ULI Real Estate Consensus Forecast

A Survey of Leading Real Estate Economists/Analysts

April 2016

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ULI Real Estate Consensus Forecast

- Three-year forecast (‘16-’18) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 48 economists/analysts at 36 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 9th survey; completed March 2 - March 28, 2016.
- A semi-annual survey; next release planned for October 2016.
- 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 Consensus Forecast* for April 2016 projects continued economic expansion over the next three years but at a somewhat slower pace than the prior two years; relatively high but declining commercial real estate transaction volumes; continued commercial price appreciation and positive returns but at more subdued and decelerating rates; above-average but decelerating rent growth rates in all property sectors and better than average vacancy/occupancy rates, except for retail; single family housing starts continue to increase but remain below the long-term average.

- All real estate indicators are forecasted to be better than their 20-year averages in 2016, with the exception of eight indicators expected to be worse: commercial price appreciation, equity REIT returns, NCREIF returns for the four major property types, retail availability, and single-family housing starts.

- By 2018, the following ten indicators are forecasted to be worse than their 20-year averages: commercial property price growth, equity REIT returns, NCREIF returns for the four major property types, retail availability rates, rental rate growth for apartments, RevPAR growth for hotels, and single-family housing starts.

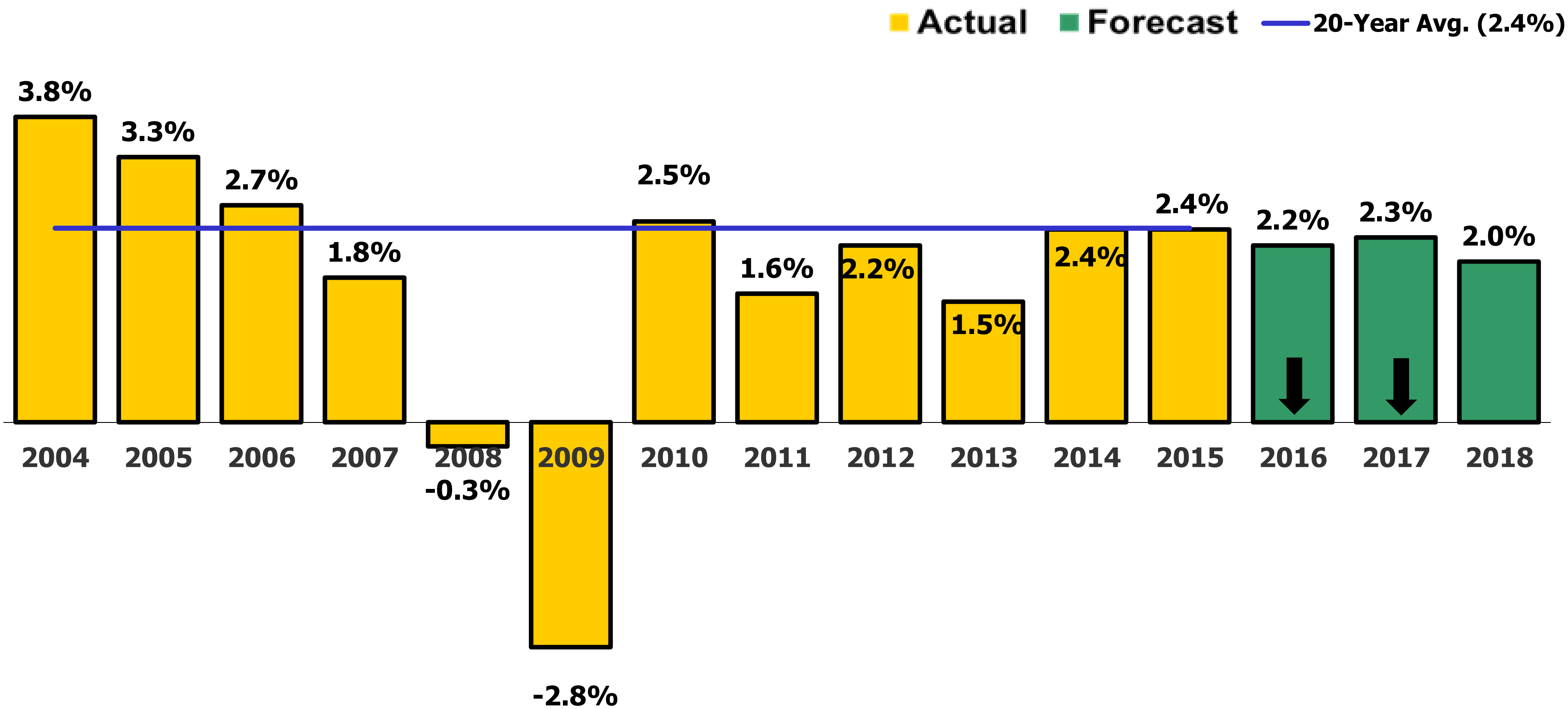
Key Findings

- Following 6 years of commercial property transaction volume growth, annual volume is expected to decline over the next three years to $475 billion in 2018. Still, volume in all 3 forecast years is surpassed only by that in 2007 and 2015.
- Issuance of commercial mortgage-backed securities (CMBS), a key source of financing for commercial real estate which had grown consistently since ‘09, is expected to decline in 2016 to $85 billion and then return to $100 billion in both ‘17 and ’18.
- Commercial real estate prices are projected to grow but at subdued and slowing rates over the next 3 years, at 5.0% in 2016, 2.7% in ‘17 and 3.0% in ‘18, all below the long-term average growth rate of 5.8%.
- Institutional real estate assets are expected to provide total returns of 8.1% in 2016, moderating to 7.2% in 2017 and 7.1% in 2018. By property type, returns are expected to be stronger for industrial and office, followed by apartments and retail, in 2016. By 2018, there is little variation among property type.
- Vacancy rates are expected to continue to improve modestly for office and retail over all three forecast years. Industrial availability rates and hotel occupancy rate are forecasted to improve modestly in 2016 and then very slightly reverse direction in 2017 and 2018. Apartment vacancy rates are also expected to rise over the next 3 years.
- Commercial property rents are expected to increase for the four major property types in 2016, ranging from 2.0% for retail up to 4.0% for office and 4.5% for industrial. Rent increases in 2018 in these four types will range from 1.7% for retail to 3.0% for office. Hotel RevPAR is expected to increase by 4.6% in 2016 and 3.0% in 2018.
- Single-family housing starts are projected to increase from 714,600 units in 2015 to 900,000 units in 2018, remaining below the 20-year annual average.

Economy

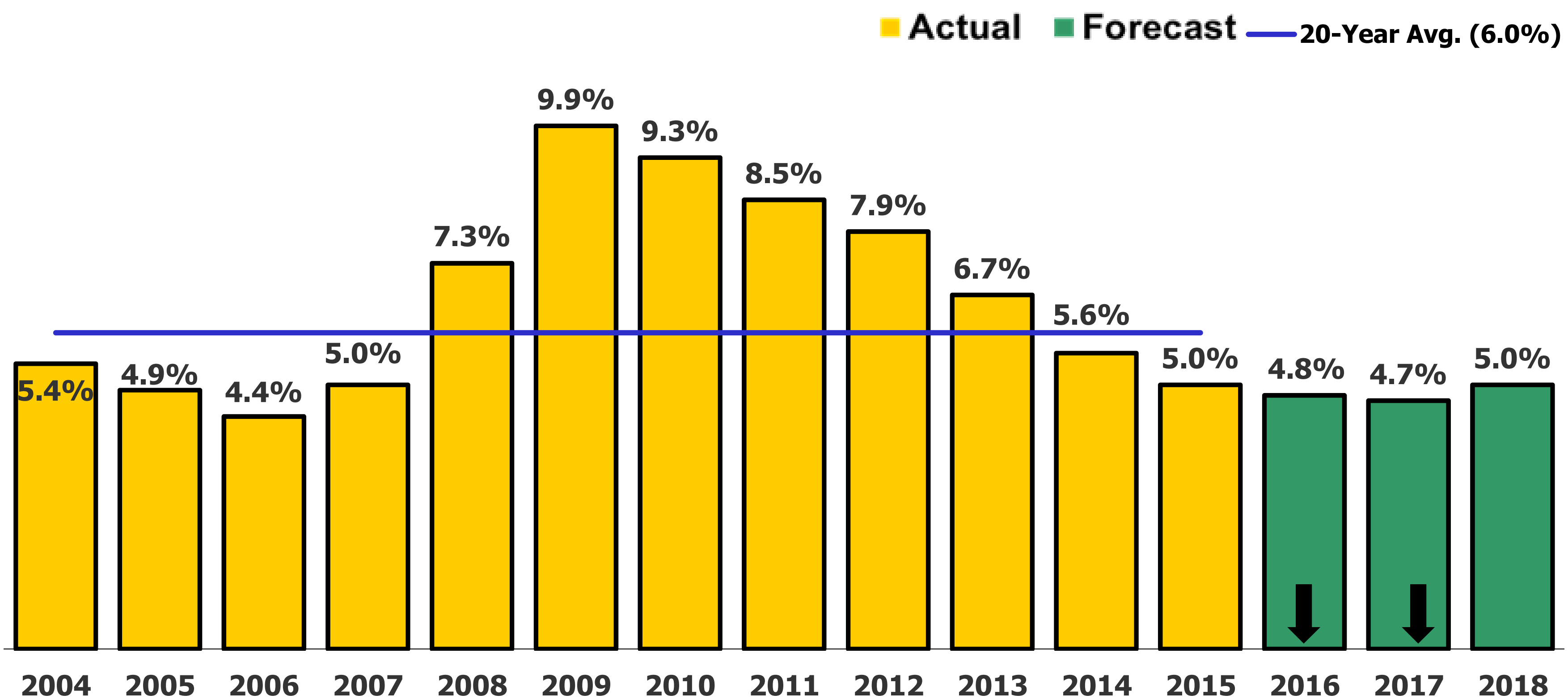
- The economists/analysts expect continued economic expansion at a healthy but somewhat slower pace than the prior two years.
- GDP growth in the next three years is expected to average slightly lower than in 2015, fluctuating only slightly. Forecasted growth rates are 2.2% in 2016, 2.3% in 2017, and 2.0% in 2018.
- The unemployment rate is expected to decline further from 5.0% in 2015 to 4.8% by the end of 2016, and then tighten further to 4.7% by the end of 2017, before rising back to 5.0% by the end of 2018.
- Employment growth in 2016 is expected to continue but at a somewhat lower level than in 2015, by about 11%, at 2.43 million jobs; growth is expected to further moderate to 2.10 million jobs in 2017 and 1.59 million jobs in 2018.
- Compared to forecasts of 6 month's ago, GDP and employment forecasts remain strong but at slightly lower levels and unemployment rates are slightly more optimistic.

Real GDP Growth



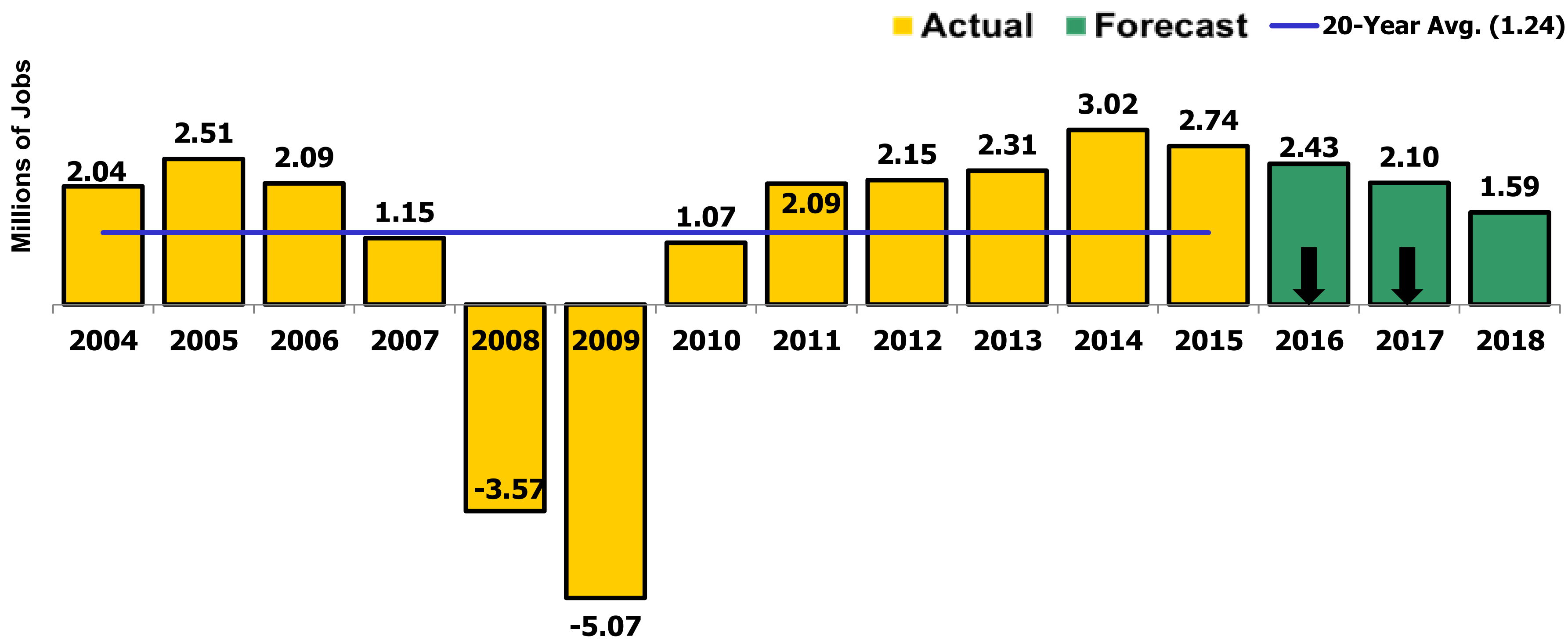
Sources: 1996-2015, Bureau of Economic Analysis; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 2.8% and 2.7%, respectively, for 2016 and 2017.

Unemployment Rate



Sources: 1996-2015, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2016-2018 (YE), ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 4.9% and 4.8%, respectively, for 2016 and 2017.

Employment Growth



Sources: 1996-2015, Bureau of Labor Statistics; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 2.72 and 2.60, respectively, for 2016 and 2017.

Inflation, Interest Rates, and Cap Rates

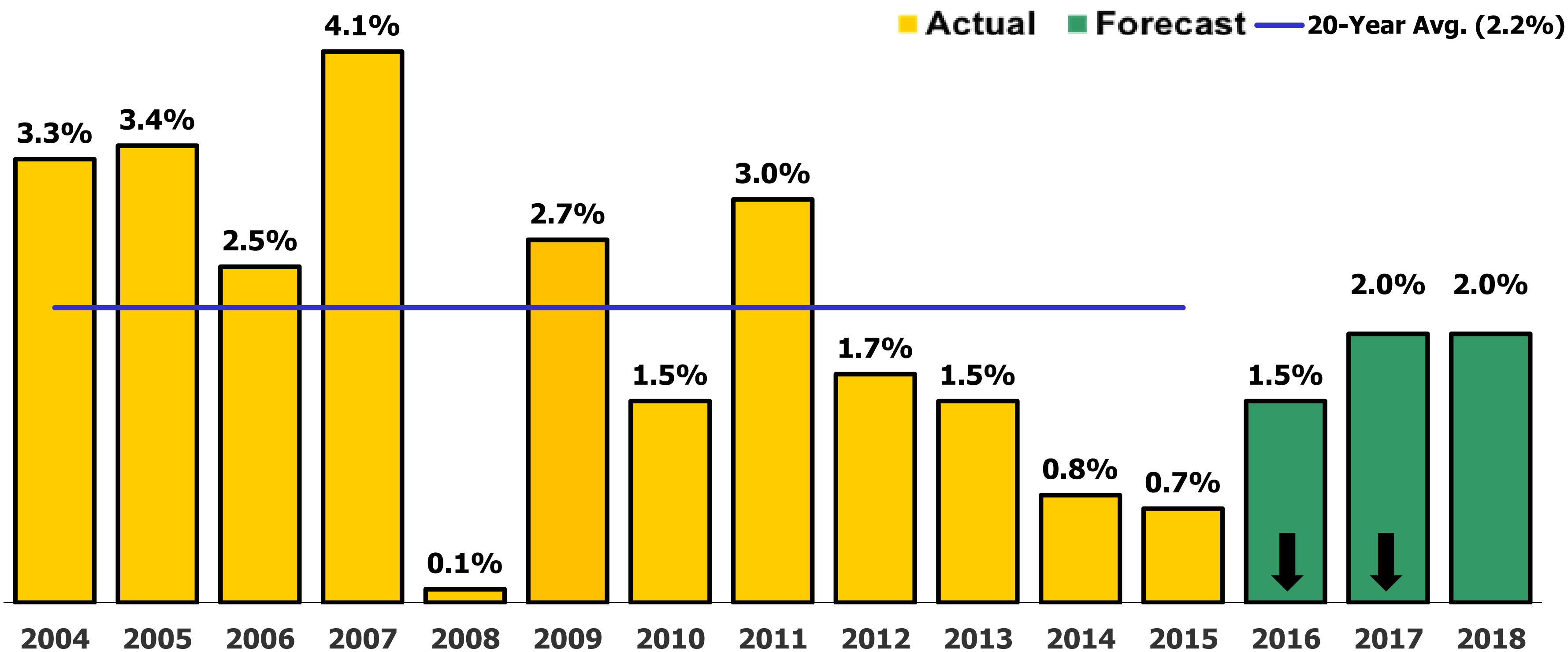
- Inflation is expected to reverse the decline of the last 4 years, up to 1.5% in 2016; it is forecasted to then move up in 2017 and 2018 to a steady and healthy 2.0% in both years. These forecasts are just below the 20-year average of 2.2%.

- Ten-year treasury rates are projected to increase slightly by the end of 2016 to 2.4%, rising to 2.8% by the end of 2017, and to 3.2% by the end of 2018. These rates remain below the 20-year average of 4.0%.

- Rising treasury rates will increase borrowing costs for real estate investors. However, survey respondents do not expect it to substantially impact real estate capitalization rates for institutional-quality investments (NCREIF cap rates), which are expected to remain stable at 5.1% in 2016 and then rise to 5.3% in 2017 and 5.5% in 2018.

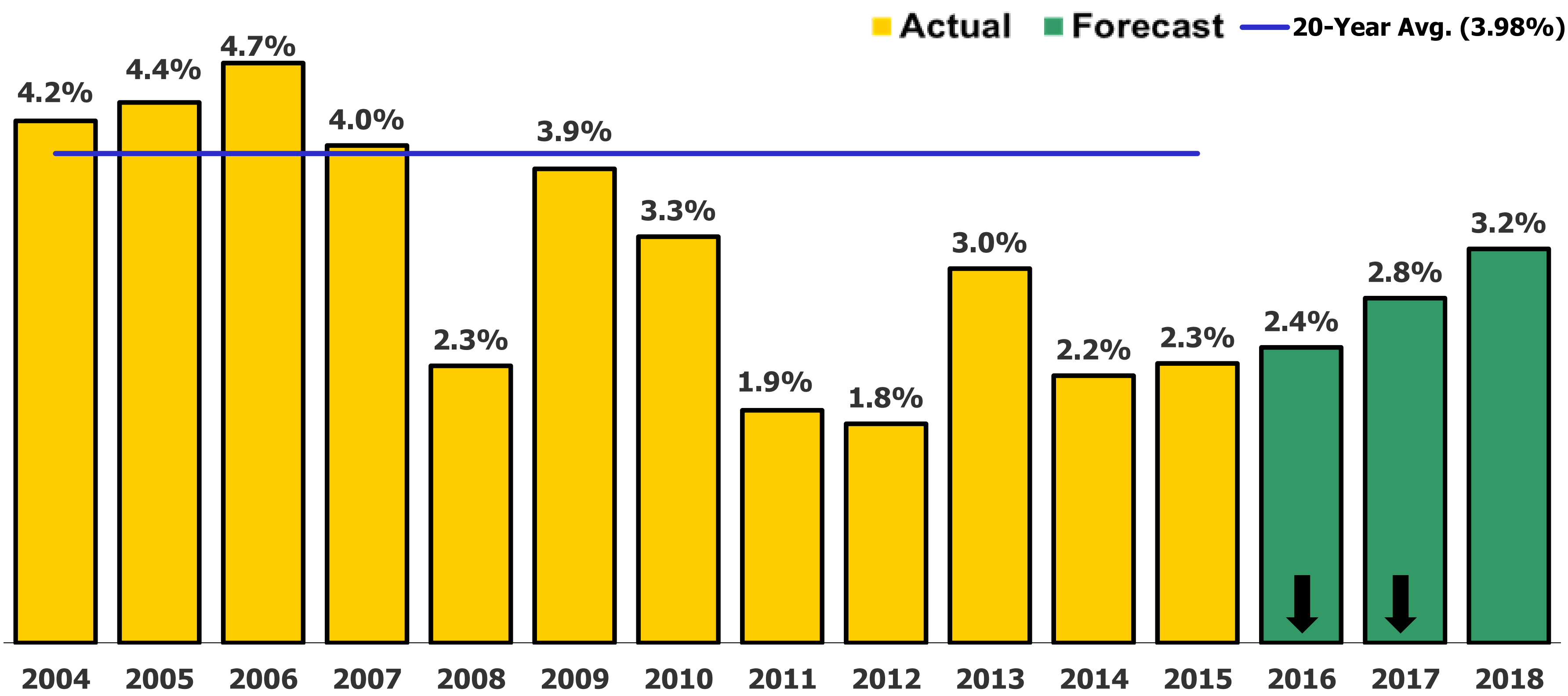
- Compared to 6 months ago, forecasts for inflation, 10-year treasury rates and cap rates are lower.

Consumer Price Index Inflation Rate



Sources: 1996-2015, (12-month change, as of December), Bureau of Labor Statistics; 2016-2018 (YE), ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 2.0% and 2.2%, respectively, for 2016 and 2017.

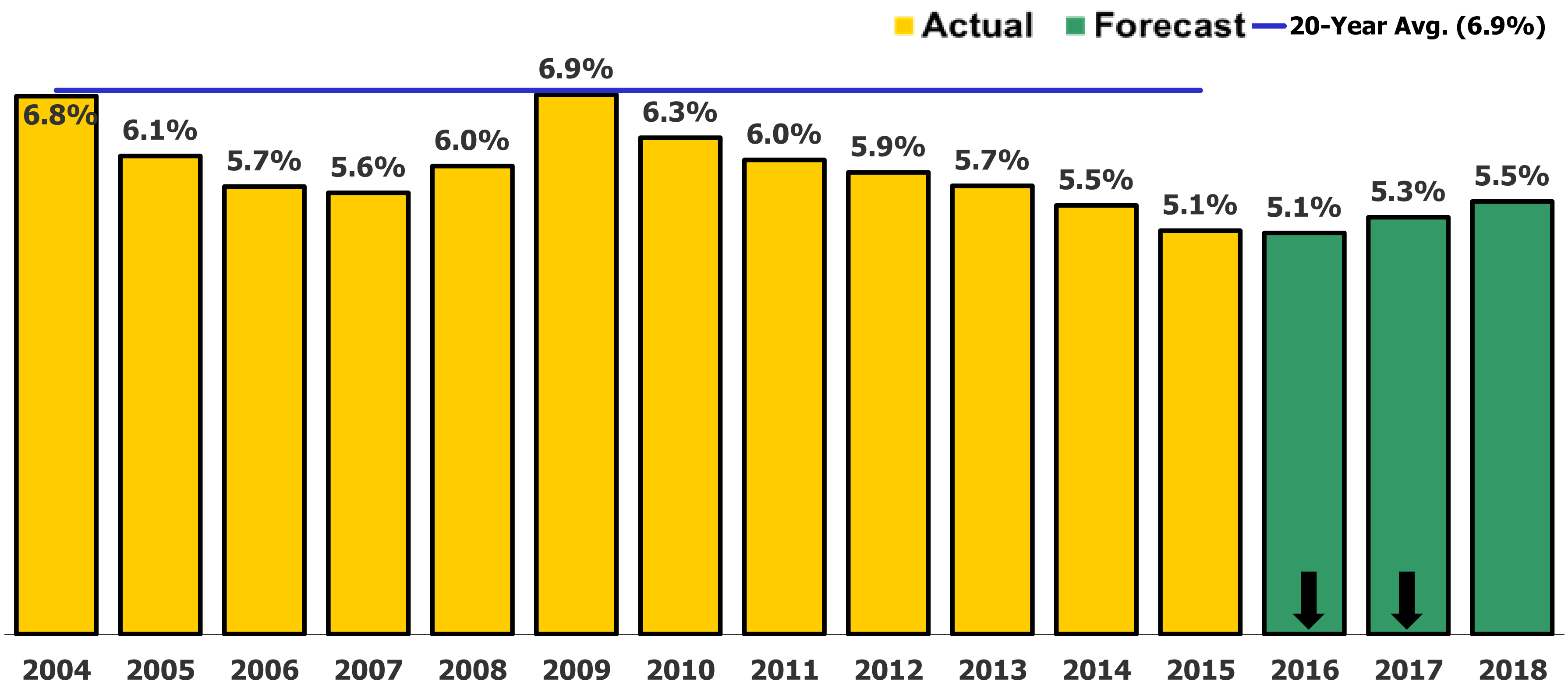
Ten-Year Treasury Rate



Sources: 1996-2015 (YE), U.S. Federal Reserve; 2016-2018 (YE), ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 2.8% and 3.3%, respectively, for 2016 and 2017.

NCREIF Capitalization Rate



Sources: 1996-2015, (Q4), National Council of Real Estate Investment Fiduciaries (NCREIF); 2016-2018 (YE), ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 5.3% and 5.7%, respectively, for 2016 and 2017.

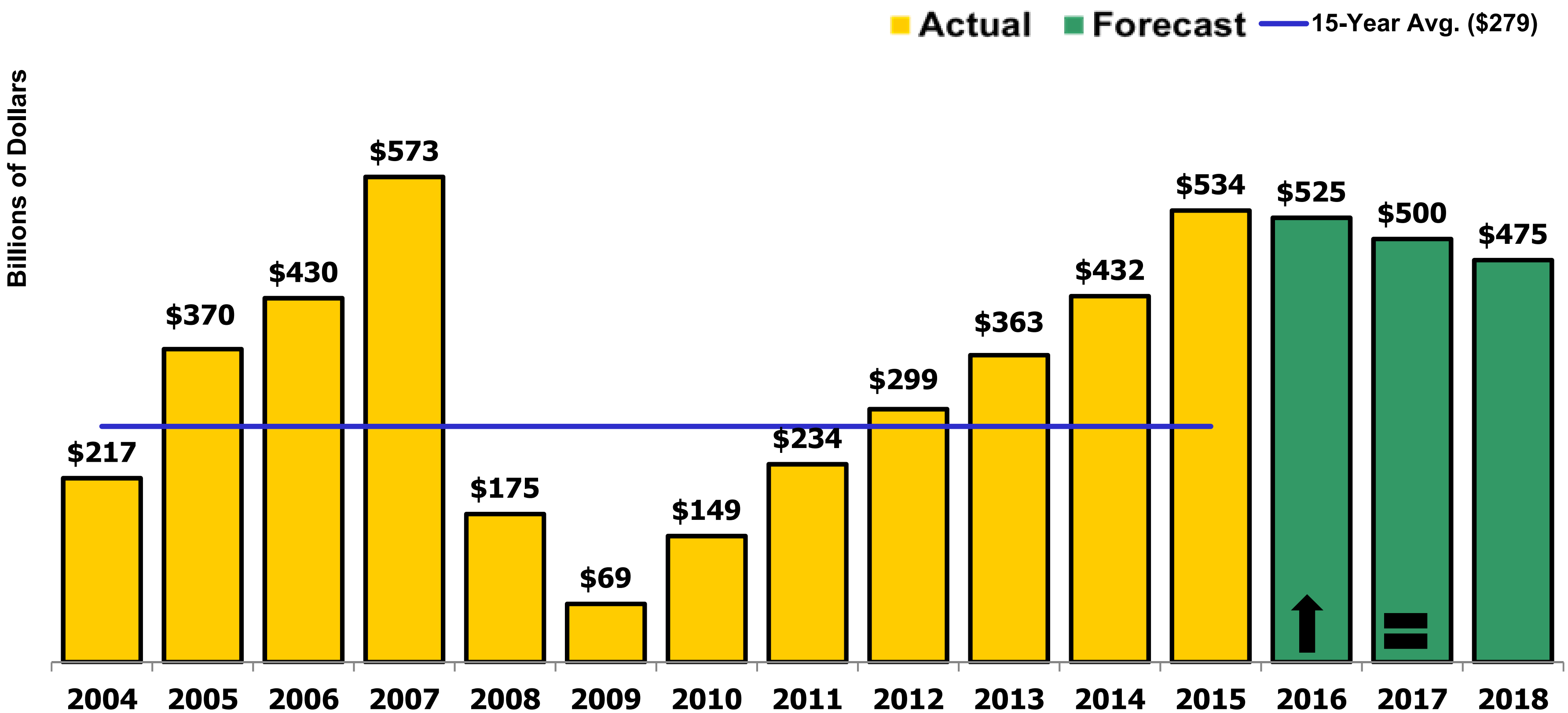
Real Estate Capital Markets

- Commercial real estate transaction volume has consistently increased for 6 years and reached a volume in ‘15 that is surpassed only by that in ‘07. Volume is expected to decline for the next three years to $525 billion in 2016, $500 billion in ‘17, and $475 billion in ‘18. Despite the decline these volumes remain surpassed only by that in ‘07 and in ‘15.

- Issuance of commercial mortgage-backed securities (CMBS), a key source of financing for commercial real estate which had rebounded consistently since ‘09, is expected to decline in 2016 to $85 billion and then rebound to $100 billion in both ‘17 and ’18.

- Compared to the forecasts of 6 months ago, the current forecasts for ’16 transactions are more optimistic and unchanged for ‘17. Current forecasts CMBS issuance are lower.

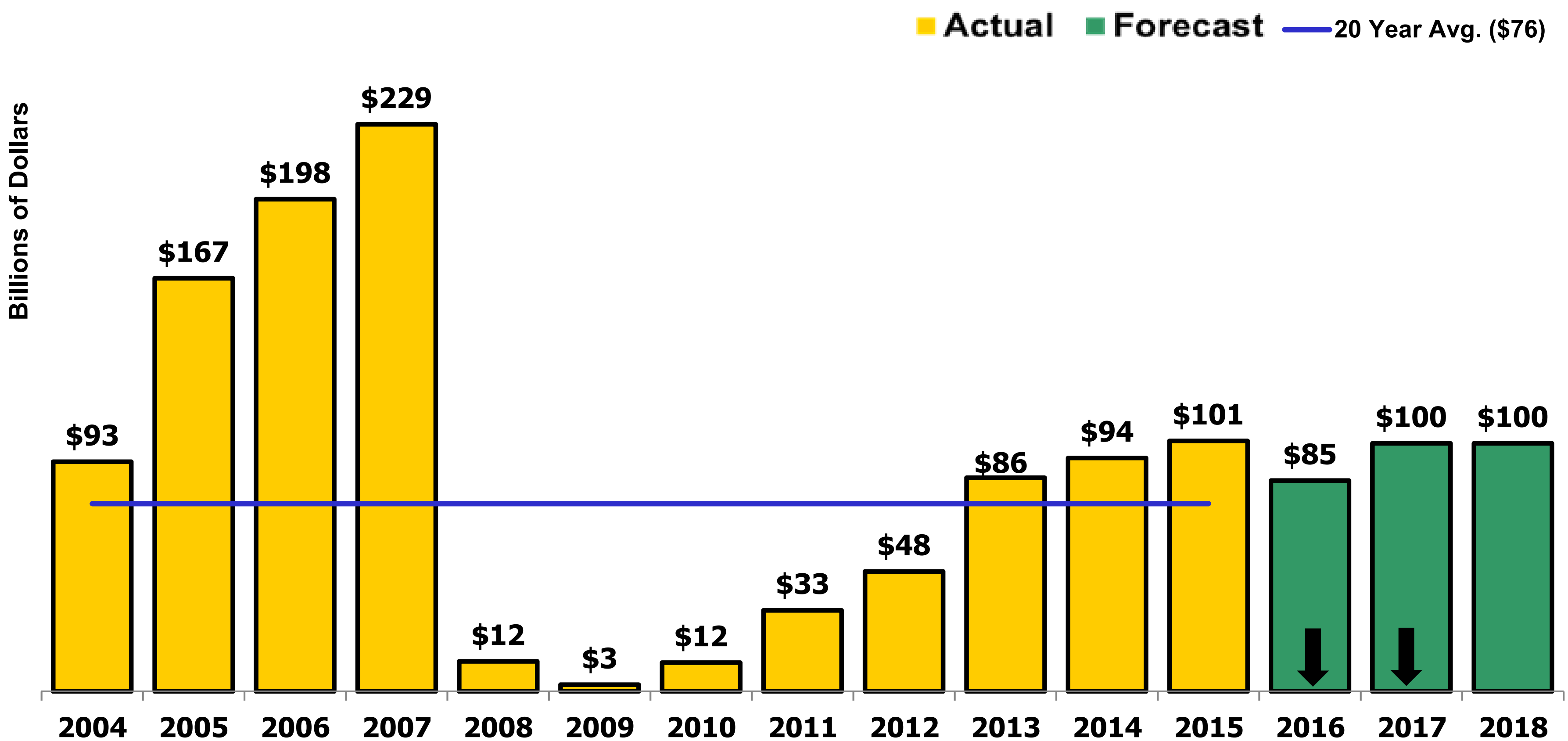
Commercial Real Estate Transaction Volume



Sources: 2001-2015, Real Capital Analytics; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September 2015) projected $510 and $500, respectively, for 2016 and 2017.

Commercial Mortgage-Backed Securities (CMBS) Issuance



Sources: 1996-2015, Commercial Mortgage Alert; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected $130 and $140, respectively, for 2016 and 2017.

Real Estate Returns and Prices

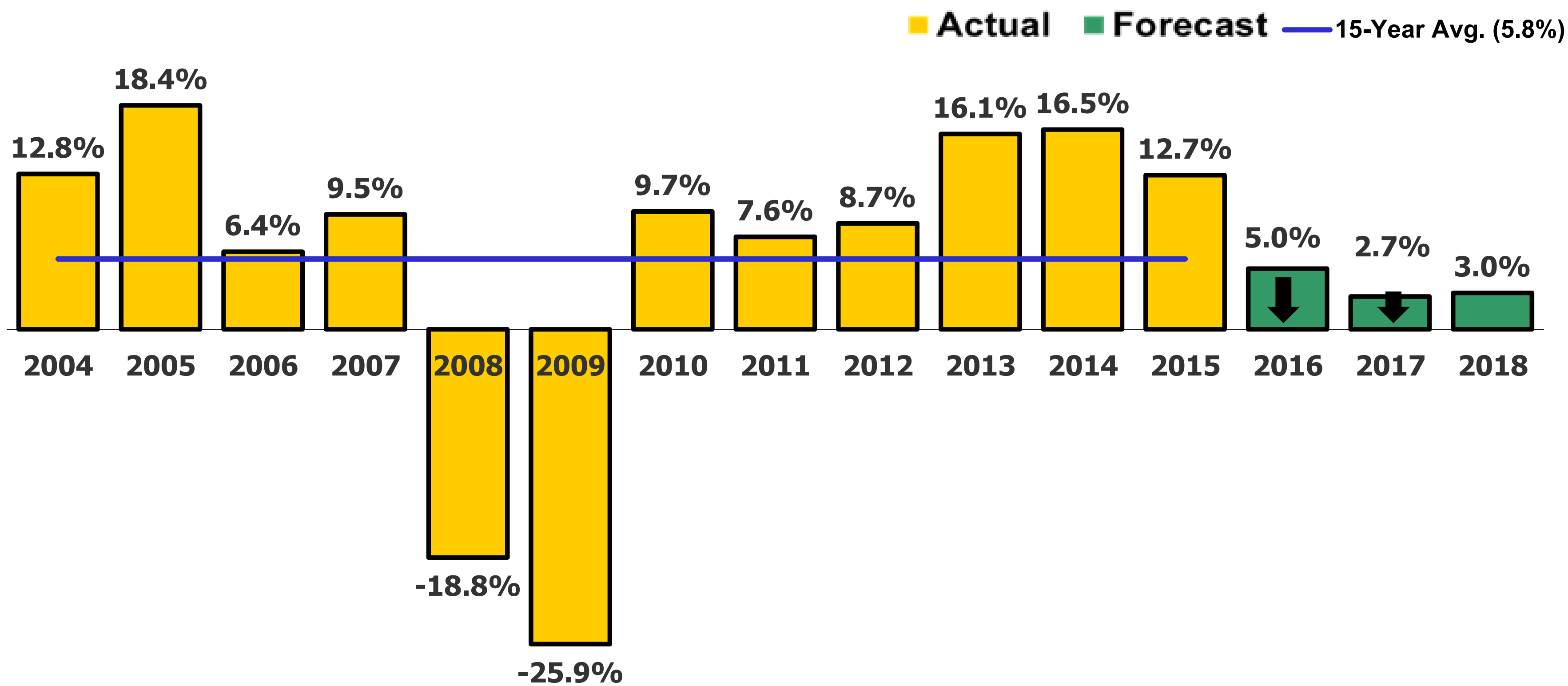
- The Moody's/RCA Commercial Property Price Index (CPPI) has had some recent very high growth years and surpassed the pre-recession index value high in 2014. It is expected to continue to grow at very subdued and slowing rates in the next three years, at 5.0% in 2016, 2.7% in '17 and 3.0% in '18, all below the long-term average growth rate of 5.8%.

- Equity REIT total returns, according to NAREIT, experienced over 30% growth in 2014 but returns declined to 3.2% in 2015. Future returns are expected to improve somewhat to 5.0% in 2016, 7.0% in 2017, and remaining at 7.0% in 2018. Returns in all three forecasted years are below the long-term average returns.

- Total returns for institutional-quality direct real estate investments, as measured by the NCREIF Property Index, have remained above the long-term average the last six years. Returns for the next three years are forecasted to dip below the long-term average to 8.1% in 2016, 7.2% in '17 and 7.1% in '18.

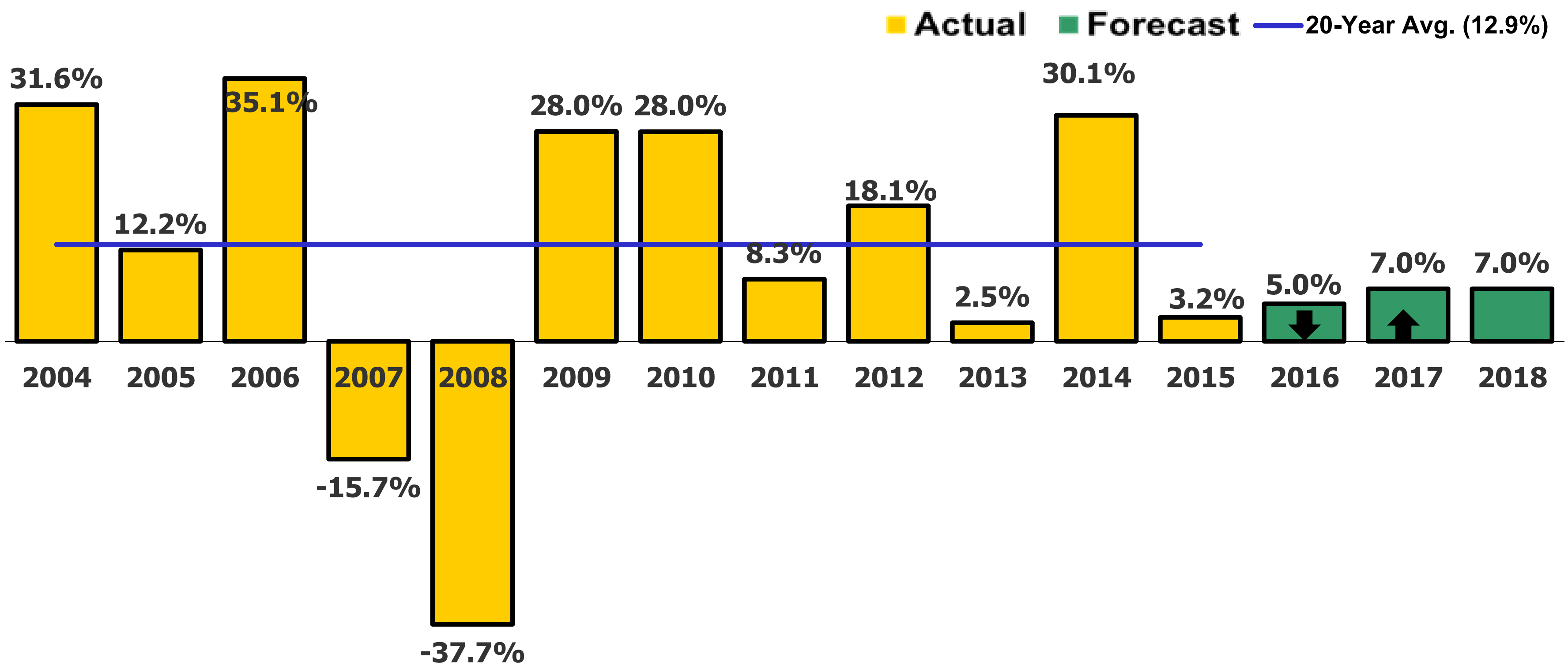
- Compared to the forecasts of 6 months ago, the 2016 forecasts for the CPPI, REIT returns, and NCREIF returns are less optimistic. The 2017 forecasts for REIT and NCREIF returns are both more optimistic, while the CPPI forecast is less optimistic.

Moody's/RCA Commercial Property Price Index (annual change)



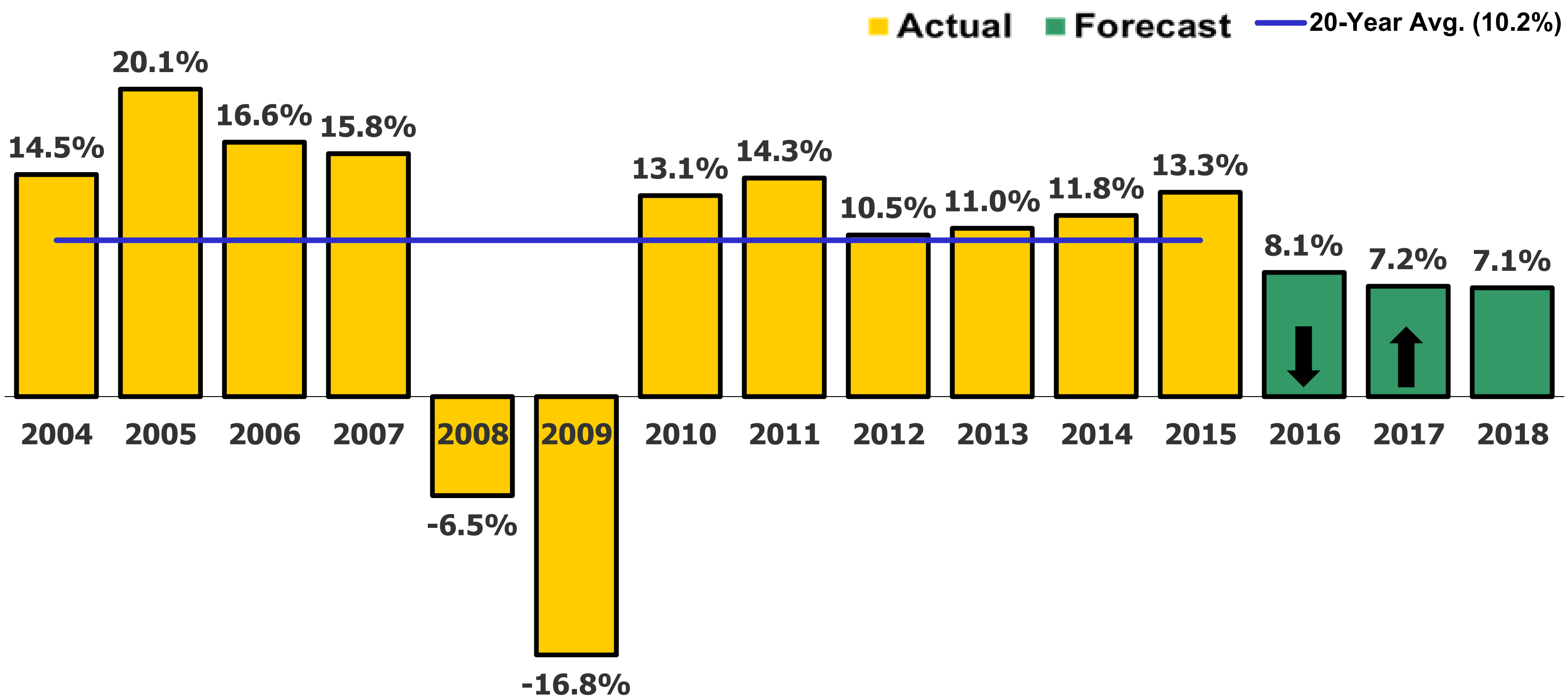
Sources: 2001-2015, Moody's and Real Capital Analytics; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 6.0% and 4.5%, respectively, for 2016 and 2017.

Equity REIT Total Annual Returns



Sources: 1996-2015, National Association of Real Estate Investment Trusts; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 6.5% and 5.5%, respectively, for 2016 and 2017.

NCREIF Total Annual Returns



Sources: 1996-2015 National Council of Real Estate Investment Fiduciaries (NCREIF); 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 9.0% and 7.0%, respectively, for 2016 and 2017.

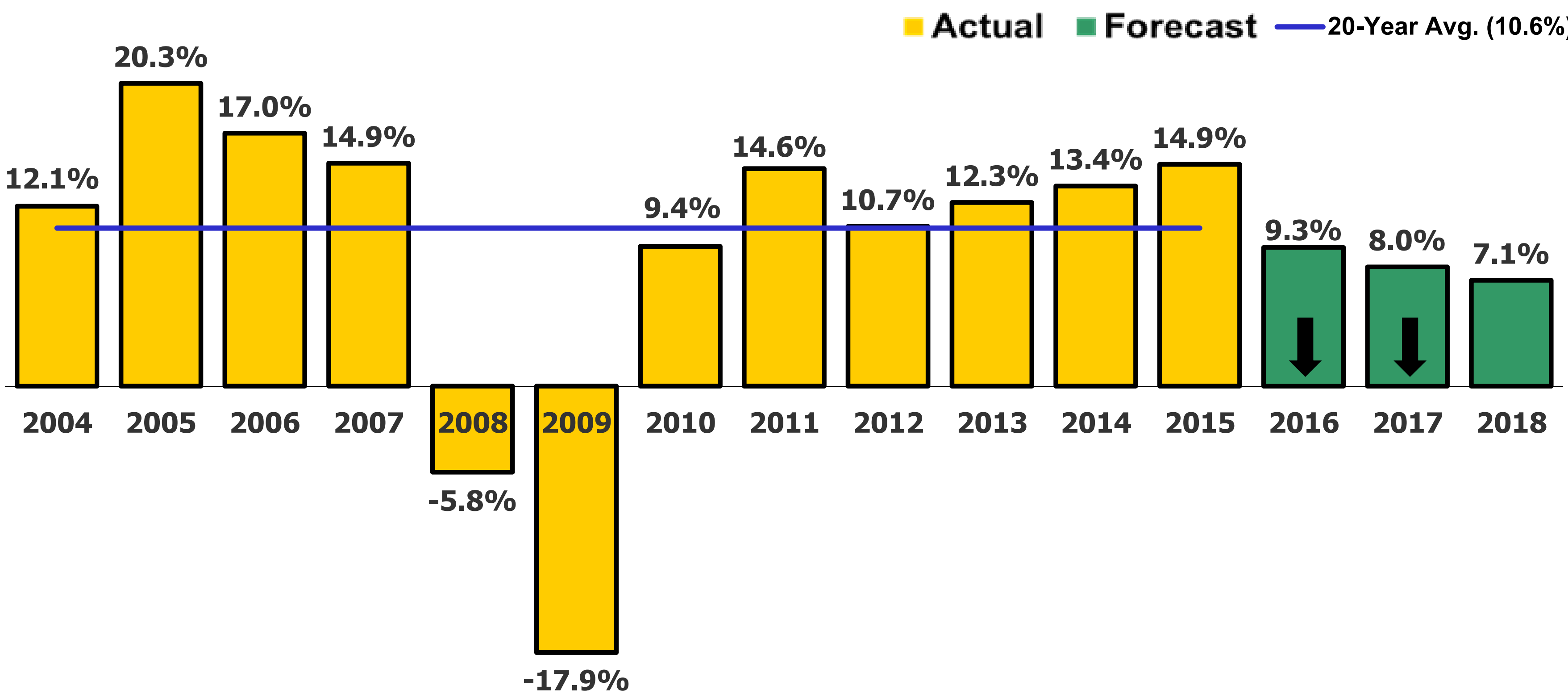
NCREIF Returns by Property Type

- NCREIF total returns in 2016 are expected to fall below the 20-year average for all sectors. By property type, returns for industrial are forecasted at 9.3%, followed by office and apartment returns of 9.0% and 8.6%, respectively. Retail returns are forecasted at 8.0%.

- By 2018, all sector returns are expected to decrease to about the same level, with industrial returns forecast at 7.1% and office, apartment and retail returns at 7.0%.

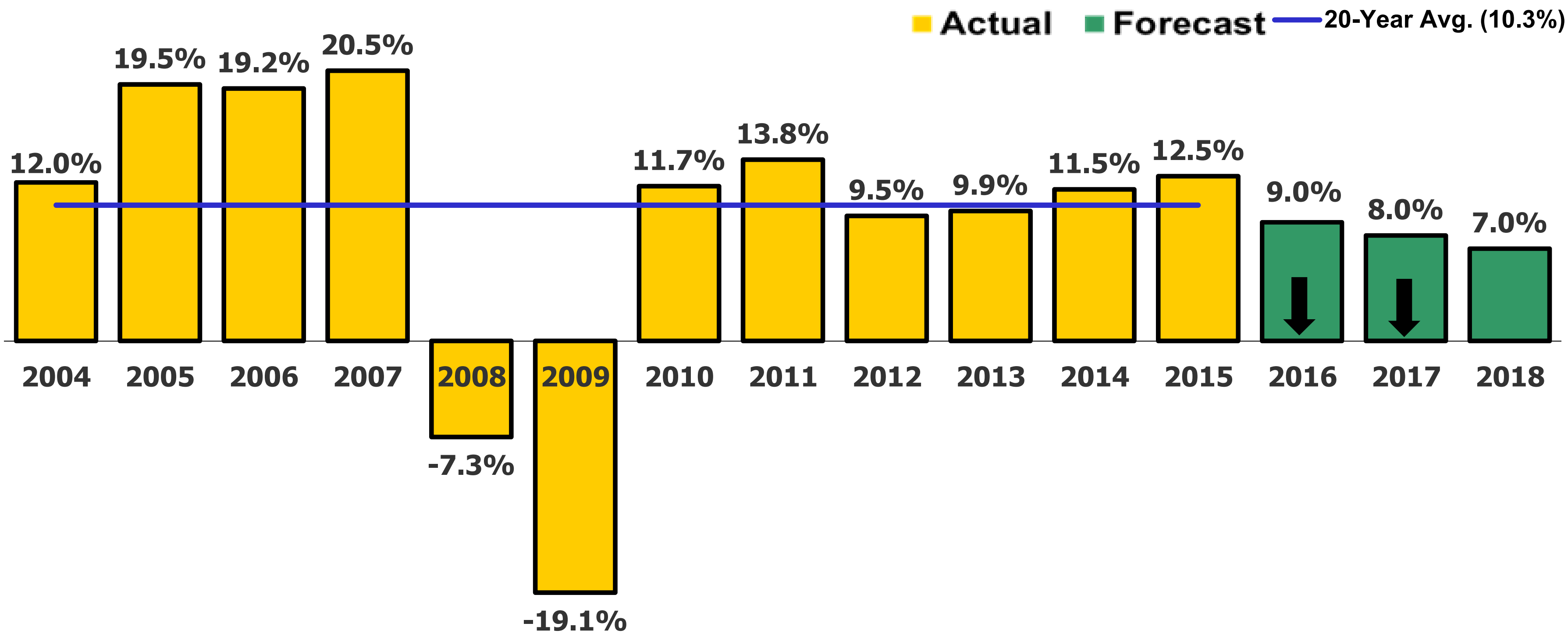
- Compared to 6 months ago, forecasts for ‘16 and ‘17 are less optimistic for the industrial, office and retail sectors. Apartments returns are about the same in both years compared to forecasts of 6 months ago.

NCREIF Industrial Total Annual Returns



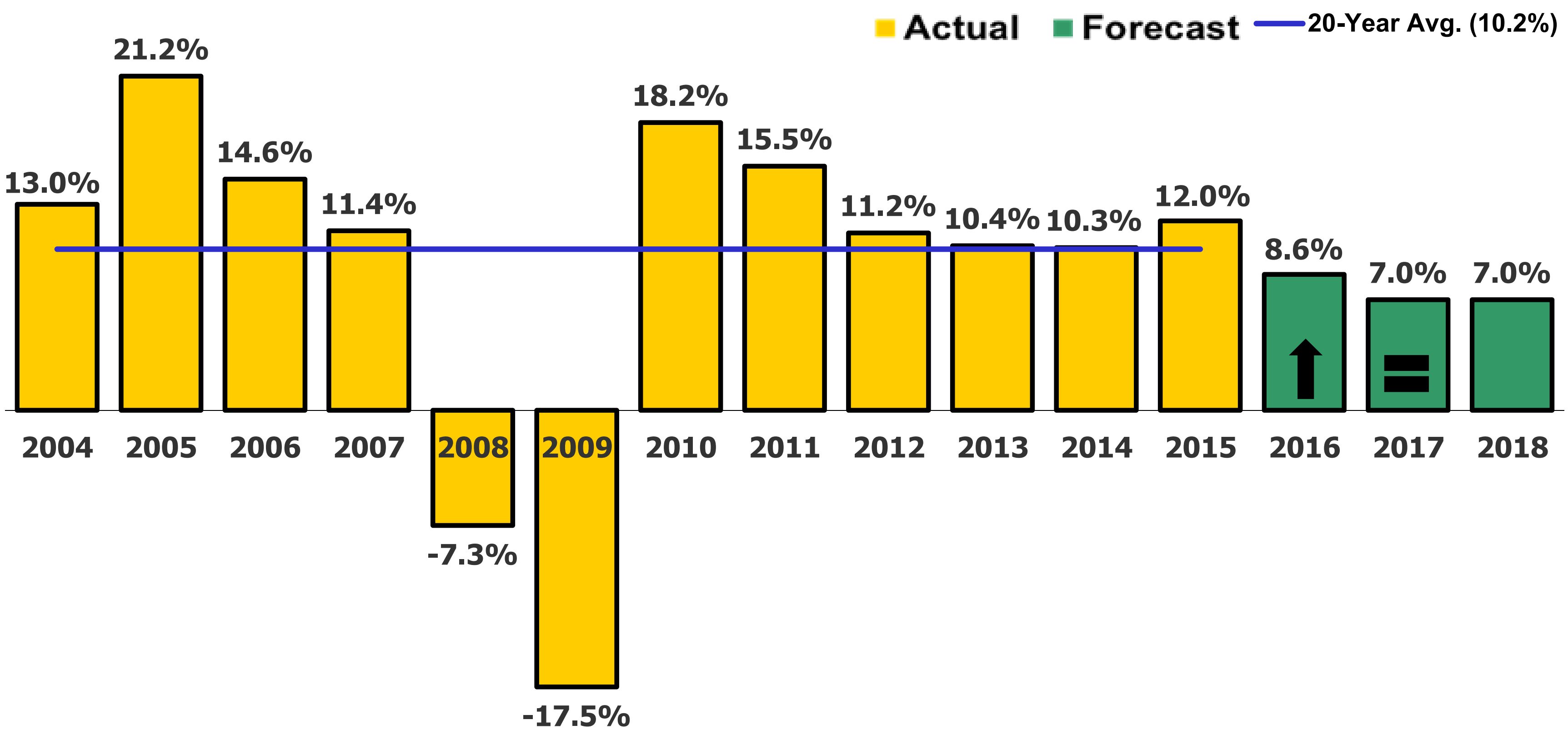
Sources: 1996-2015, National Council of Real Estate Investment Fiduciaries (NCREIF); 2015-2017, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 10.1% and 8.4%, respectively, for 2016 and 2017.

NCREIF Office Total Annual Returns



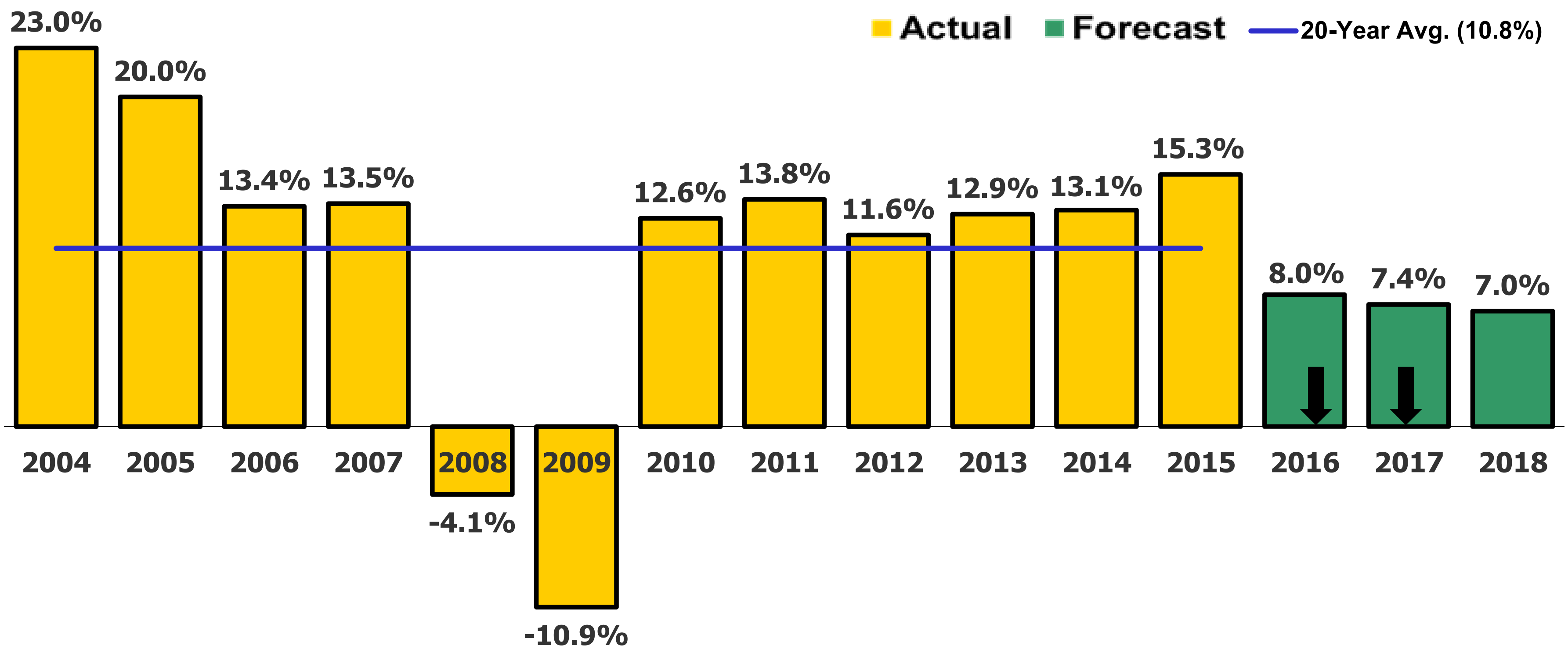
Sources: 1996-2015, National Council of Real Estate Investment Fiduciaries (NCREIF); 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 10.0% and 8.2%, respectively, for 2016 and 2017.

NCREIF Apartment Total Annual Returns



Sources: 1996-2015, National Council of Real Estate Investment Fiduciaries (NCREIF); 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 8.5% and 7.0%, respectively, for 2016 and 2017.

NCREIF Retail Total Annual Returns



Sources: 1996-2015, National Council of Real Estate Investment Fiduciaries (NCREIF); 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 9.6% and 8.0%, respectively, for 2016 and 2017.

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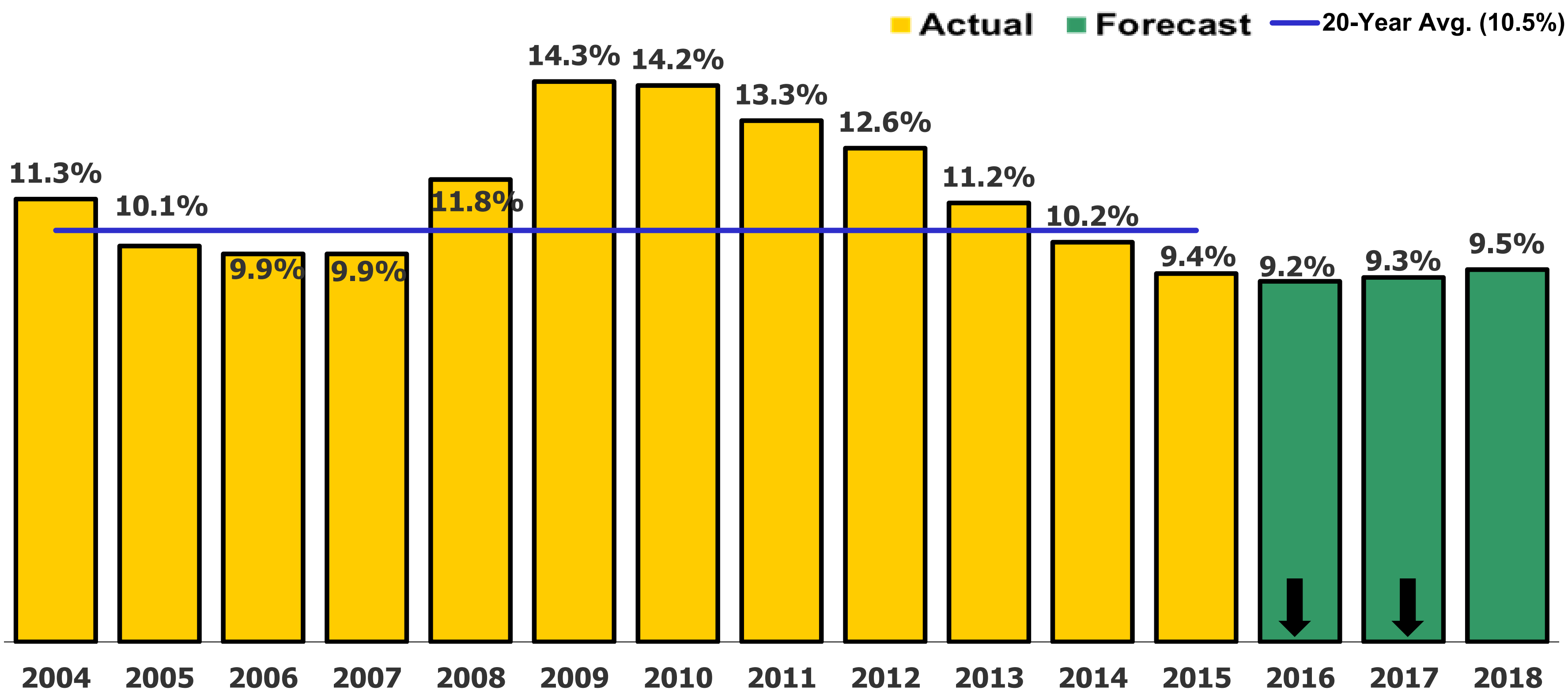
Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector declined to 9.4% at the end of 2015, below the 20-year average for the second-straight year. Availability rates are expected to continue to decline in 2016, with year-end vacancy rates at 9.2%. Rates are forecast to inch up in ‘17 and ‘18 but remain below the long-term average.

- Warehouse rental rates have shown positive growth for the past four years. Forecasts are for healthy but moderating rental rate growth with increases of 4.5% in 2016, 3.0% in 2017, and 2.7% in 2018. These forecasts are all above the 20-year average growth rate.

- The forecasts for industrial/warehouse availability rates and rental growth rates in ’16 and ‘17 are all more optimistic than the *Consensus Forecast* of six months ago.

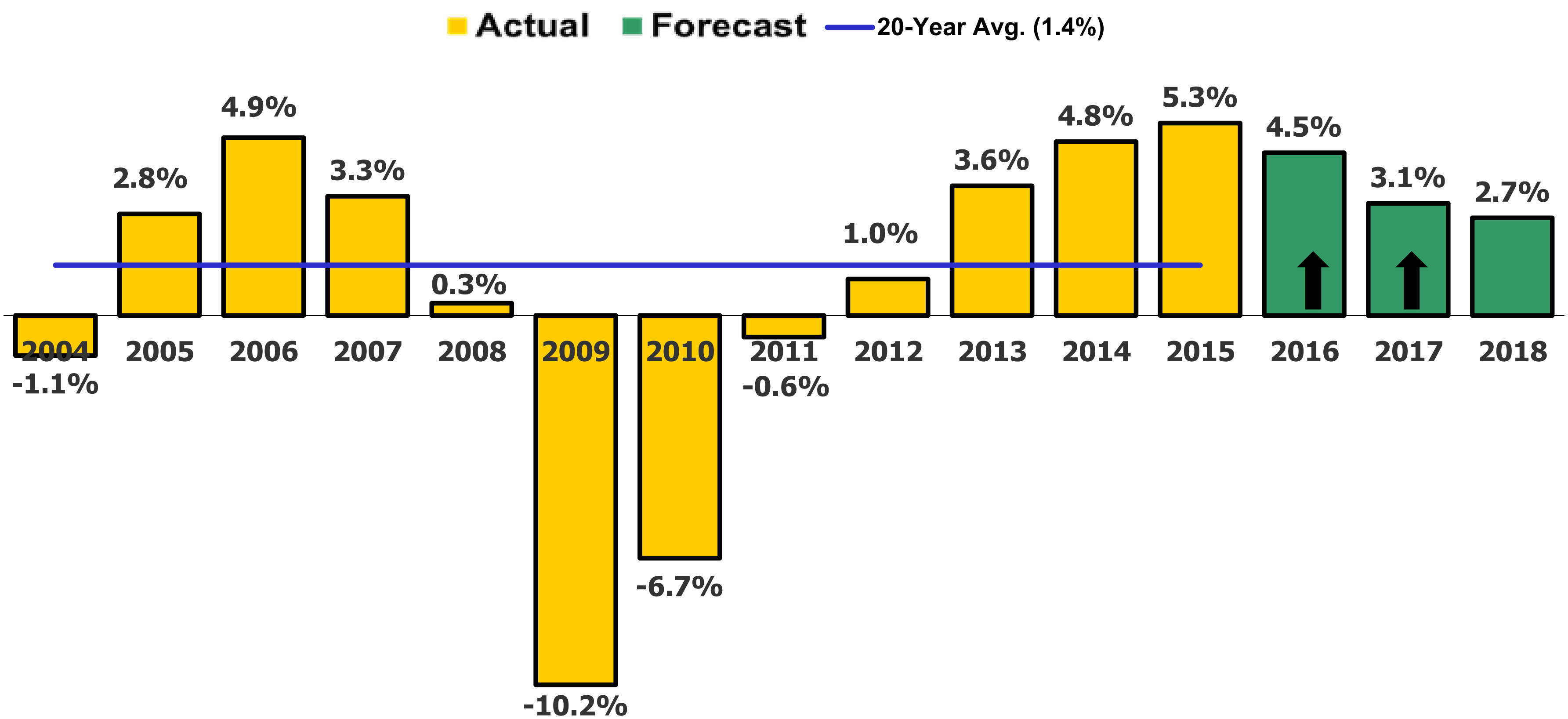
Industrial/Warehouse Availability Rates



Sources: 1996-2015 (Q4), CBRE; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 9.5% and 9.5%, respectively, for 2016 and 2017.

Industrial/Warehouse Rental Rate Change



Sources: 1996-2015, CBRE; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 4.0% and 3.0%, respectively, for 2016 and 2017.

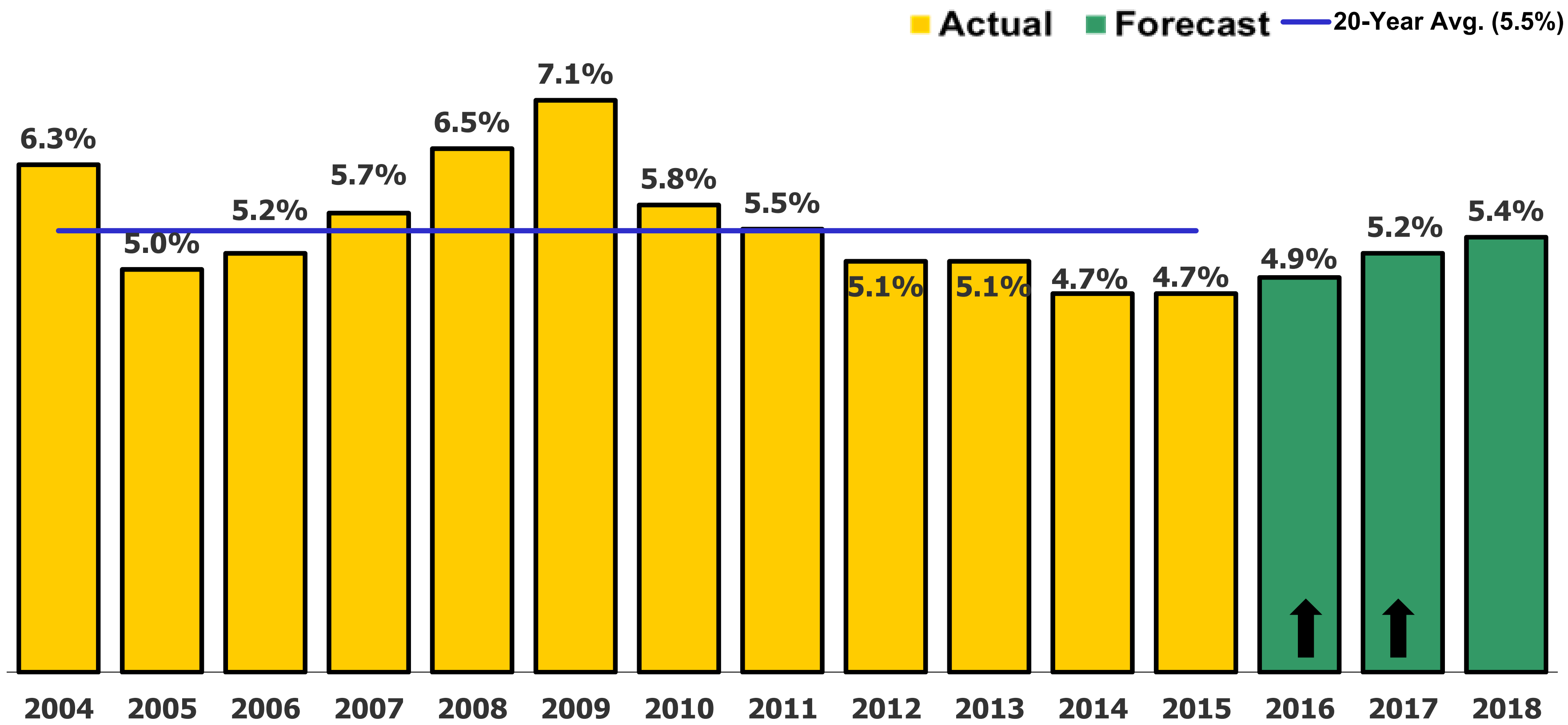
Apartment Sector Fundamentals

- Even with continued strong construction activity, the apartment sector has performed very well the past several years. Vacancy rates have decreased from 7.1% in 2009 to 4.7% in 2015. Vacancy rates are expected to increase slightly over the next three years, to 4.9%, 5.2% and 5.4% in 2016, ‘17 and ‘18, respectively. Still, these forecasts remain below the 20-year average vacancy rate.

- Apartment rental rate growth is expected to moderate in 2016 and ‘17 to 3.6% and 3.0%, respectively, but remain above the 20-year average growth rate of 2.8%. Rent growth is expected to dip below the long-term average in 2018, to 2.4%.

- Compared to 6 months ago, the forecasted vacancy rates for ‘16 and’17 are slightly higher, and the forecasted rental rate changes are about the same.

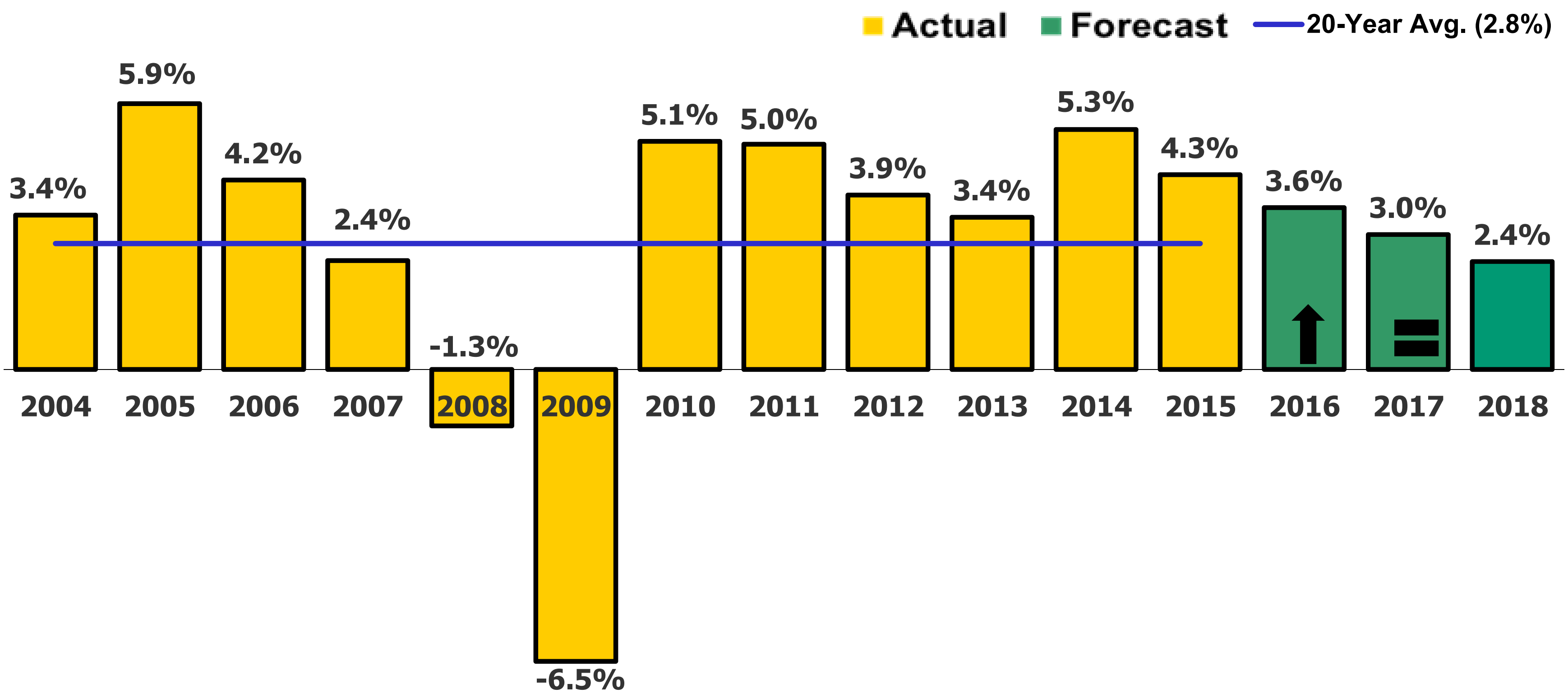
Apartment Vacancy Rates



Sources: 1996-2015 (Q4), CBRE; 2016-2018 (Q4), ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 4.8% and 5.0%, respectively, for 2016 and 2017.

Apartment Rental Rate Change



Sources: 1996-2015, CBRE; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 3.5% and 3.0%, respectively, for 2016 and 2017.

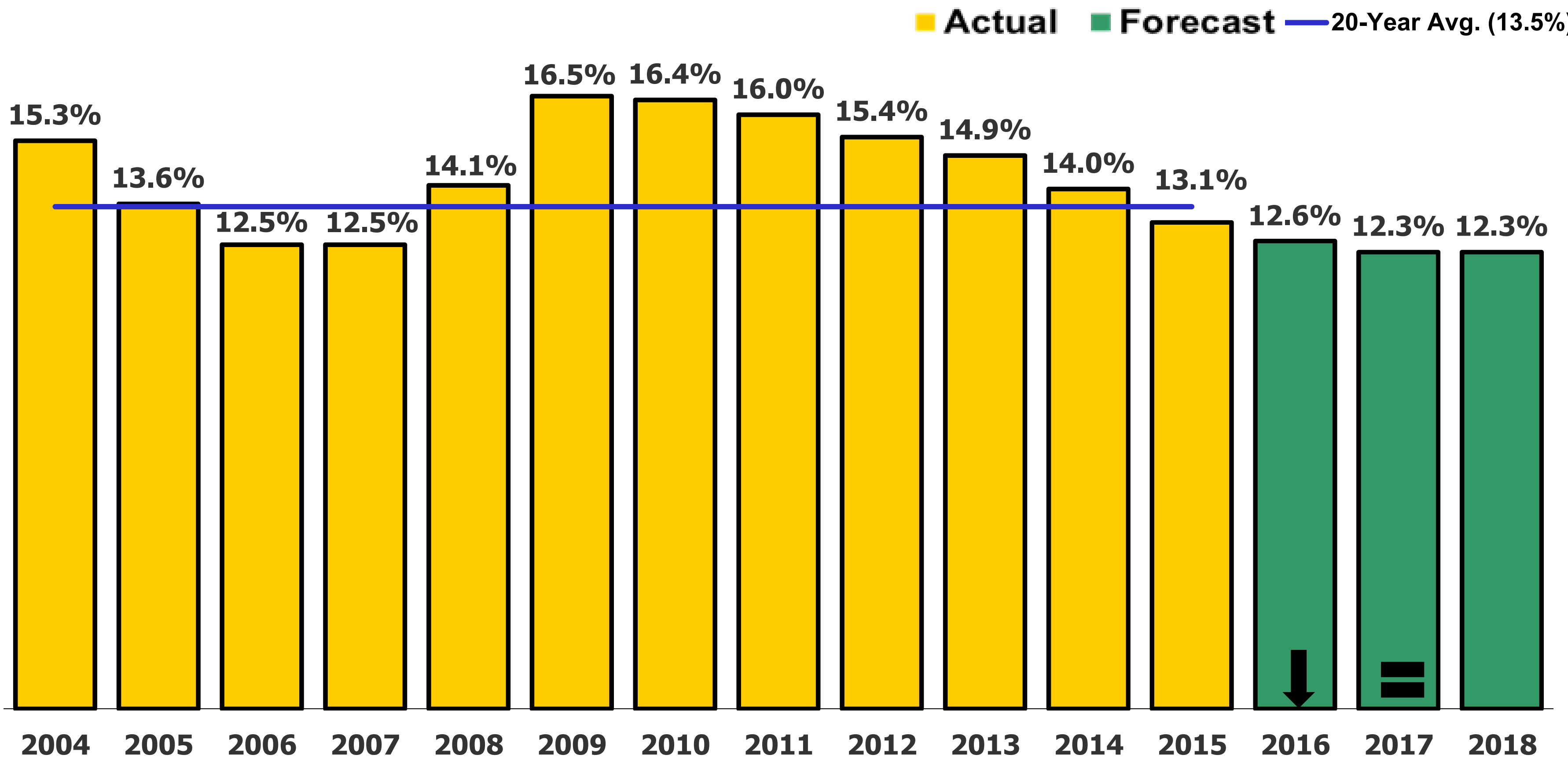
Office Sector Fundamentals

- Office vacancy rates declined for the fifth straight year in 2015 to 13.1%, bringing the vacancy rate below the 20-year average for the first time in 8 years. The forecast for 2016 and 2017 is for continued declines to 12.6% and 12.3%, respectively. Rates are expected to plateau in 2018 at 12.3%.

- Office rental rates increased 4.0% in 2015. Rental rate growth is expected to continue at 4.0% in 2016 and then moderating to 3.5% in ‘17 and 3.0% in ‘18. Still, all forecasted rates remain above the 20-year average.

- The forecasts for office vacancy rates in ‘16 and ‘17 are about the same as the forecast of six months ago. The forecasts for rental rate growth in ‘16 remain the same, while the forecast for ‘17 is less optimistic.

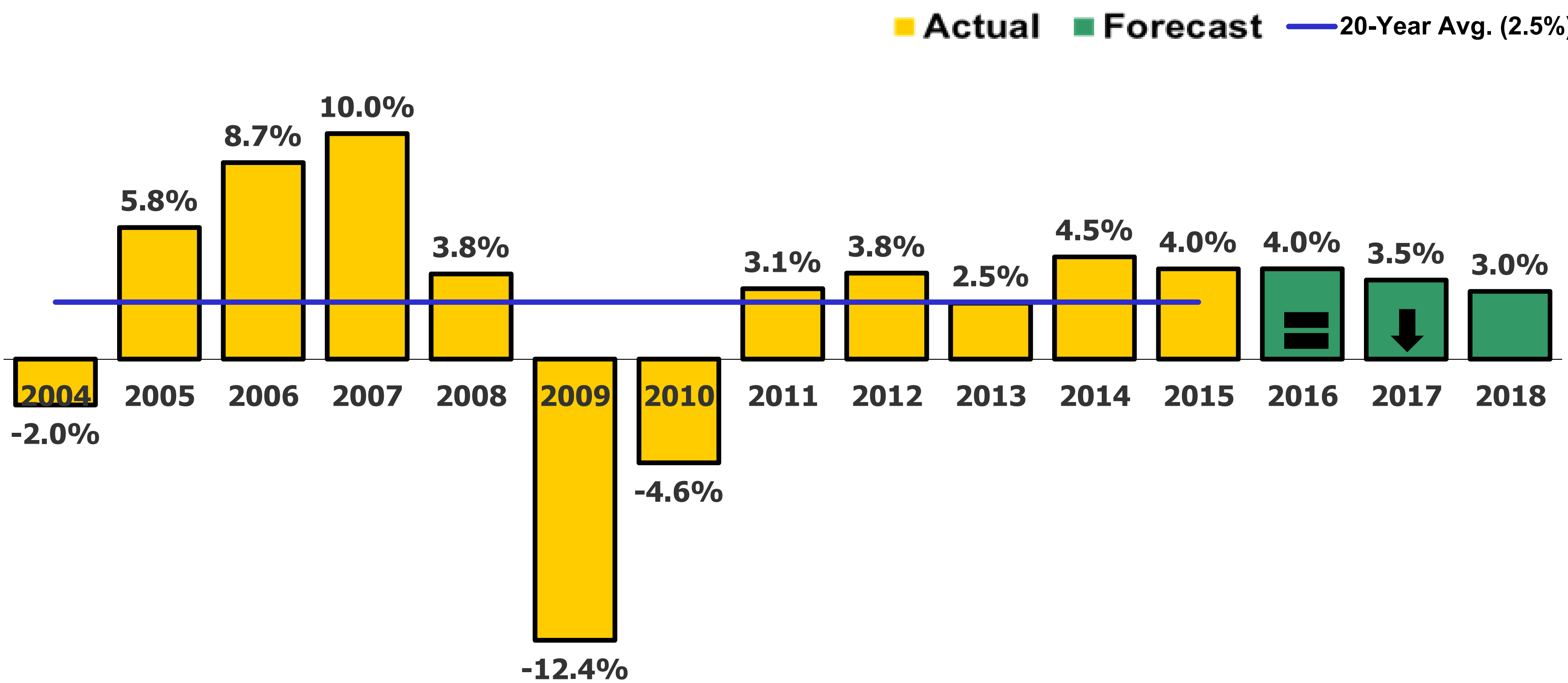
Office Vacancy Rates



Sources: 1996-2015 (Q4), CBRE; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 12.7% and 12.3%, respectively, for 2016 and 2017.

Office Rental Rate Change



Sources: 1996-2015, CBRE; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 4.0% and 4.0%, respectively, for 2016 and 2017.

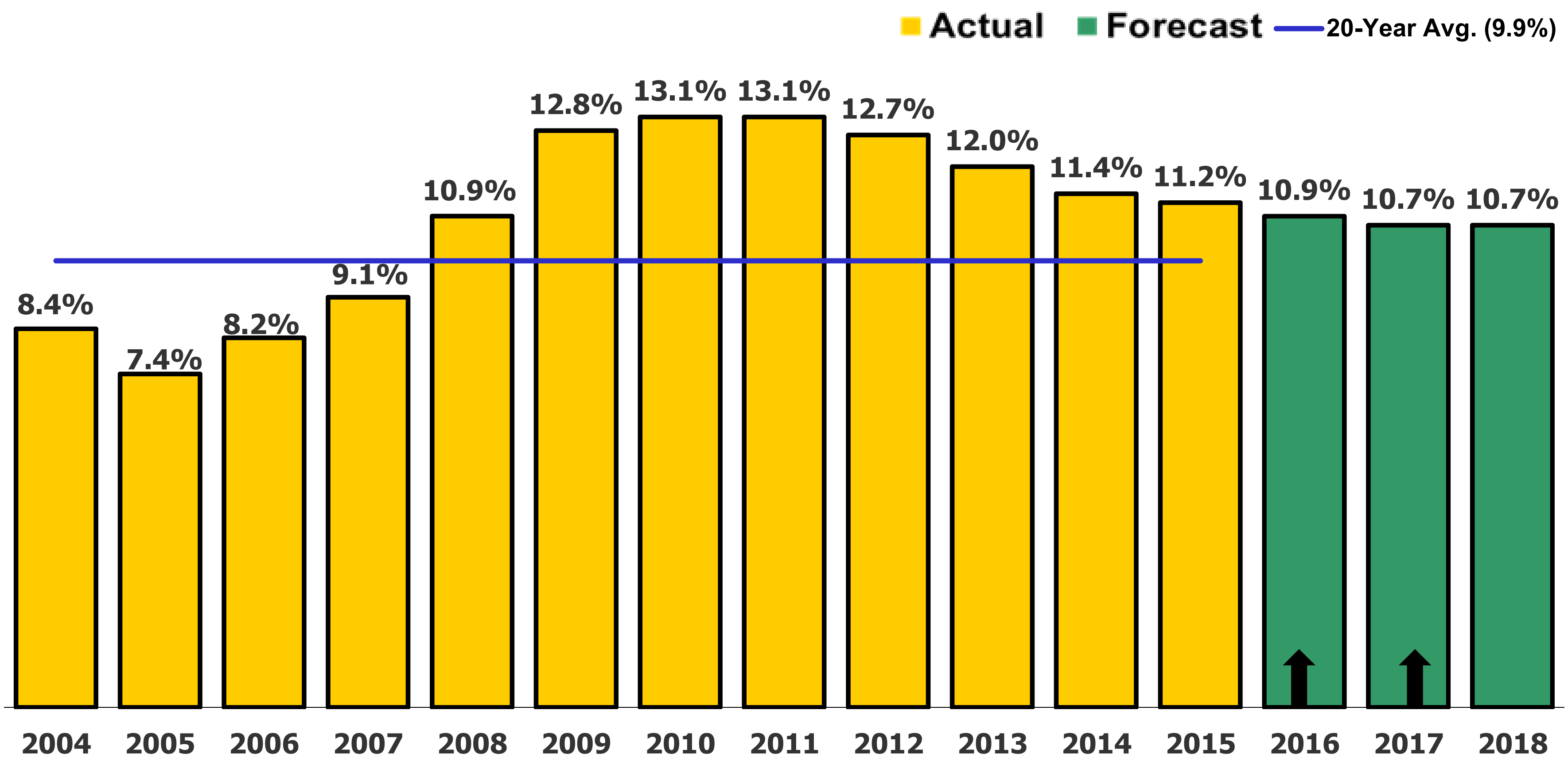
Retail Sector Fundamentals

- Retail availability rates have been on a steady decline from a peak of 13.1% in 2011, to 11.2% in 2015. The forecast anticipates continued improvements over the next two years, with year-end availability rates expected to decline to 10.9% by 2016 and 10.7% by 2017. Availability rates are expected to plateau at 10.7% in 2018. All these rates remain above the 20-year average.

- Retail rental rates increased for the first time in seven years in 2014 and continued positive in 2015. The forecast expects further growth at a rate that exceeds the 20-year average for the first time in eight years—at 2.0% in both ‘16 and ‘17 and 1.7% in ‘18.

- Compared to 6 months ago, the forecasts of availability rates and rental rate growth for ’16, and ‘17 are less optimistic.

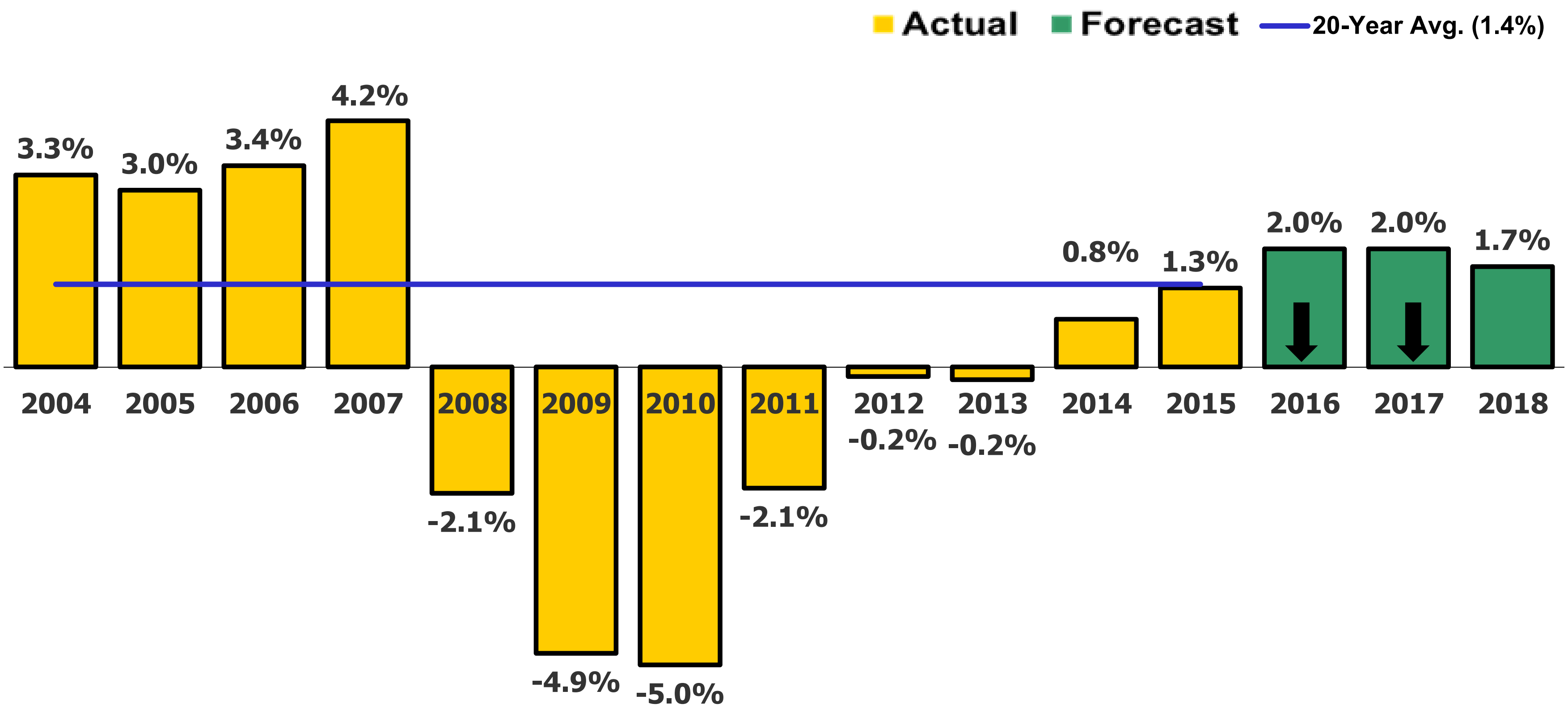
Retail Availability Rates



Sources: 1996-2015 (Q4), CBRE; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 10.7% and 10.4%, respectively, for 2016 and 2017.

Retail Rental Rate Change



Sources: 1996-2015, CBRE; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 2.5% and 2.8%, respectively, for 2016 and 2017.

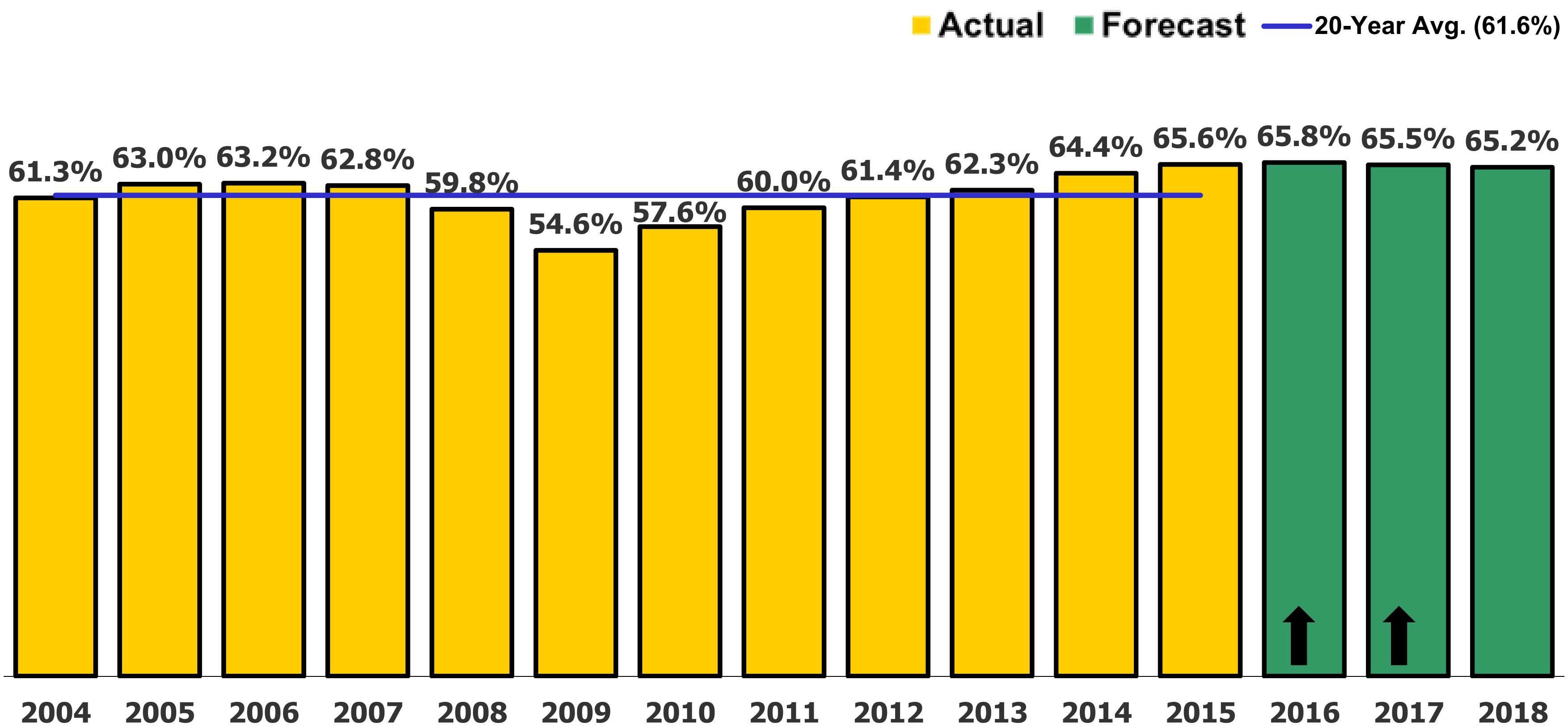
Hotel Sector Fundamentals

- Hotel occupancy rates, according to Smith Travel Research (STR), have been steadily improving since reaching a recession low of 54.6% in 2009. Occupancy rates surpassed the twenty-year average in 2013 at 62.3% and came in at 65.6% in 2015. Occupancy rates are forecast to remain strong over the next three years, with some minor fluctuations, at 65.8% in 2016, 65.5% in ‘17 and 65.2% in ‘18.

- Following six years of above-average hotel revenue per available room (RevPAR), RevPAR growth is expected to begin moderating over the next three years, staying above the long-term average in 2016, at 4.6%, but falling below the long-term average to 3.0% by ‘18.

- Compared to the forecast of 6 months ago, the current ‘16 and ‘17 forecasts for occupancy rates are slightly more optimistic, while RevPAR forecasts are more pessimistic.

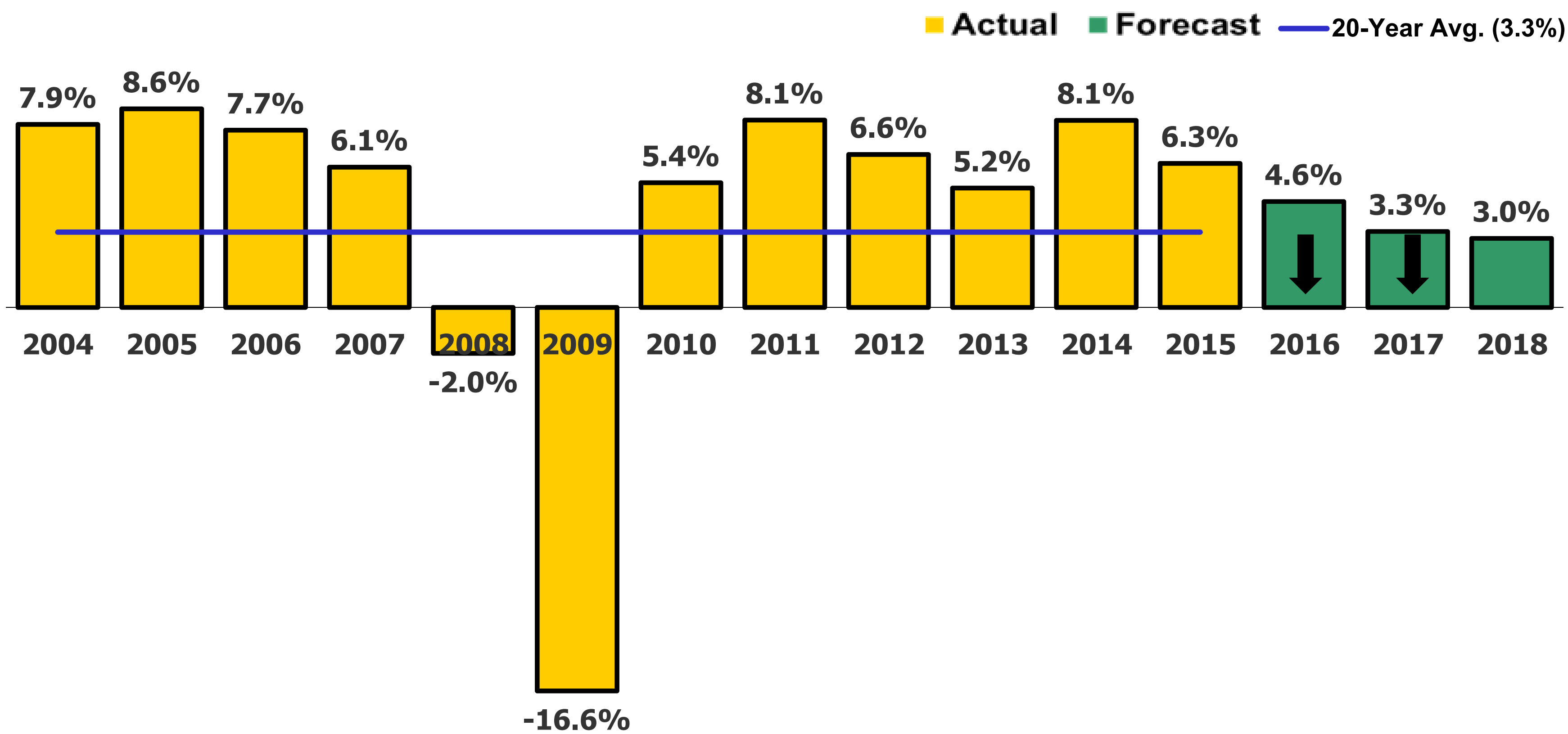
Hotel Occupancy Rates



Sources: 1996-2015, (12-month rolling average), Smith Travel Research; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 65.4% and 65.3%, respectively, for 2016 and 2017.

Hotel Revenue per Available Room (RevPAR) Change

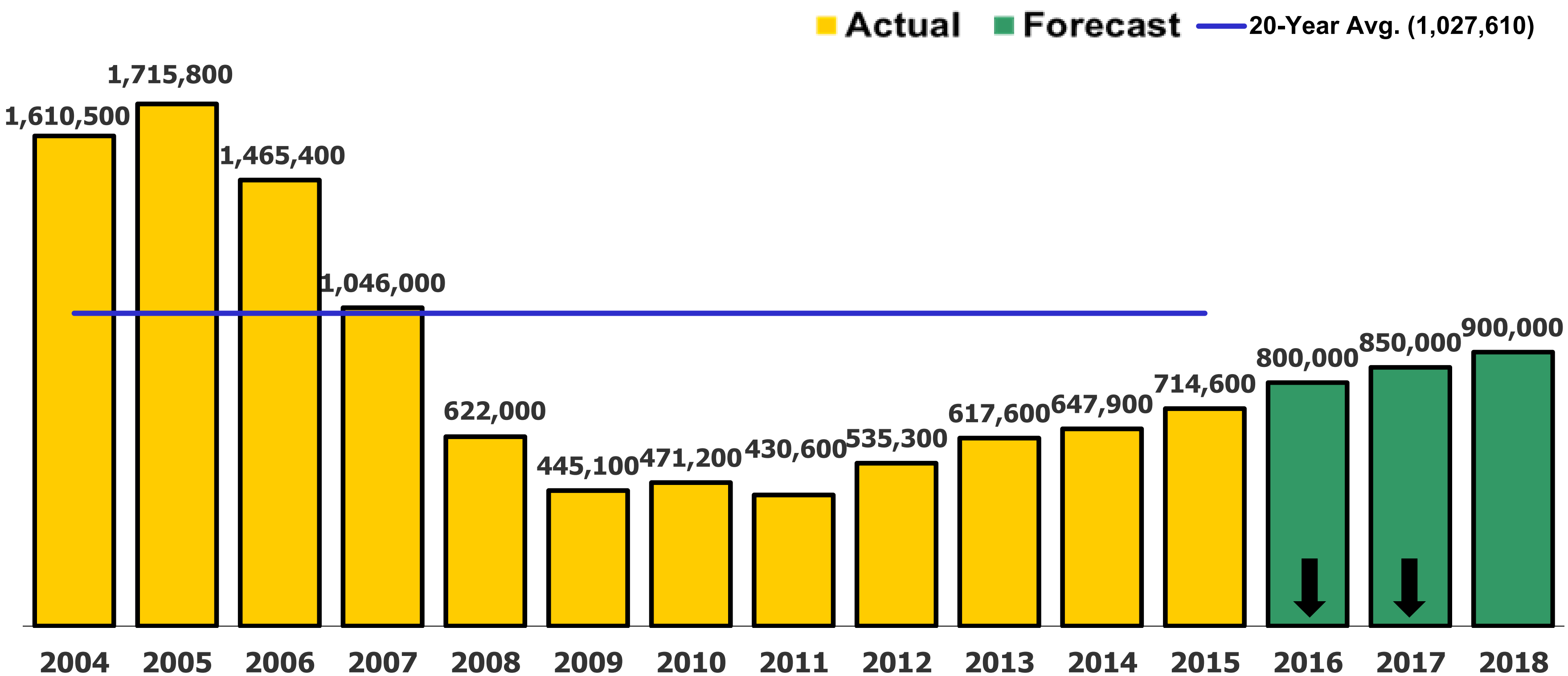


Sources: 1996-2015, (12-month rolling average), Smith Travel Research; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 5.9% and 4.2%, respectively, for 2016 and 2017.

Housing Sector

- The single-family housing sector experienced positive growth in starts for the fourth straight year in 2015. Starts are projected to increase to 800,000 in 2016, 850,000 in 2017, and 900,000 in 2018, but still remain below the 20-year average.
- According to the FHFA, growth in existing home prices increased on average by 5.7% in 2015. Price increases are expected to moderate to 5.0% in 2016, 4.3% in 2017, and 3.9% in 2018.
- Compared to six months ago, forecasts for housing starts in 2016 and 2017 are less optimistic; forecasts for existing housing prices increases are more optimistic.

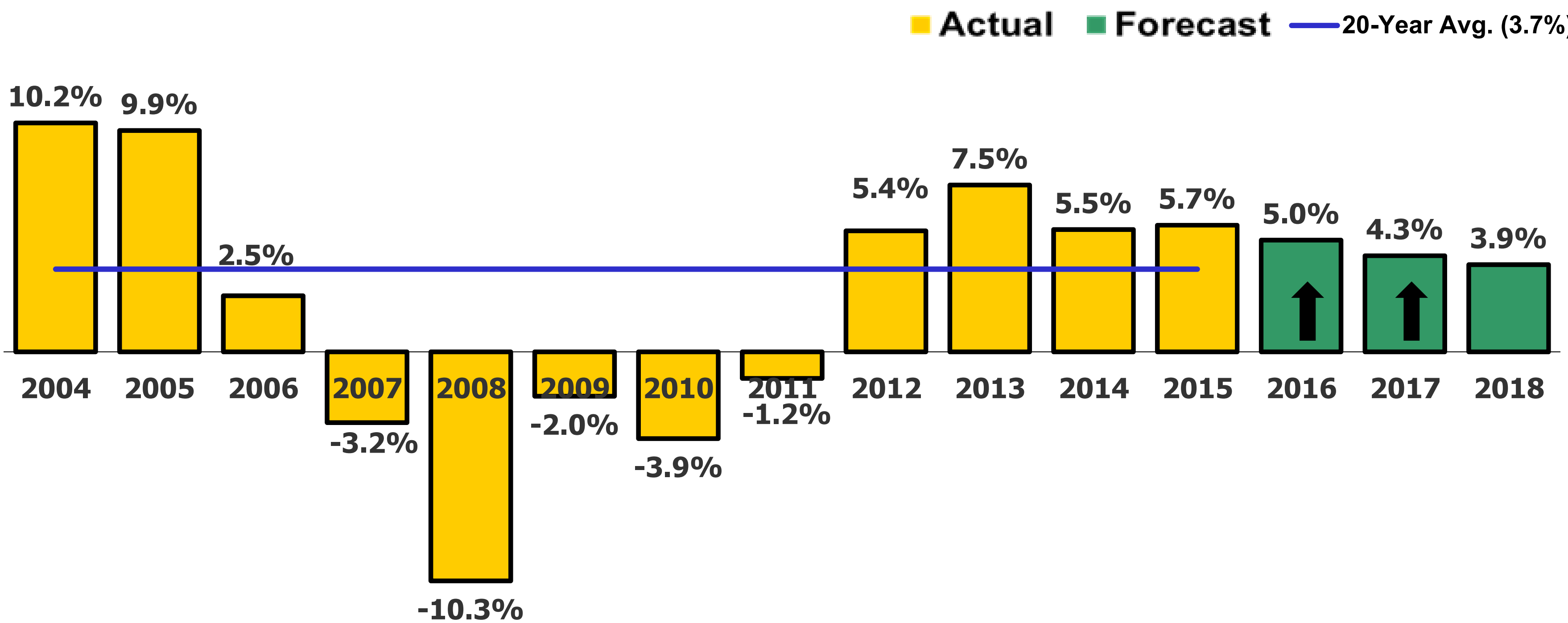
Single-Family Housing Starts



Sources: 1996-2016, (Structures w/ 1 Unit, as of December), U.S. Census; 2016-2018, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in September, 2015) projected 843,000 and 900,000, respectively, for 2016 and 2017.

Average Home Price Change



Sources: 1996-2015, (Seasonally Adjusted, as of December), Federal Housing Finance Agency; 2016-2018, ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in September, 2015) projected 4.3% and 3.9%, respectively, for 2016 and 2017.

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Alvarez & Marsal	Steven Laposa	*Principal, Global Real Estate Knowledge Center*
AvalonBay Communities	Craig Thomas	*VP, Market Research*
Bentall Kennedy	Douglas Poutasse	*EVP, Head of Strategy and Research*
Berkshire Group	Gleb Nechayev	*SVP, Head of Economic and Market Research*
CBRE Econometric Advisors	Jeffrey Havsy	*Chief Economist and Managing Director, Americas*
	Serguei Chervachidze	*Head of Forecasting*
Chandan Economics	Sam Chandan, PhD	*President and Chief Economist*
Clarion Partners	Tim Wang	*Director, Head of Investment Research*
CoreLogic, Inc.	Frank E. Nothaft	*SVP and Chief Economist*
Cornerstone Real Estate Advisers	Michael Gately	*Head of Research*
	Jim Clayton	*Head of Investment Strategy and Analytics*
CoStar Portfolio Strategy	Suzanne Mulvee	*Director of Research*
	Hans Nordby	*Managing Director*
	Shaw Lupton	*Manager*
Cushman & Wakefield	Kevin Thorpe	*Chief Economist*
	Rebecca Rockey	*Economist*
Deutsche Asset & Wealth Management	Kevin White	*Head of Strategy, Americas*
Green Street Advisors	Andrew McCulloch	*Managing Director*
	Peter Rothemund	*Senior Analyst*
Grosvenor	Eileen E. Marrinan	*Director of Research*
	Robert C. Hess	*Director of Research*
Harrison Street Real Estate Capital	Thomas Errath	*SVP, Research and Strategy*
Heitman	Mary K. Ludgin	*Managing Director*
Hines	Josh A. Scoville	*Senior Managing Director*

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
JLL	Benjamin Breslau	*Managing Director, Americas Research*
	Josh Gelormini	*Vice President, Americas Research*
LaSalle Investment Management	William Maher	*Director, North America Research & Strategy*
Linneman Associates	Peter Linneman	*Principal*
MetLife Real Estate Investors	Richard McLemore	*Managing Director*
Moody's	Tad Philipp	*Director, Commercial Real Estate Research*
Morgan Stanley Real Estate Investing	Tony Charles	*Executive Director*
	Stephen Siena	*Senior Associate*
NAREIT	Calvin Schnure	*Senior Vice President, Research*
National Association of REALTORS	Lawrence Yun	*Chief Economist*
Newmark Grubb Knight Frank	Robert Bach	*Director of Research, Americas*
NORC at the University of Chicago	Jon Southard	*Vice President, Program Area Director*
Principal Global Investors	Jodi Airhart	*Manager, Commercial Real Estate Research*
Prudential Real Estate Investors	Lee Menifee	*Managing Director, Head of Americas Research*
RCLCO	Paige Mueller	*Managing Director*
Realion, Everest, Everstone, Medical Core REIT	David J. Lynn	*Chairman and CEO*
Situs RERC	Ken Riggs	*President and CEO*
	Aaron Riggs	*Senior Analyst*
Rosen Consulting Group	Kenneth T. Rosen	*Chairman*
	Randall Sakamoto	*Executive Vice President*
Stockbridge Associates	George Casey	*President and CEO*
TIAA	Martha Peyton	*Managing Director, Head of Global Real Estate Strategy*
Trepp LLC	Matthew Anderson	*Managing Director*
	Susan Persin	*Senior Director of Research*

Urban Land Institute

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Patrick Phillips, Global Chief Executive Officer
Urban Land Institute

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A Survey of Leading Real Estate Economists/Analysts

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Anita Kramer
Senior Vice President
ULI Center for Capital Markets and Real Estate

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