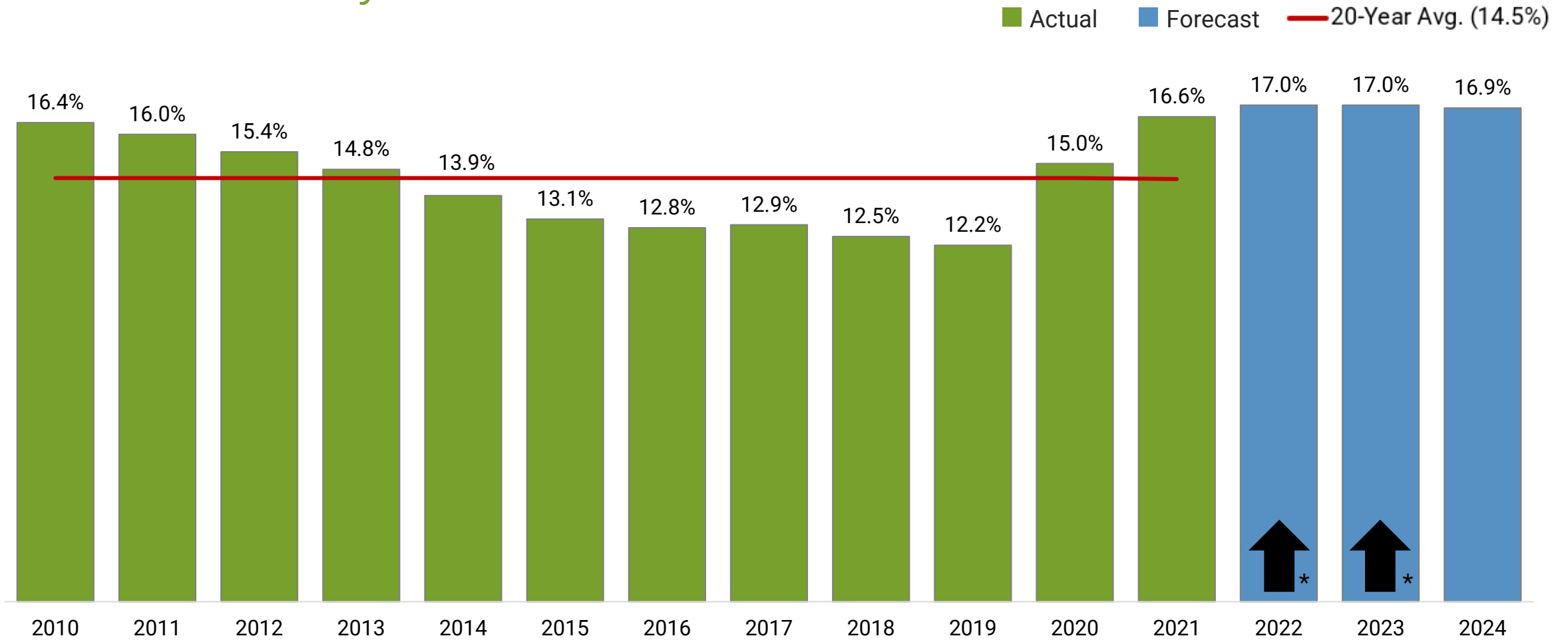
Sources: 2002-2021, CBRE; 2022-2024, ULI Real Estate Economic Forecast.

*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 4.0% for 2022 and 3.0% for 2023.

» Office Sector Fundamentals

- Office vacancy rates reached a post-GFC low of 12.2% in 2019, below the 20-year average of 14.5%. Vacancy rates rose 280 basis points in '20 to 15.0% and another 160 basis points to 16.6% in '21. Rates are expected to stay elevated during the forecast period, rising slightly in '22 to 17.0%, remain at that level in 2023, and notch down in '24 to 16.9%.
- Growth in office rental rates had averaged 2.3% in the four years prior to the pandemic, above the long-term average of 1.3%. In '20, rent growth was -0.6%, returning to positive but minimal growth of 0.1% in '21. Growth is expected to remain at that minimal level in '22, strengthen to 2.0% in '23 and return to pre-pandemic growth rates with 2.3% in '24.

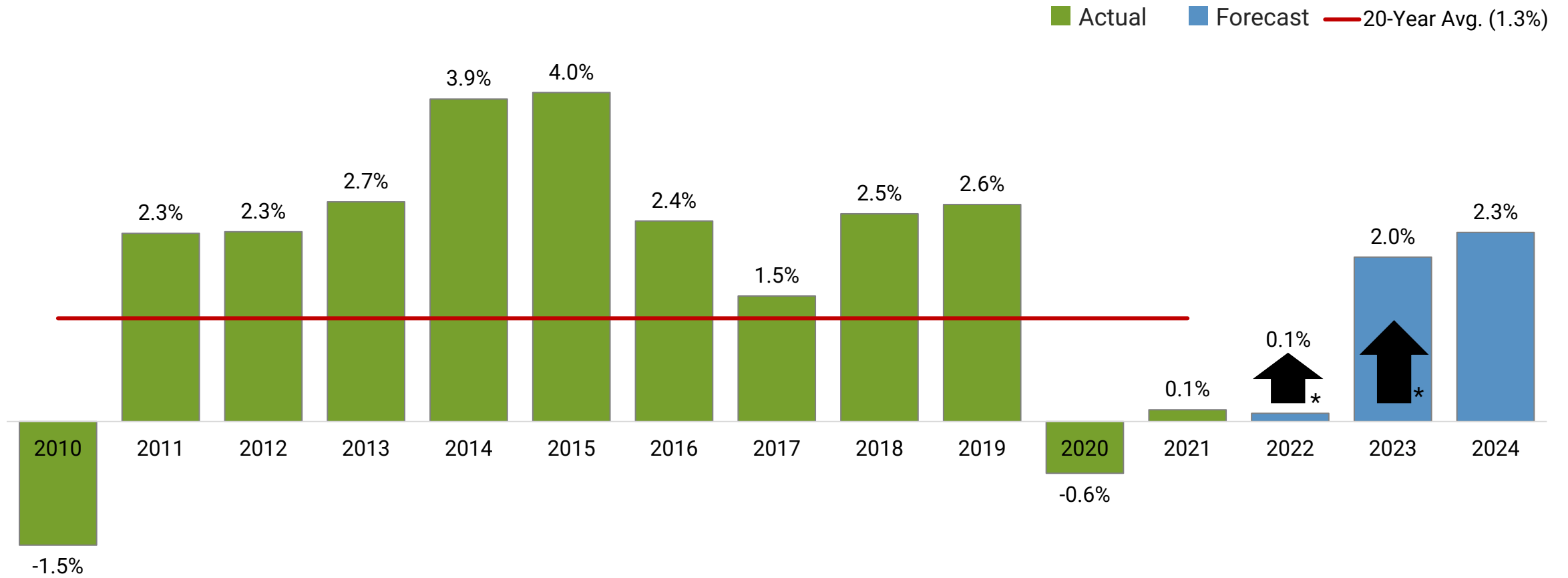
» Office Vacancy Rates



Sources: 2002-2021 (Q4), CBRE; 2022-2024 (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 16.9% for 2022 and 16.4% for 2023.

» Office Rental Rate Change

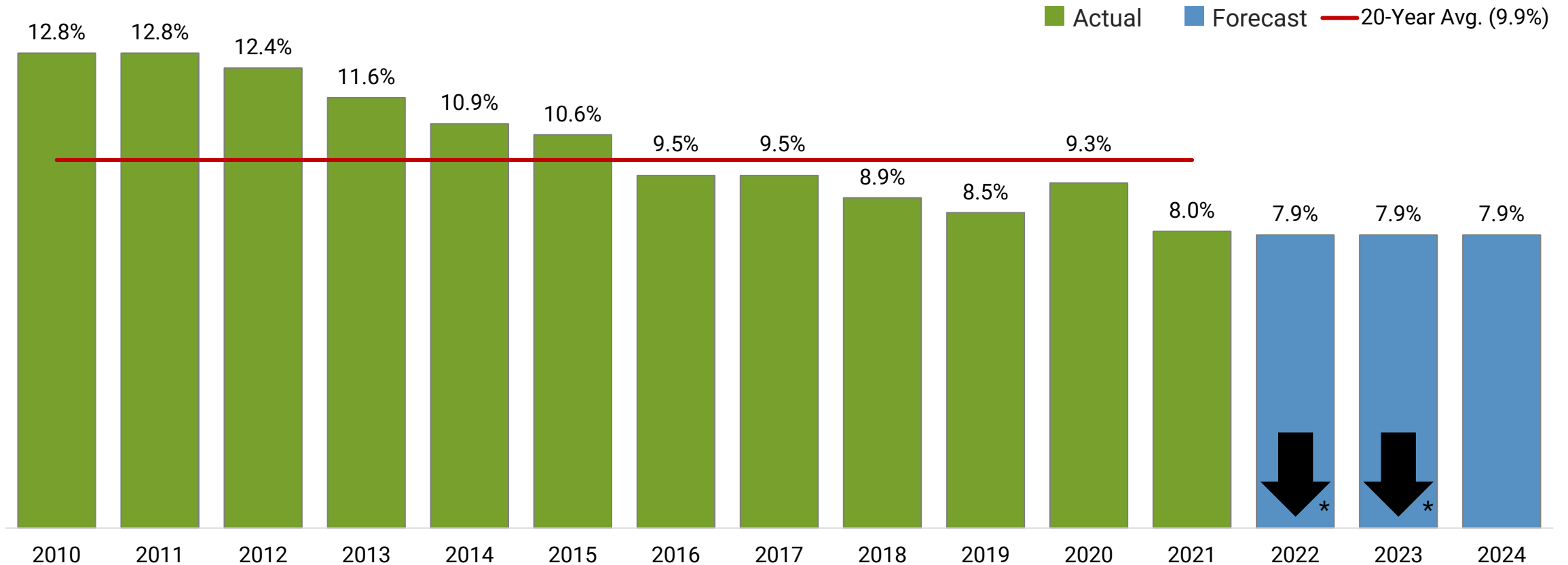


Sources: 2002-2021, CBRE; 2022-2024, ULI Real Estate Economic Forecast. Please note that the office historic forecast rent series has changed from TW Rents to EA Asking Rents.
 *Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous ULI Real Estate Economic Forecast. The previous ULI Real Estate Economic Forecast (released in October, 2021) projected 0% for 2022, and 1.0% for 2023.

» Retail Sector Fundamentals

- Despite the severe pandemic restrictions on retail, availability rates increased a relatively modest 80 basis points in 2020 to 9.3%. Retail rates tightened to 8.0% in '21, the lowest post-GFC rate. Availability rates are expected to essentially plateau over the forecast years, remaining at 7.9% in '22, '23, and '24.
- Retail rental rate growth reached a post-GFC high of 3.4% in 2016 before moderating to just above the long-term average of 1.0% in '19 and '20. Rental rate growth improved in '21 to 1.7% and is expected to plateau at relatively stronger growth of 2.0% in '22, '23, and '24.

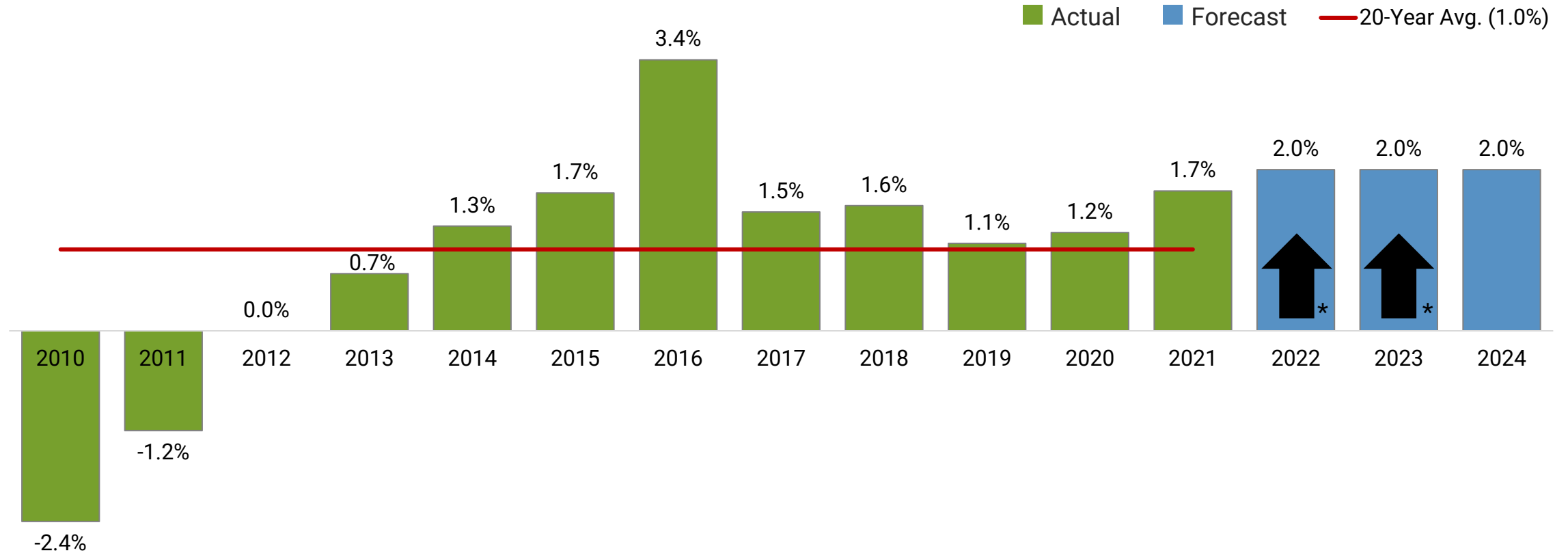
» Retail Availability Rates



Sources: 2002-2021 (Q4), CBRE; 2022-2024 (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 9.3% for 2022 and 9.1% for 2023.

» Retail Rental Rate Change



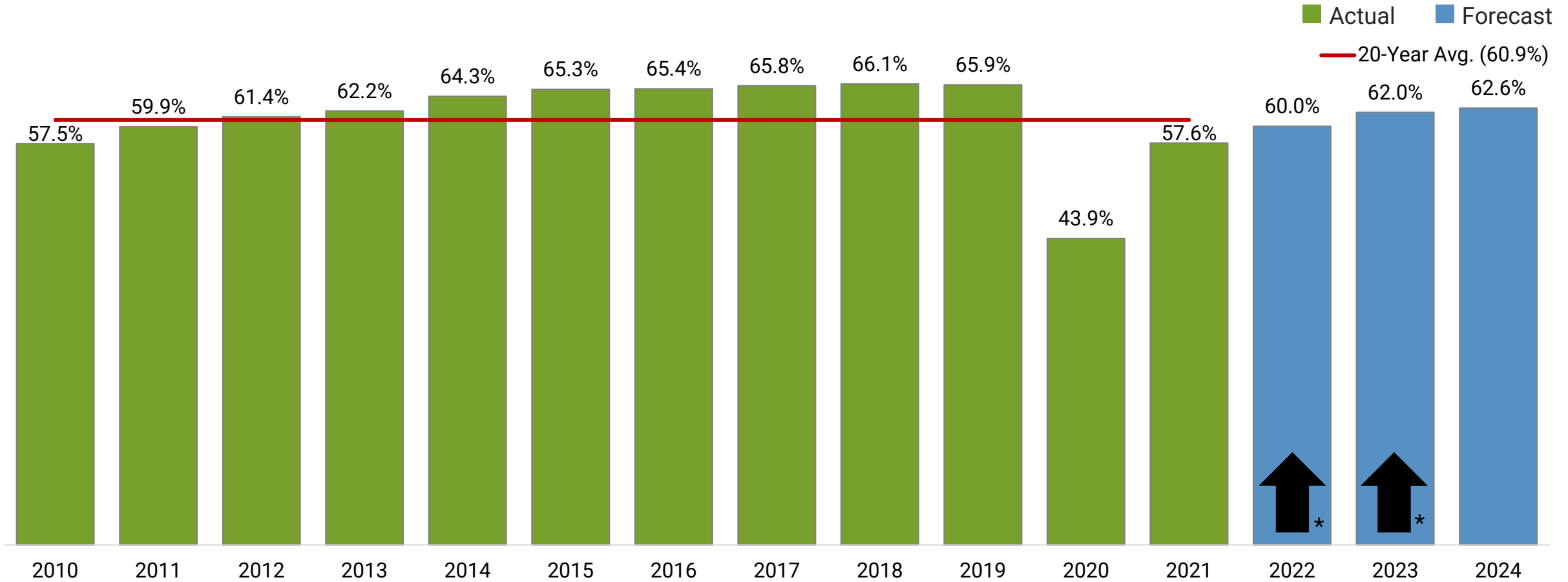
Sources: 2002-2021 (Q4), CBRE; 2022-2024, ULI Real Estate Economic Forecast.

*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 1.5% for 2022 and 1.5% for 2023.

»» Hotel Sector Fundamentals

- According to STR, hotel occupancy rates in the pandemic year of '20 fell to 43.9% after steadily improving over the prior decade; rates in '19 had come in above the twenty-year average at 65.9%. Occupancy rates began recovery in '21, rising to 57.6%. Continued improvement, although not to the pre-pandemic high, is expected during the forecast period, with occupancy rates of 60.0%, 62.0%, and 62.6%, respectively in '22, '23', and '24.
- Following four years of already slowing hotel revenue per available room (RevPAR) growth, the RevPAR dropped substantially in '20 with a growth rate of -47.4%. RevPAR began recovery in '21 with a substantial positive growth rate of 58.4%. Continued improvement is expected over the forecast period, with RevPAR growth of 19.4% in '22, 10.0% in '23 and 5.0% in '24, all above the long-term average growth rates and sufficient to bring RevPAR above the '19 level.

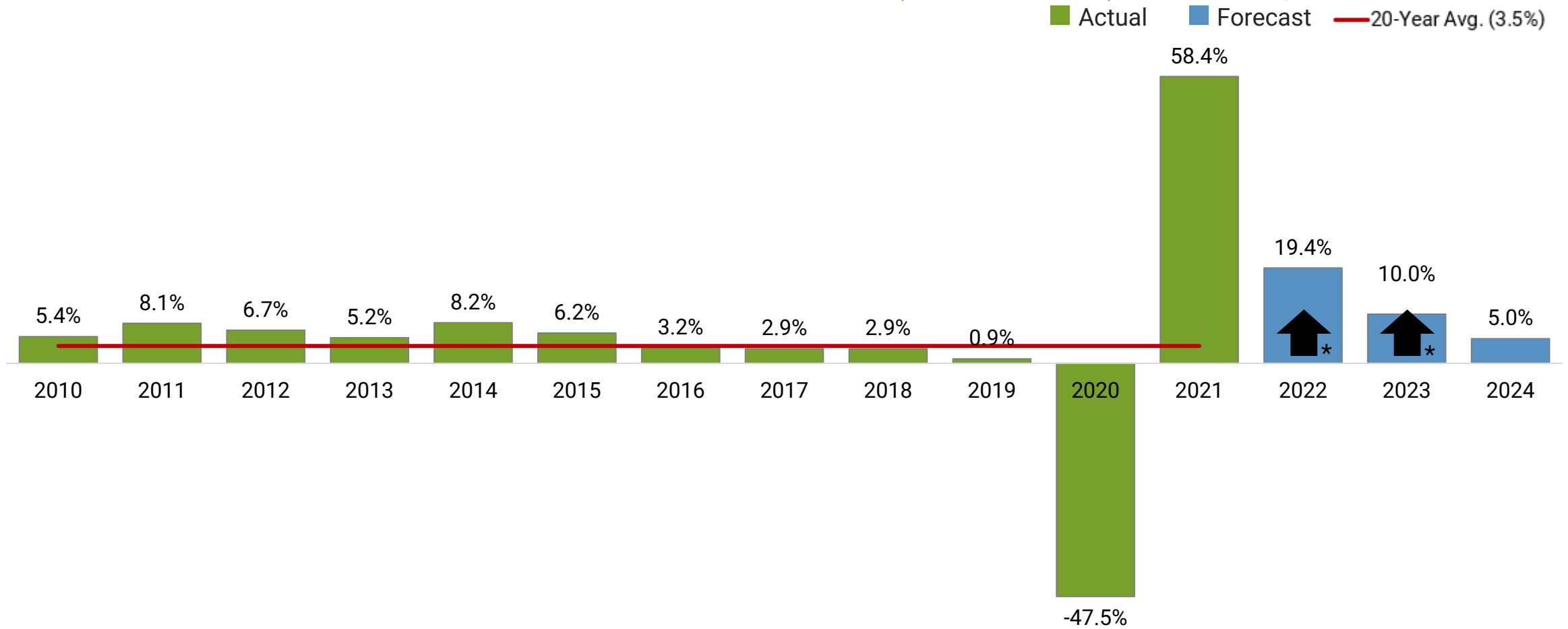
>> Hotel Occupancy Rates



Sources: 2002-2021 (December, 12 month rolling average), STR; 2022-2024, 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 58.5% for 2021 and 61.9% for 2023.

» Hotel Revenue per Available Room (RevPAR) Change



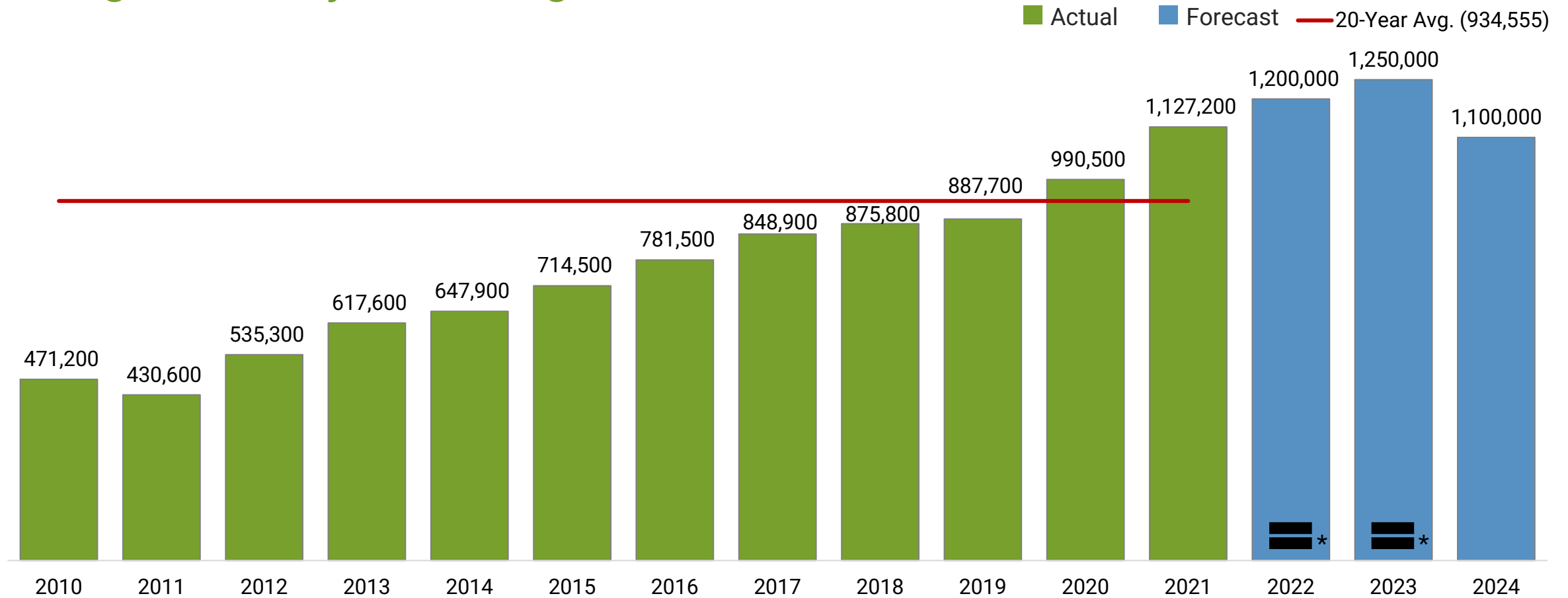
Sources: 2002-2021 (December, 12-month rolling average) STR; 2022-2024, ULI Real Estate Economic Forecast.

*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 12.2% for 2022 and 8.0% for 2023.

» Housing Sector

- Over the last decade, single-family housing starts experienced consistent annual growth, doubling the number of starts in 2012 by 2021. Housing starts are expected to continue to increase in the first two forecast years to 1.20 million in '22 and 1.25 million in '23. Housing starts will decline somewhat in '24 to 1.1 million but remain elevated above the 20-year average.
- According to the FHFA, existing home prices increased an average of 11.7% in 2020, roughly double the strong growth rates of the eight years prior, and continued at historically-elevated levels in '21, moving up by 17.6%. Price growth is expected to remain strong but moderate in '22, with 10.0% price growth, and slow in '23 and '24 to 5.0% and 4.4%, respectively, rates more in line with the long-term average.

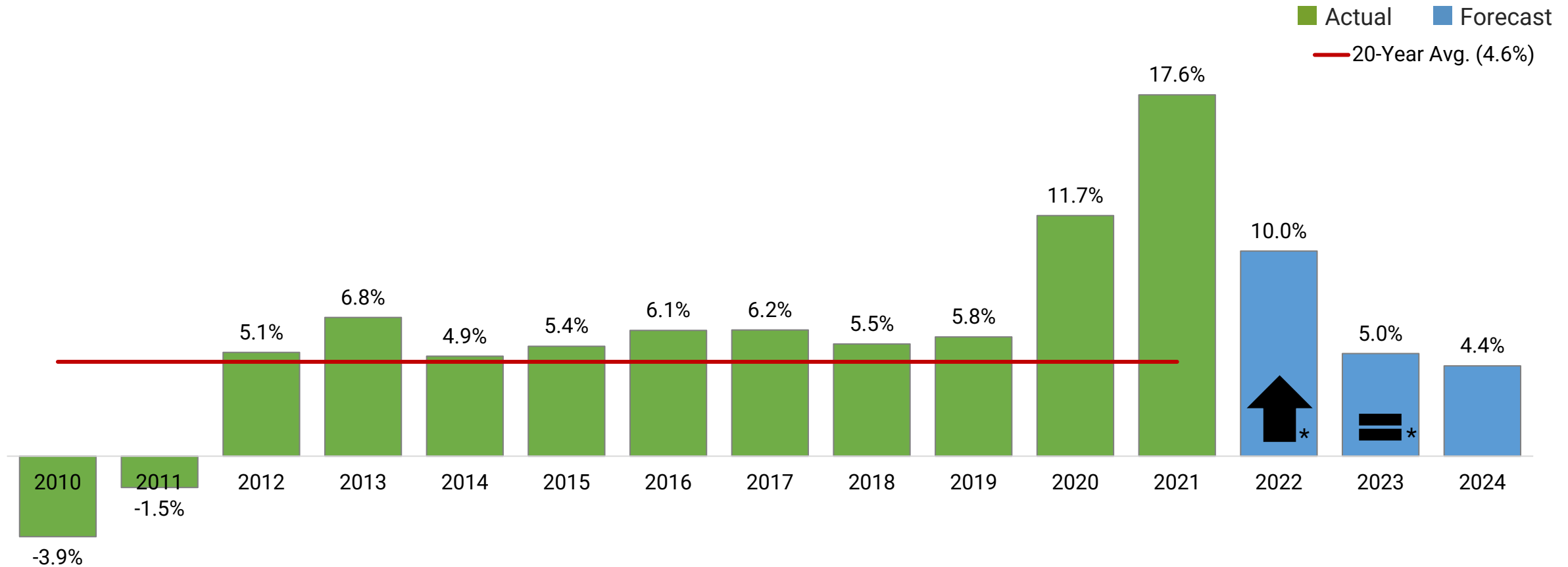
» Single-Family Housing Starts



Sources: 2002-2021, (structures with 1 unit, as of December), U.S. Census; 2022-2024, 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 1,200,000 for 2022 and 1,250,000 for 2023.

>> Average Home Price Change



Sources: 2002-2021, (seasonally adjusted, as of December), Federal Housing Finance Agency; 2022-2024, 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 6.4% for 2022 and 5.0% for 2023.

Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Economist/Analyst	Title
AEW Capital Management	Michael Acton	Managing Director
American Realty Advisors	Sabrina Unger	Managing Director, Head of Research & Strategy
	Britteni Lupe	Associate, Research & Strategy
AvalonBay Communities	Craig Thomas	Senior Vice President
Avison Young	Mark Franceski	Executive Director, Capital Markets & Multifamily Research
Barings Real Estate	Dags Chen	Head of U.S. Real Estate Research & Strategy
Berkshire Residential Investments	Gleb Nechayev	Head of Research
Capital Economics	Kiran Raichura	Senior Property Economist
CBRE	Matt Mowell	Senior Economist
CCIM Institute	Kiernan C Conway	Chief Economist
Clarion Partners	Tim Wang	Head of Investment Research and Managing Director
Colliers	Steig Seaward	National Director of Research
CoreLogic	Frank Nothaft	Chief Economist
Cushman & Wakefield	Rebecca Rockey	Economist, Global Head of Economic Analysis & Forecasting
DWS	Kevin White	Head of Real Estate Research, Americas

continued.....

Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Economist/Analyst	Title
GID	Suzanne Mulvee	Chief Strategy Officer
Green Street	Dave Bragg	Co-Head of Strategic Research
	Jared Giles	Senior Associate
	Peter Rothemund	Senior Analyst
Grosvenor	Brian Biggs	Vice President, Research
Harrison Street Real Estate Capital	Thomas Errath	Managing Director
Heitman	Jeffrey Bingham	Senior Vice President
	Mary Ludgin	Managing Director, Head of Global Research
	Maiko Adachi	SVP, Deputy Director of North American Research
JLL	Ryan Severino	Chief Economist
	Benjamin Breslau	Chief Research Officer
Laposa Realty Advisors, LLC	Steven P. Laposa	Principal
LaSalle Investment Management	Richard Kleinman	Head of US Research and Strategy
Marcus & Millichap	John T. Chang	Senior Vice President, National Director Research Services
	Peter Tindall	Vice President, Director of Research Operations
MetLife Investment Management	William Pattison	Head of Real Estate Research

Firms That Participated in the ULI Real Estate Economic Forecast

Organization	Economist/Analyst	Title
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	Keegan Kelly	Quantitative Researcher
National Association of Realtors	Gay Cororaton	Senior Economist, Director of Housing and Commercial Research
	Lawrence Yun	Chief Economist
Oxford Economics	Aran Ryan	Tourism Economics, Director, Lodging Analytics
Principal Real Estate	Indraneel Karlekar	Senior Managing Director
PwC, LLP	Andrew Warren	Director Real Estate Research
RCLCO Financial Advisors	Gadi Kaufmann	Managing Director/CEO
	Taylor Mammen	CEO, RCLCO Fund Advisors
	William Maher	Director, Strategy & Research
Rosen Consulting Group	Ken Rosen	Chairman
	Randall Sakamoto	President
Stockbridge Associates, LLC	George Casey	CEO
Trepp, LLC	Matthew Anderson	Managing Director
Unity Medical Properties REIT, LLC	Dr. David Lynn	CEO
Waterton	Lee Everett	Director of Research and Strategy

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Urban Land Institute

About the Urban Land Institute

The Urban Land Institute is a global, member-driven organization comprising more than 45,000 real estate and urban development professionals dedicated to advancing the Institute's mission of shaping the future of the built environment for transformative impact in communities worldwide. 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

APRIL 2022

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