



ULI Real Estate Consensus Forecast

A Survey of Leading Real Estate Economists/Analysts

uli.org/consensusforecast

April 2017

ULI Center for Capital Markets and Real Estate



**Urban Land
Institute**

ULI Center for Capital Markets
and Real Estate

ULI Real Estate Consensus Forecast

- Three-year forecast ('17-'19) for 27 economic and real estate indicators.
- A consensus forecast based on the median of the forecasts from 53 economists/analysts at 39 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 11th survey; completed March 3 – April 1, 2017.
- A semi-annual survey; next release planned for October 2017.
- 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 2017 projects continued economic expansion over the next three years, with healthy GDP growth, though moderating somewhat by 2019; moderating employment growth compared to 2016; relatively high but moderating commercial real estate volumes; continued commercial price appreciation, rent growth, and positive returns but at relatively subdued and decelerating rates; better than, or at, average vacancy/occupancy rates for all but retail, but with little, if any, further improvement in all sectors; continued growth in single family housing starts but remaining at levels below the long-term average.
- In 2017, 11 real estate indicators are projected to be better than their 20-year averages, while 12 are expected to be worse. Also, inflation is projected to be higher than its 20-year average, while the 10-year Treasury rate and the NCREIF Capitalization rate are projected to be lower than their long-term averages.
- In 2019, just 9 indicators are expected to be better than their 20-year average, and 13 are expected to be worse while one (apartment vacancy rate) is expected to be right at its average. Similar to the 2017 projections, inflation in 2019 is expected to be above its average while the Treasury rate and the cap rate are projected to be lower.

Forecasts vs. Long-Term Averages

2017 Forecast

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

2019 Forecast*

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

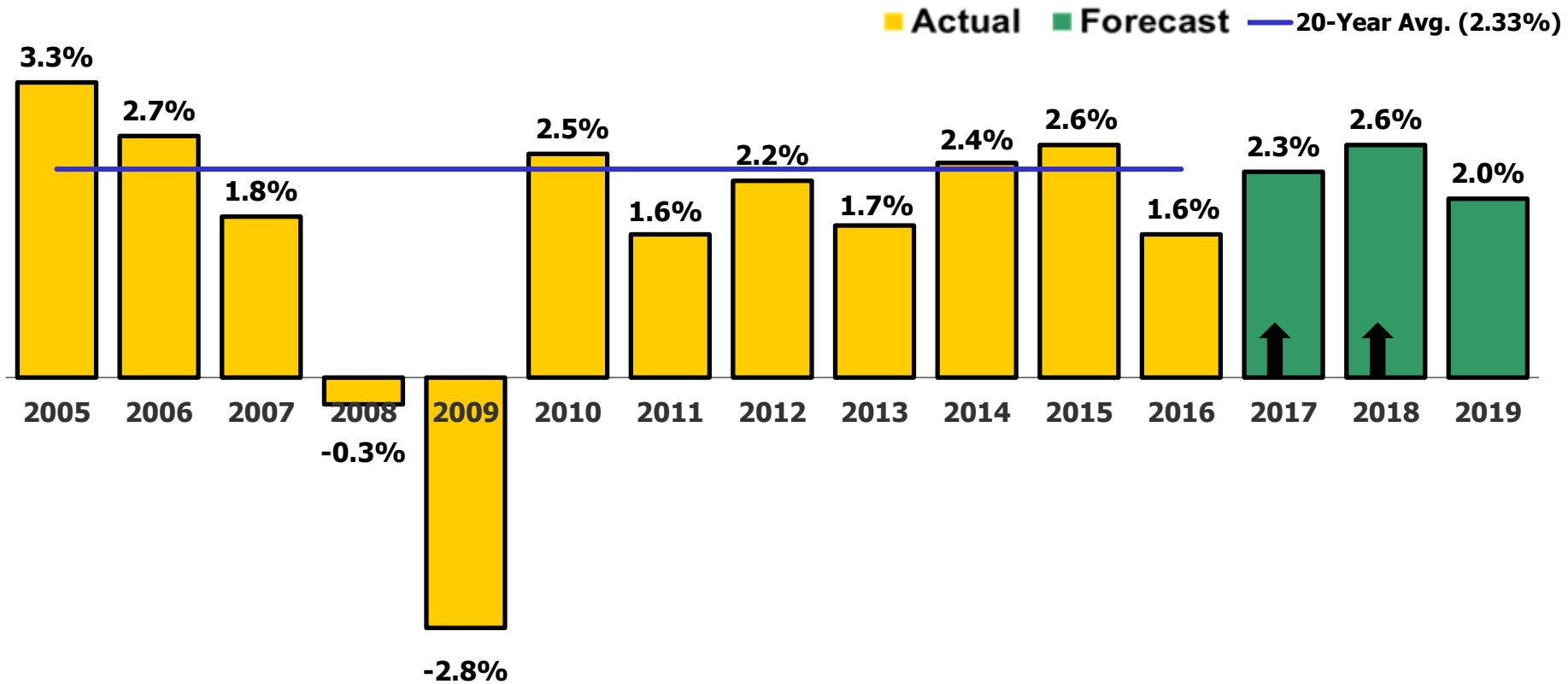
*The 2019 Forecast for Apartment Vacancy is equal to the long-term average

Key Findings

- Following 6 years of commercial property transaction volume growth that reached a post-recession high of \$547 billion in 2015, transaction volume declined to \$489 billion in '16. Annual volume is forecasted to further decline to \$450 billion in '17 and \$430 billion in '19. Still, the average volume of the 3-year forecast period is surpassed only by 2007, 2015, and 2016 levels and remains well above the long-term average.
- Similarly, issuance of commercial mortgage-backed securities (CMBS), a source of financing for commercial real estate which had grown consistently since '09 to \$101 billion in 2015, declined in '16 to \$76 billion. Issuance is forecasted to remain essentially level in '17 and moderately increase to \$80 billion in '18 and \$85 billion in '19.
- Commercial real estate prices are projected to grow at relatively subdued and slowing rates in the next three years, at 5.0% in '17, 3.5% in '18 and 3.0% in '19, all below the long-term average growth rate of 5.7%.
- Institutional real estate assets are expected to provide total returns of 7.0% in '17, moderating to 6.0% in '18 and staying at 6.0% in '19. By property type, 2017 returns are expected to range from 9.8% for industrial to 6.0% for both office and apartments. In '19, returns are expected to range from 7.9% for industrial to 5.5% for apartments.
- Availability and vacancy rates for 3 sectors (industrial, office, and retail) are expected to continue to improve in '17, but remain essentially flat in '18 and '19. The exception is apartments, whose vacancy rate slightly increased in '16 from near historic lows in '15, and is expected to tick up once more in '17 to 5.2%, but remain below the long-term average. The hotel sector's occupancy rate is forecasted to remain flat in '17 and decline slightly in '18 and '19.
- Commercial property rent is expected to continue to grow in the next three years in all sectors, although at more subdued rates than in recent years. In 2017, rent increases in the four major property types will range from 4.6% for industrial to 2.0% for apartments. Rent increases in 2019 will range from 3.0% for industrial to 2.0% for retail, office, and apartments. Hotel RevPAR is expected to increase by 2.5% in 2017 and 2.4% in 2019.
- Single-family housing starts are projected to increase from 781,500 units in 2016 to 920,000 units in 2019, still slightly below the 20-year annual average.

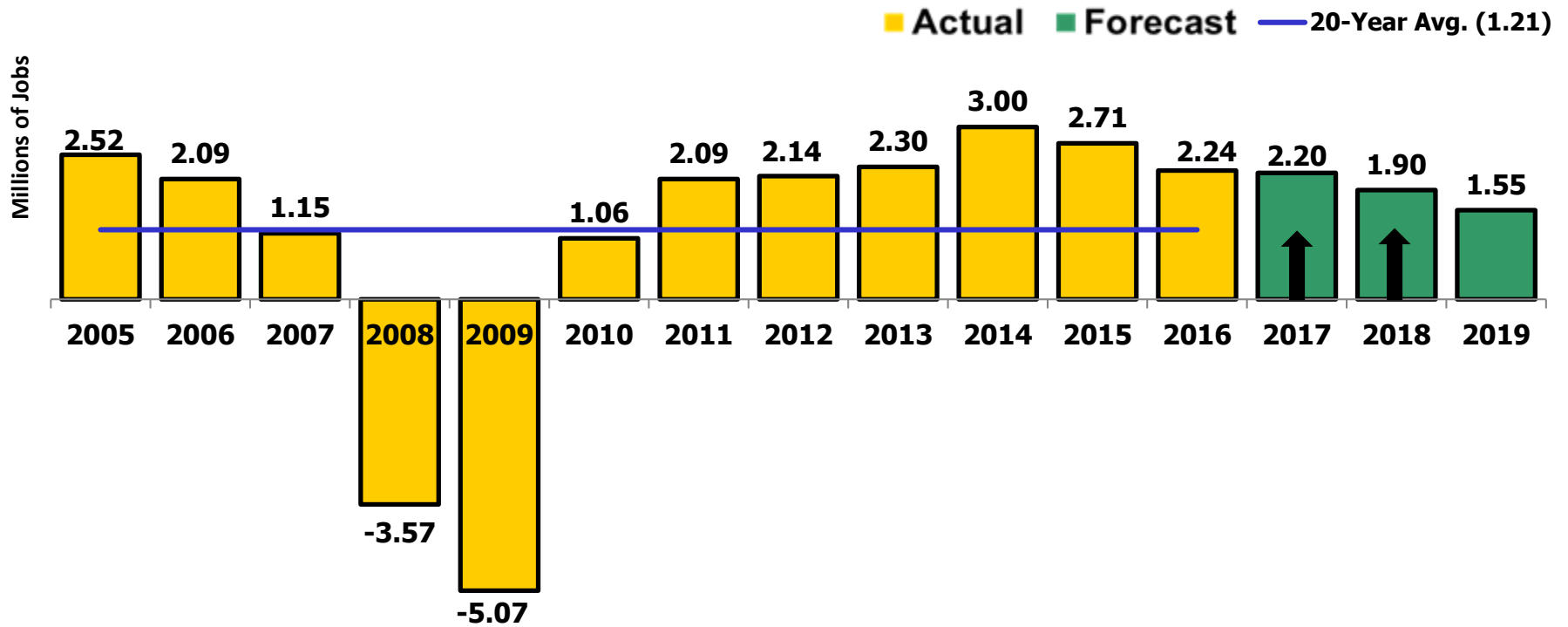
Economy

- The economists/analysts expect continued economic expansion over the next 3 years, though they expect employment growth to slow and the unemployment rate to plateau as the economy approaches full employment.
- GDP growth was 1.6% in 2016, down from the 2.6% growth in 2015. Growth rates are forecasted to increase to 2.3% in 2017 and 2.6% in 2018 and be slightly lower at 2.0% in 2019.
- Employment growth is expected to continue in 2017 at 2.20 million jobs, similar to the 2.24 million jobs added in 2016. Employment growth is expected to moderate to 1.90 million jobs in 2018 and 1.55 million jobs in 2019.
- The unemployment rate is expected to continue its seven-year decline, reaching 4.6% by the end of 2017 and 4.5% in 2018, before ticking back up to 4.6% by the end of 2019.
- Compared to forecasts of 6 months ago, the forecasts for GDP, unemployment rate, and employment growth are all more optimistic for both '17 and '18.



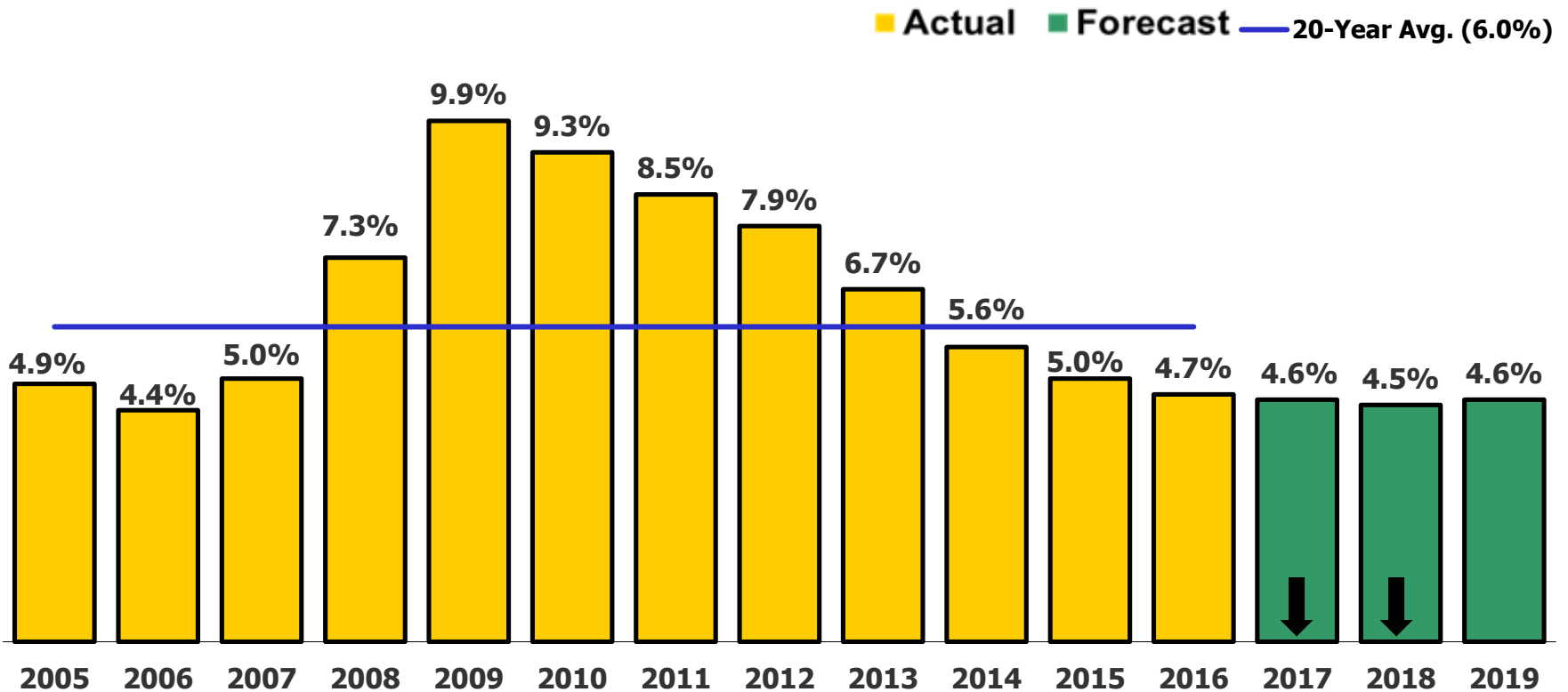
Sources: 1997-2016, Bureau of Economic Analysis; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 2.1% and 2.0%, respectively, for 2017 and 2018.



Sources: 1997-2016, Bureau of Labor Statistics; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 2.00 and 1.80, respectively, for 2017 and 2018.



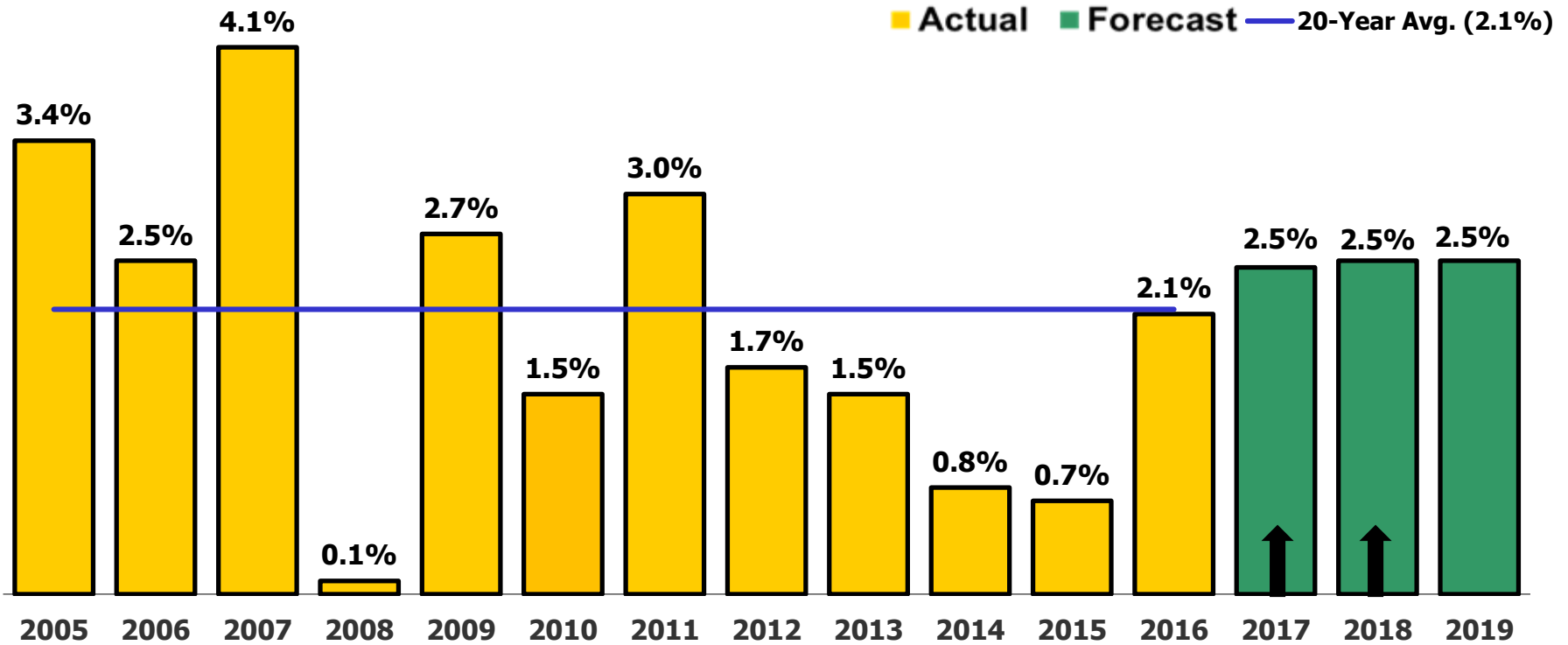
Sources: 1997-2016, (seasonally adjusted, as of December), Bureau of Labor Statistics; 2017-2019 (YE), ULI Consensus Forecast.
Note: The previous ULI Consensus Forecast (released in October, 2016) projected 4.7% and 4.6%, respectively, for 2017 and 2018.

Inflation, Interest Rates, and Cap Rates

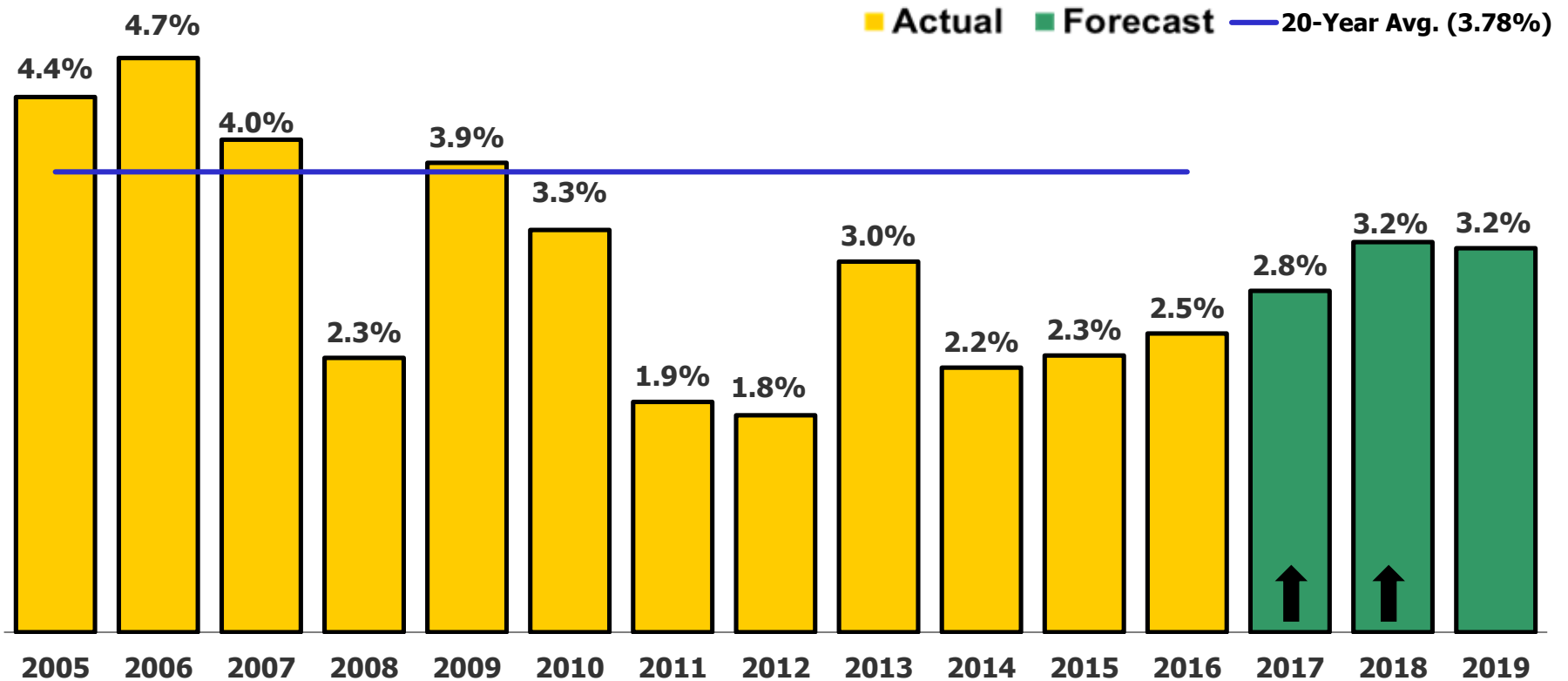
- The CPI inflation rate reversed a decline of 4 consecutive years in 2016, increasing to 2.1%. CPI is projected to rise to 2.5% in '17 and plateau at that rate in both '18 and '19. This rate is above the 20-year average of 2.1%.
- Ten-year treasury rates reached 2.5% by the end of 2016, and are projected to rise to 2.8% by year-end 2017. They are then projected to rise to 3.2% in 2018 and stay at that level in 2019. These rates remain below the 20-year average of 3.78%.
- Capitalization rates for institutional-quality investments (NCREIF cap rates) in 2016 were 5.1%, flat from 2015. They are expected to stay at 5.1% in 2017, before inching up to 5.3% in 2018 and 5.5% in 2019.
- Compared to 6 months ago, forecasts for CPI and 10-year treasury rates are higher for both '17 and '18, while cap rate forecasts are lower.



Consumer Price Index Inflation Rate



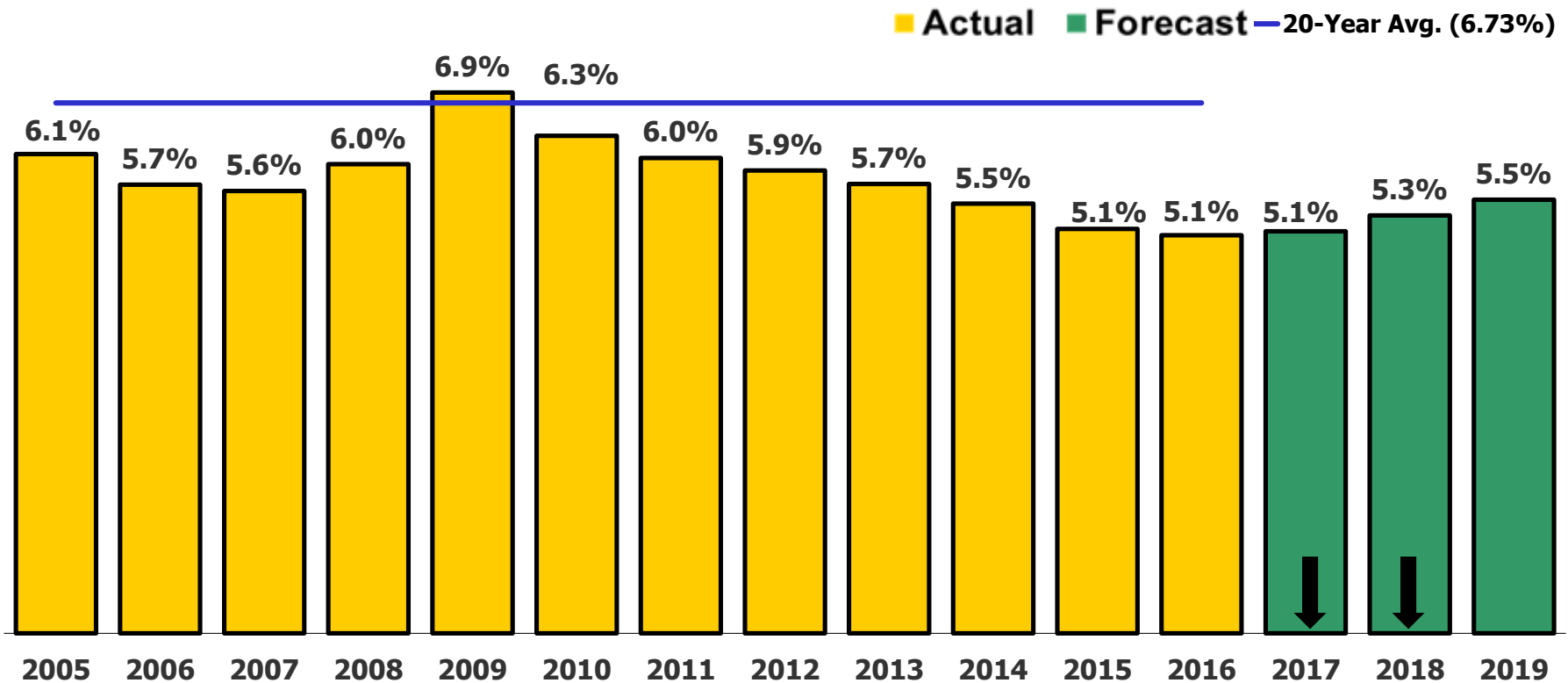
Sources: 1997-2016, (12-month change, as of December), Bureau of Labor Statistics; 2017-2019 (YE), ULI Consensus Forecast.
 Note: The previous ULI Consensus Forecast (released in October, 2016) projected 1.9% and 2.1%, respectively, for 2017 and 2018.



Sources: 1997-2016 (YE), U.S. Federal Reserve; 2017-2019 (YE), ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 2.2% and 2.5% respectively, for 2017 and 2018.

NCREIF Capitalization Rate



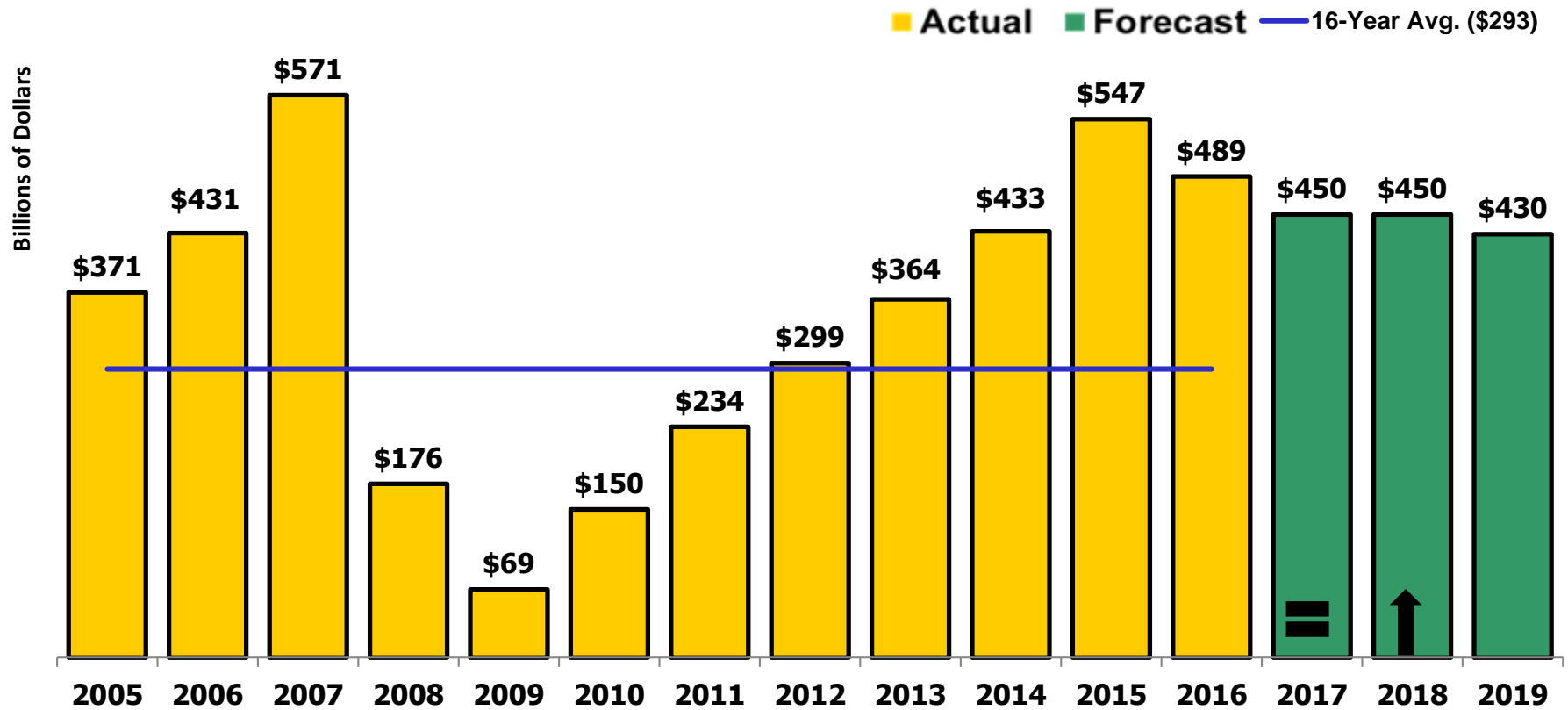
Sources: 1997-2016, (Q4), National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019 (YE), ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 5.3% and 5.5%, respectively, for 2017 and 2018.

Real Estate Capital Markets

- Commercial real estate transaction volume had consistently increased for 6 years through 2015 to a post-recession peak of \$547 billion, but decreased in 2016 to \$489 billion. Volume is expected to further decline in 2017 to \$450 billion, remain at that level in 2018, and decline in '19 to \$430 billion. Despite these projected declines, volumes remain substantially above the 16-year average of \$293 billion.
- Issuance of commercial mortgage-backed securities (CMBS), a key source of financing for commercial real estate that had rebounded consistently since '09, declined in 2016 to \$76 billion from 2015's \$101 billion. CMBS issuance is expected to slightly decrease to \$74 billion in 2017, and then increase to \$80 billion and \$85 billion in '18 and '19, respectively.
- Compared to the forecasts of 6 months ago, the current forecasts for transactions is the same in '17 and higher in '18, while CMBS issuance is lower for both years.

Commercial Real Estate Transaction Volume



Sources: 2001-2016, Real Capital Analytics; 2017-2019, ULI Consensus Forecast.

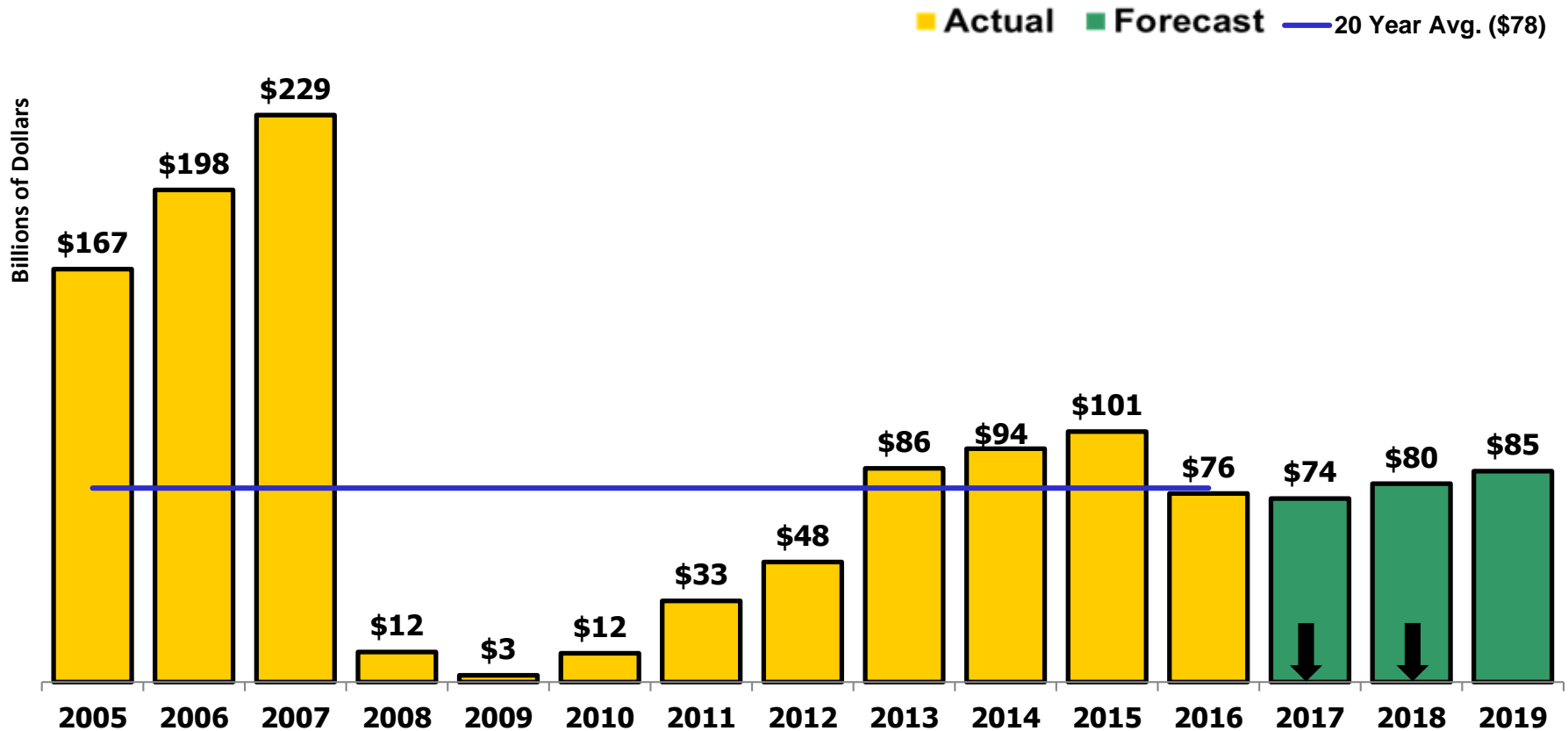
Note: The previous ULI Consensus Forecast (released in October, 2016) projected \$450 and \$428 respectively, for 2017 and 2018.



Urban Land Institute

ULI Center for Capital Markets and Real Estate

Commercial Mortgage-Backed Securities (CMBS) Issuance



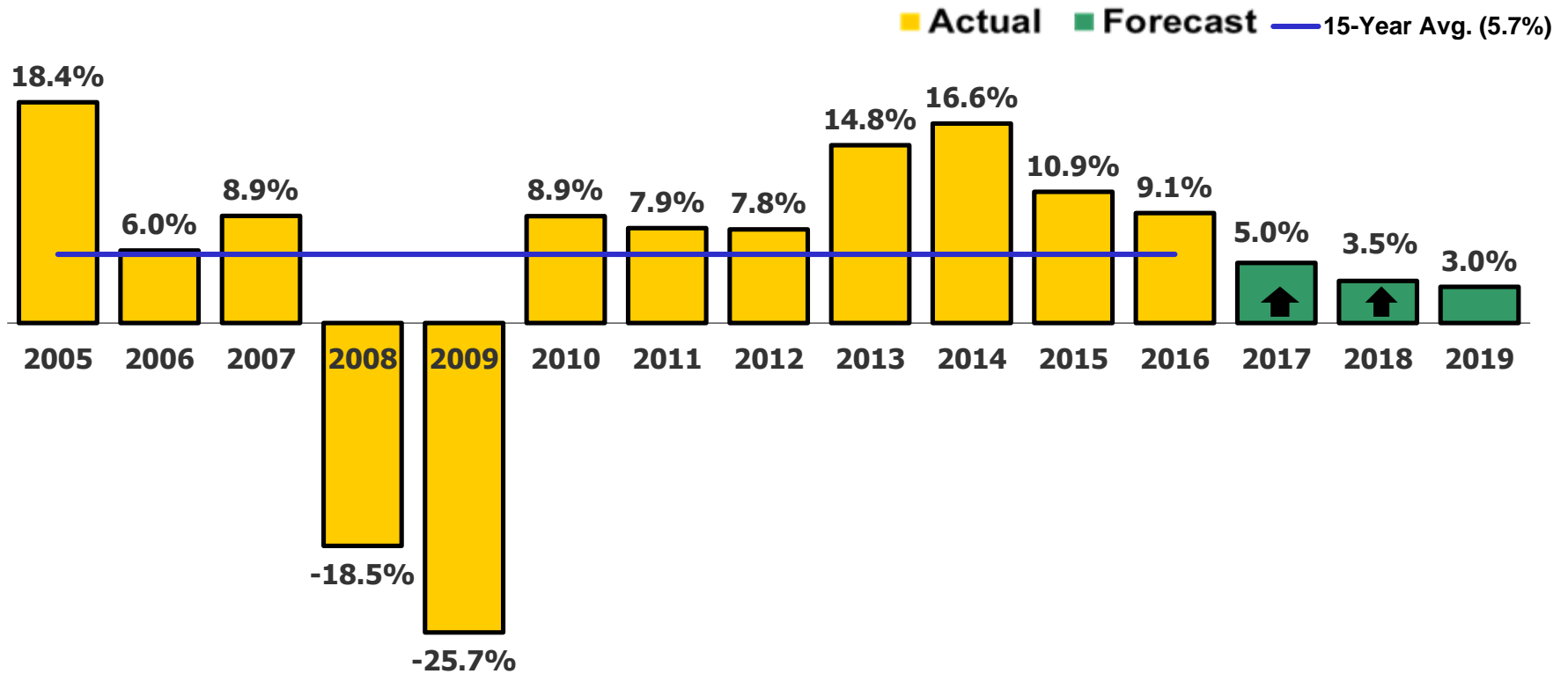
Sources: 1997-2016, Commercial Mortgage Alert; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected \$85 billion and \$90 billion, respectively, for 2017 and 2018.

Real Estate Returns and Prices

- The Moody's/RCA Commercial Property Price Index (CPPI) has had some recent high growth years. It is expected to continue to grow at relatively subdued and slowing rates in the next three years, at 5.0% in 2017, 3.5% in '18 and 3.0% in '19, all below the long-term average growth rate of 5.7%.
- Equity REIT total returns, according to NAREIT, experienced over 30% growth in 2014 but returns declined to 3.2% in 2015 before increasing to 8.5% in 2016. Future returns are expected to moderate to 7.0% in '17, remain at 7.0% in '18 and bump up to 7.3% in '19. 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, dipped to 8.0% in 2016, below the long-term average for the first time since 2009. Returns for the next three years are forecasted to further moderate to 7.0% in 2017, 6.0% in '18 and 6.0% in '19.
- Compared to the forecasts of 6 months ago, the forecasts for the CPPI are more optimistic while, on average, the REIT returns forecasts are about the same and NCREIF total returns forecasts remained the same for both '17 and '18.

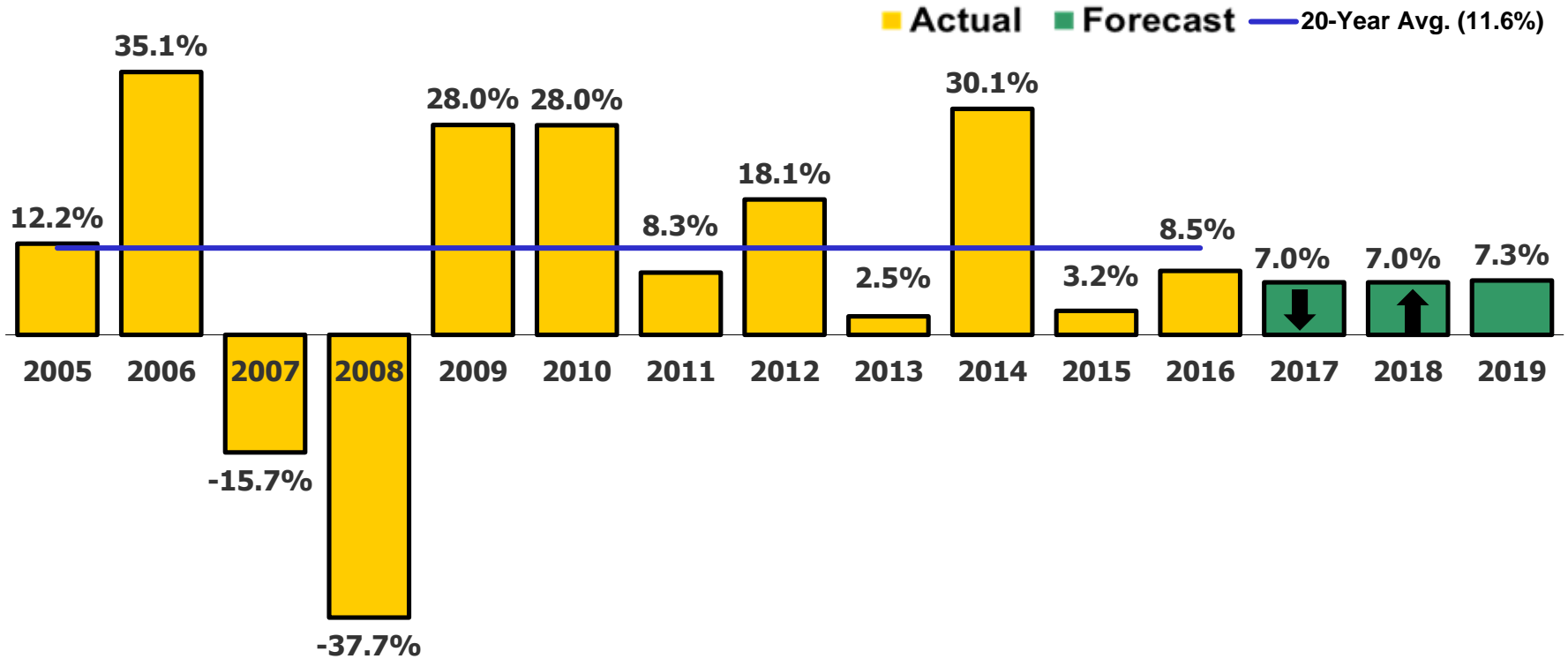
Moody's/RCA Commercial Property Price Index (annual change)



Sources: 2001-2016, Moody's and Real Capital Analytics; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 4.0% and 2.5%, respectively, for 2017 and 2018.

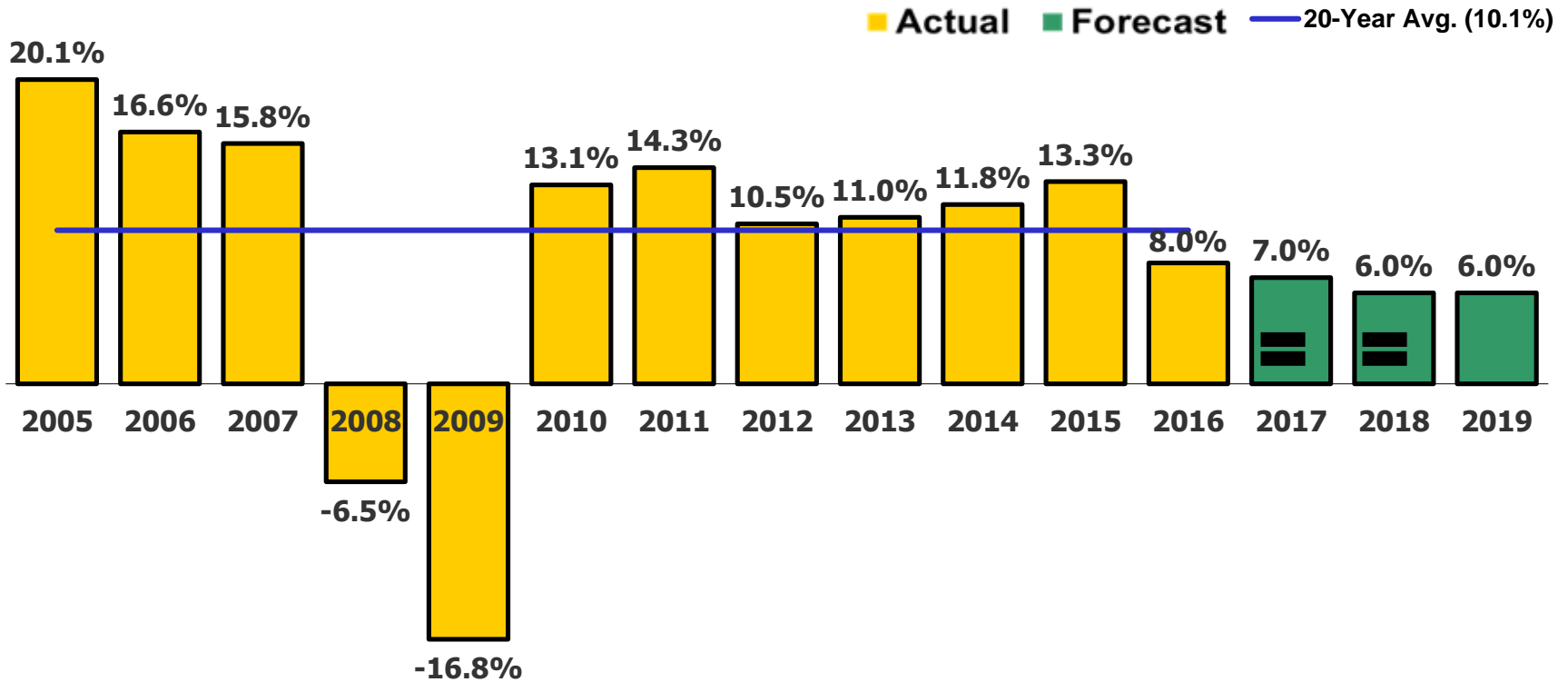
Equity REIT Total Annual Returns



Sources: 1997-2016, National Association of Real Estate Investment Trusts; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 8.0% and 6.0%, respectively, for 2017 and 2018.

NCREIF Property Index (Total Annual Returns)



Sources: 1997-2016 National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019, ULI Consensus Forecast.

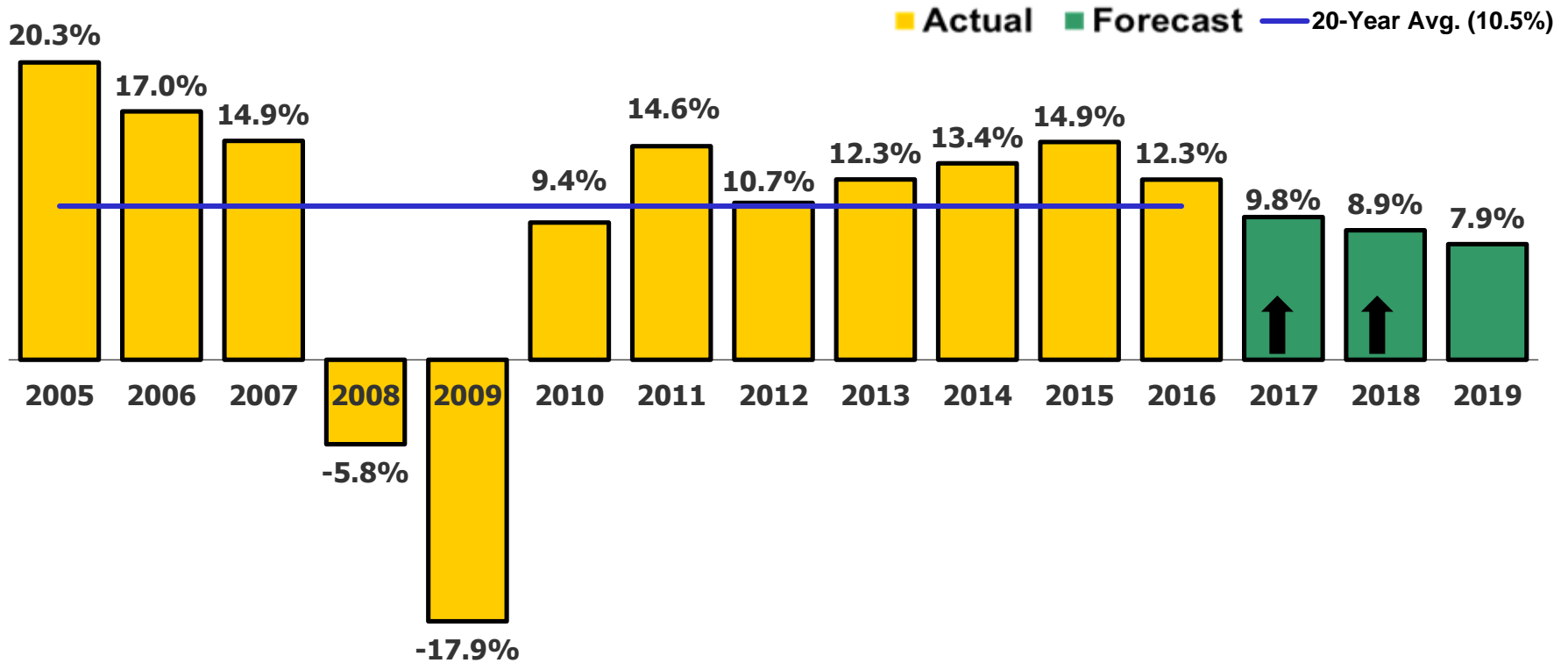
Note: The previous ULI Consensus Forecast (released in October, 2016) projected 7.0% and 6.0% respectively, for 2017 and 2018.

NCREIF Returns by Property Type

- NCREIF total returns in 2017 for all sectors are expected to moderate relative to each sector's performance over the last few years. By property type, returns for the industrial sector are forecasted at 9.8%, followed by retail returns of 7.0%. Apartment and office returns are both forecasted at 6.0%.
- By 2019, all sector returns are expected to further moderate, with industrial returns forecast at 7.9% and retail, office and apartment returns at 6.0%, 5.6% and 5.5%, respectively.
- Compared to 6 months ago, forecasts for '17 are more optimistic for the industrial sector and less optimistic for the apartment, retail and office sectors. Forecasts for '18 are more optimistic for the industrial, retail and apartment sectors and less optimistic for the office sector.



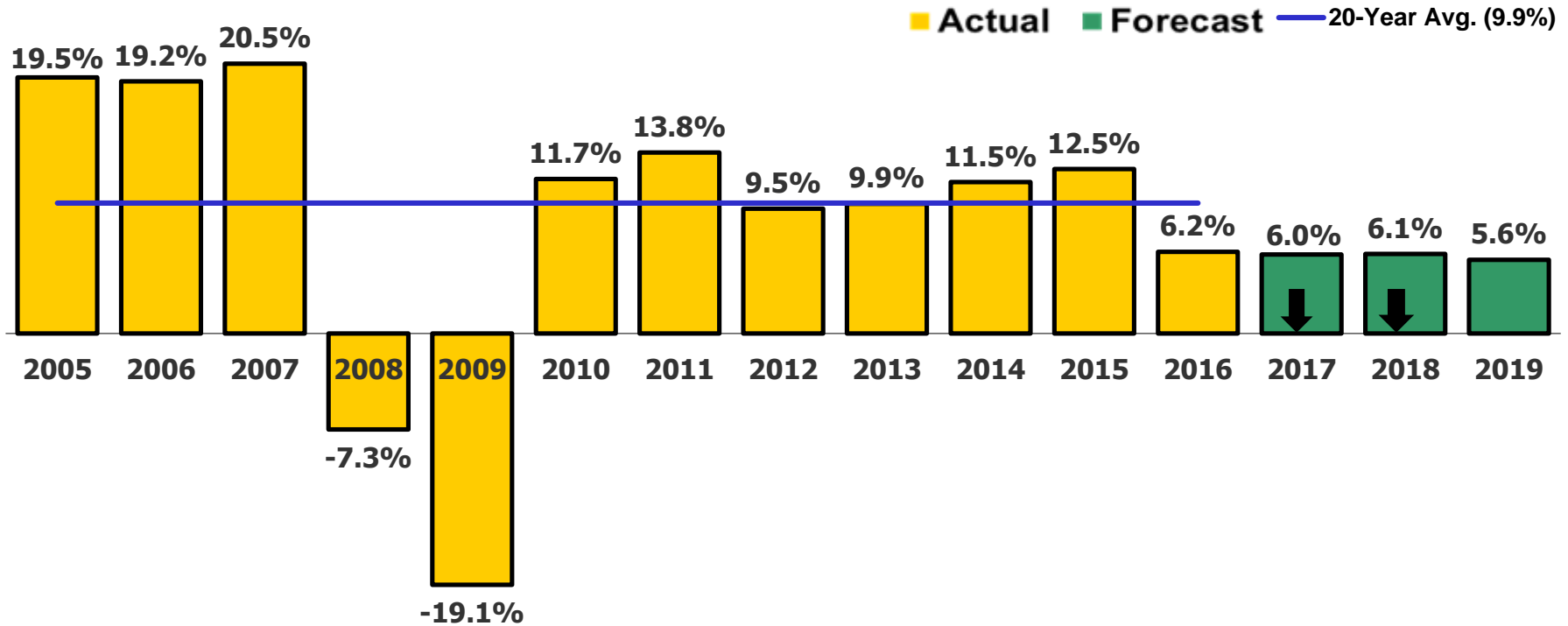
NCREIF Industrial Total Annual Returns



Sources: 1997-2016, National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 8.5% and 7.0% respectively, for 2017 and 2018.

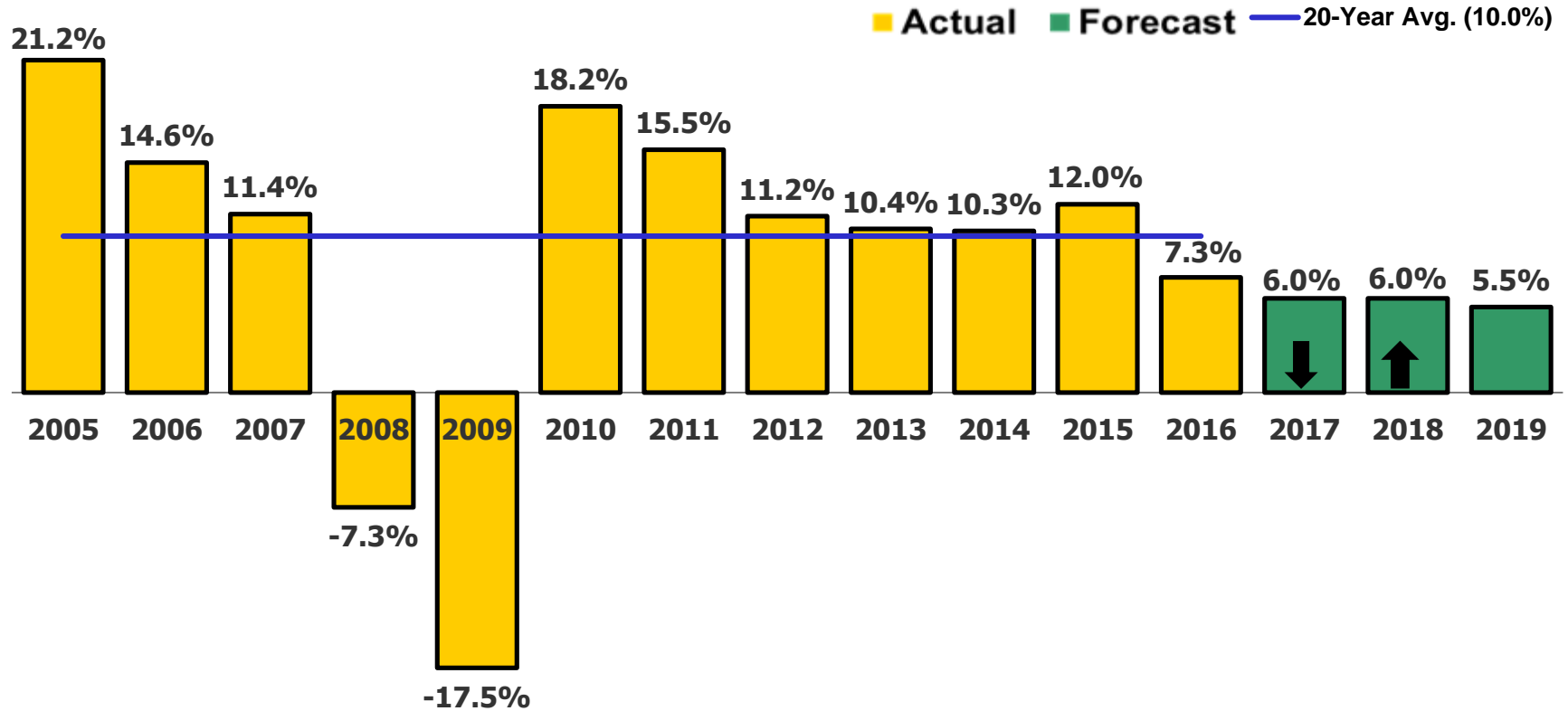
NCREIF Office Total Annual Returns



Sources: 1997-2016, National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 7.5% and 6.5% respectively, for 2017 and 2018.

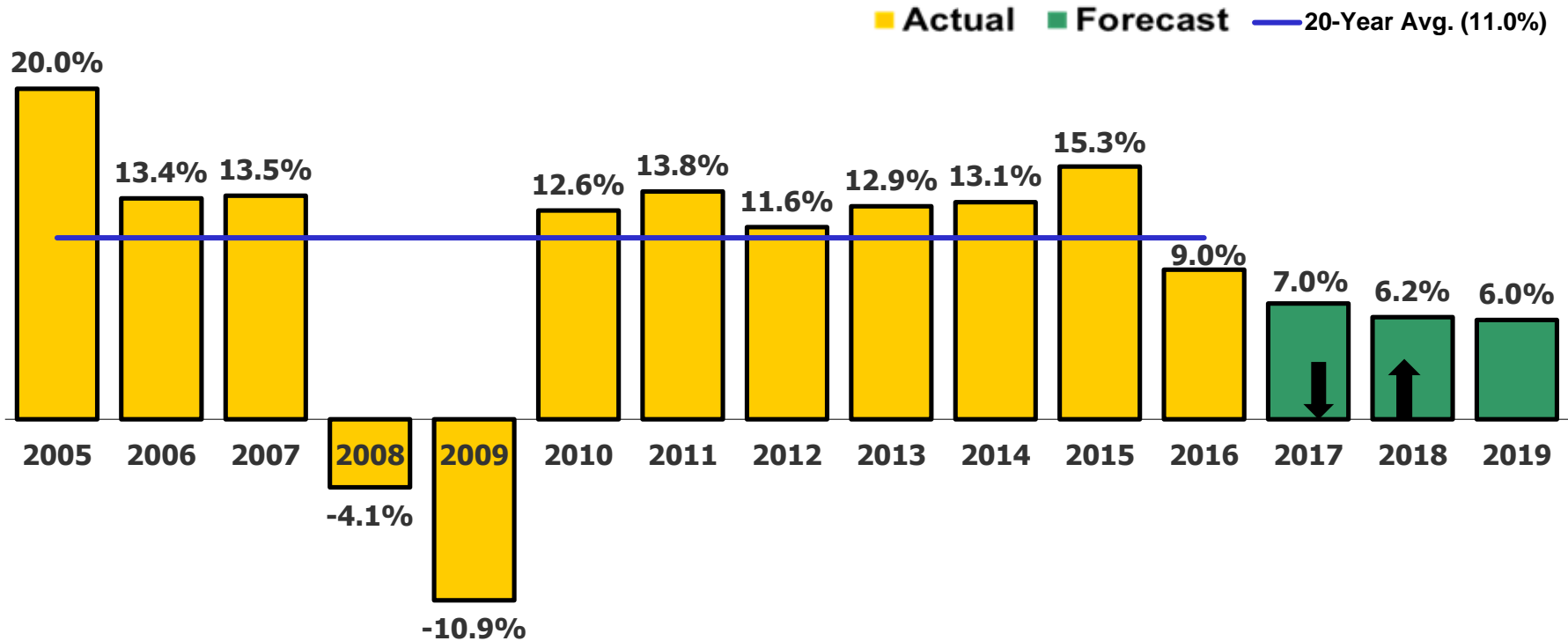
NCREIF Apartment Total Annual Returns



Sources: 1997-2016, National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 7.0% and 5.6%, respectively, for 2017 and 2018.

NCREIF Retail Total Annual Returns



Sources: 1997-2016, National Council of Real Estate Investment Fiduciaries (NCREIF); 2017-2019, ULI Consensus Forecast.

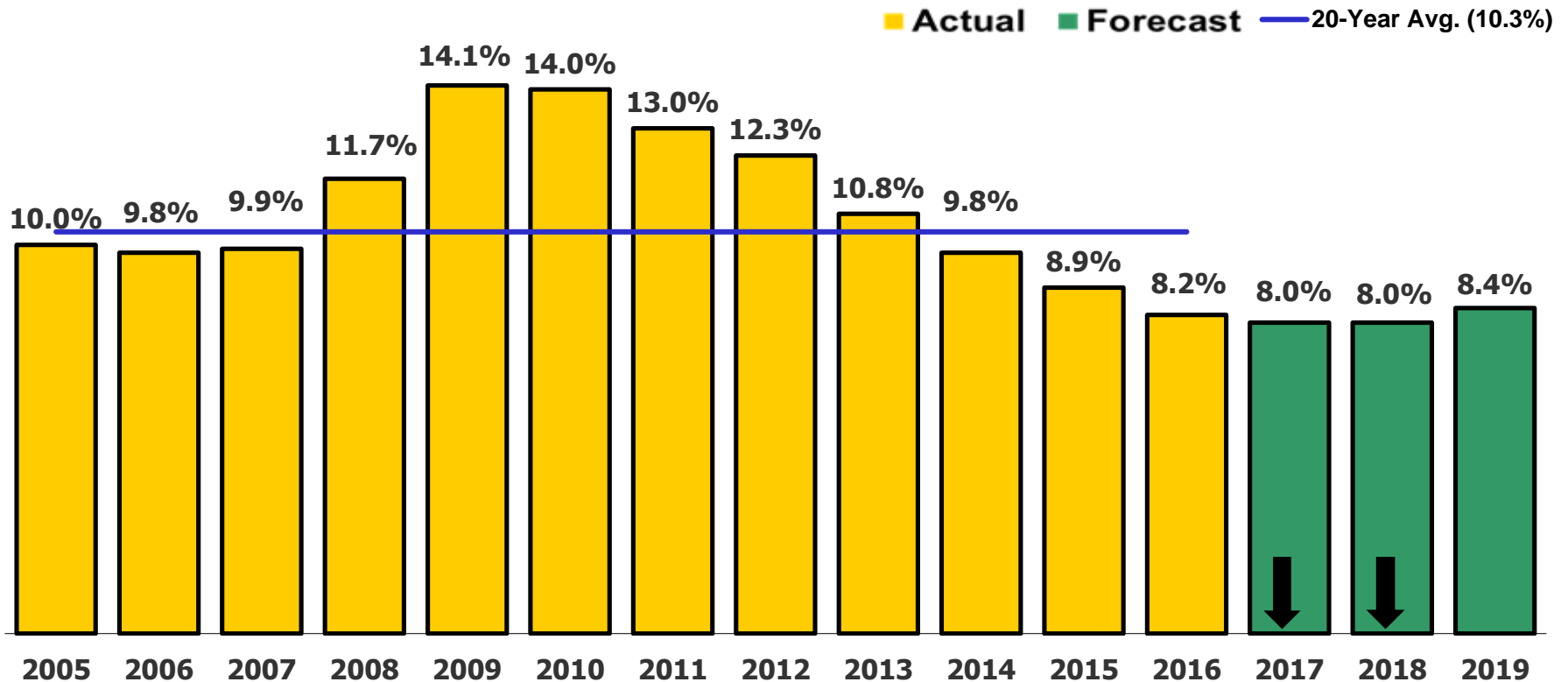
Note: The previous ULI Consensus Forecast (released in October, 2016) projected 8.0% and 6.0%, respectively, for 2017 and 2018.

Industrial/Warehouse Sector Fundamentals

- The availability rate for the industrial/warehouse sector declined to 8.2% at the end of 2016. Availability rates are expected to continue to further decline in 2017, with year-end vacancy rates at 8.0%, where it will remain in '18 at before slightly increasing to 8.4%. Rates in all three forecast years are projected to remain well below the 20-year average.
- Warehouse rental rates have shown positive growth for the past five years, with growth in the last four years substantially above the long-term average. Forecasts are for healthy but moderating rental rate growth with increases of 4.6% in 2017, 3.8% in 2018, and 3.0% in 2019, still remaining above the 20-year average growth rate.
- The forecasts for industrial/warehouse availability rates in both 2017 and 2018 are more optimistic than the forecast from six months ago. Forecasts for rental growth rates are also more optimistic in '17 and '18.



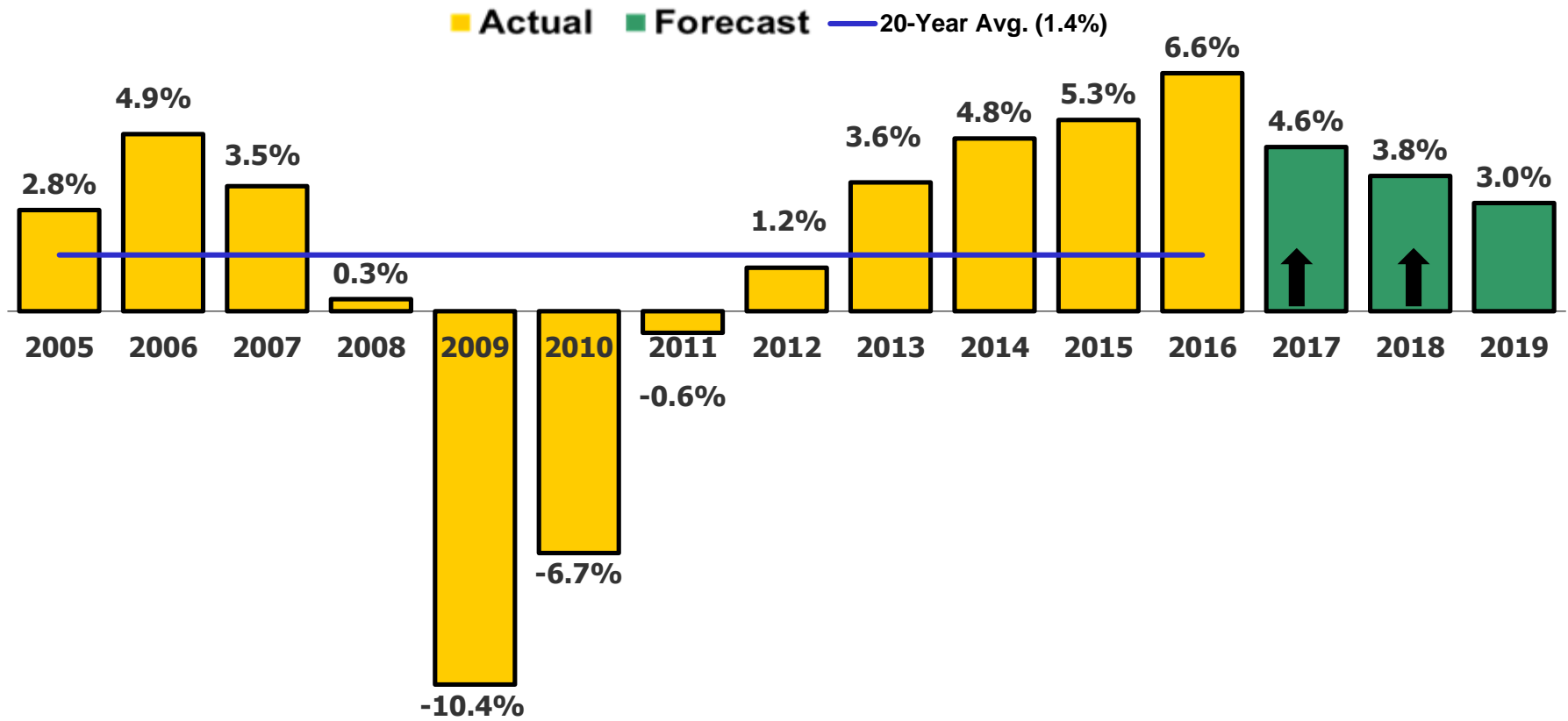
Industrial/Warehouse Availability Rates



Sources: 1997-2016 (Q4), CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 8.6% and 8.7%, respectively, for 2017 and 2018.

Industrial/Warehouse Rental Rate Change



Sources: 1997-2016, CBRE; 2017-2019, ULI Consensus Forecast.

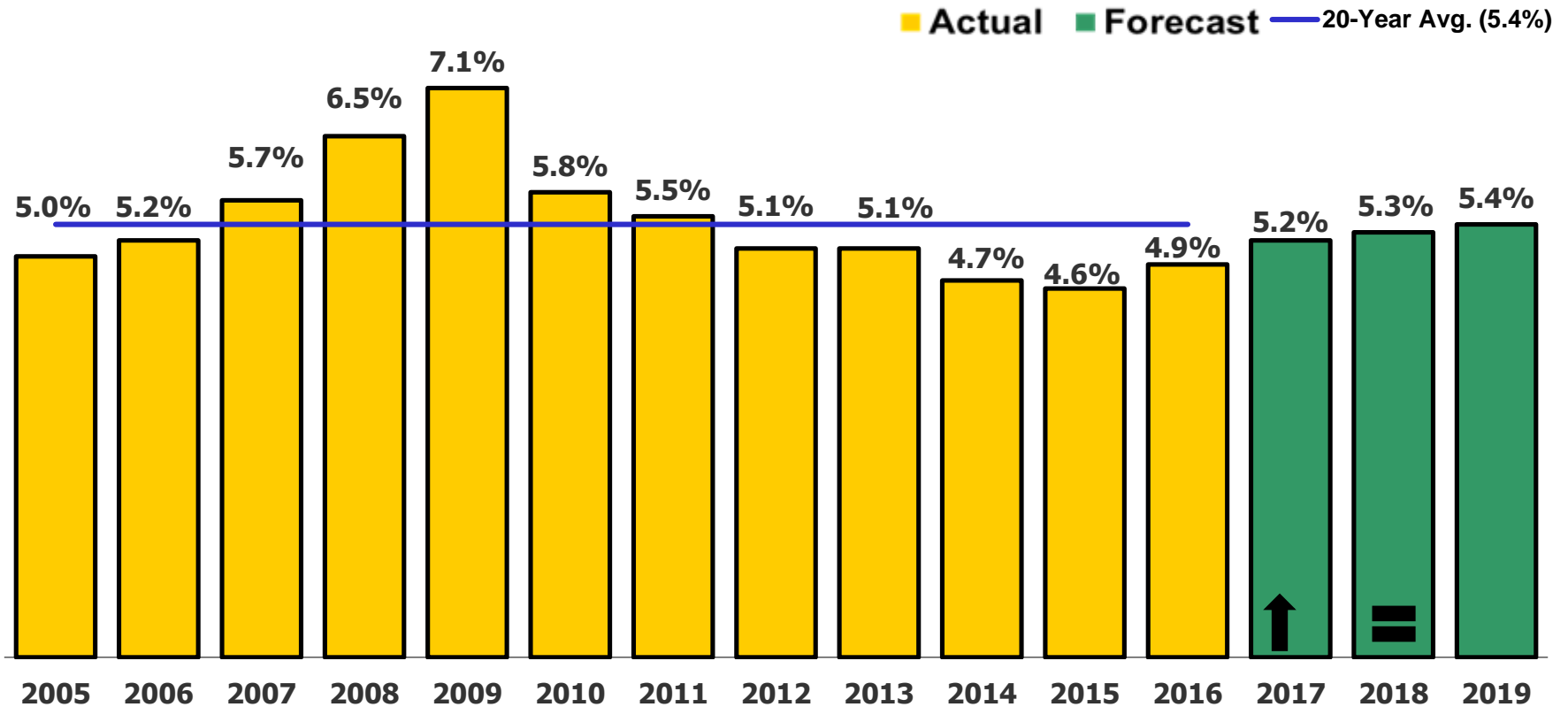
Note: The previous ULI Consensus Forecast (released in October, 2016) projected 4.0% and 2.7%, respectively, for 2017 and 2018.

Apartment Sector Fundamentals

- Even with continued strong construction activity, the apartment sector has performed very well the past several years. Vacancy rates decreased from 7.1% in 2009 to 4.6% in 2015, before a slight uptick to 4.9% in 2016, still remaining below the 20-year average. Vacancy rates are expected to continue upward the next 3 years, to 5.2% in 2017, 5.3% in 2018, reaching the 20-year average of 5.4% in 2019.
- Apartment rental rate growth slowed significantly in 2016, growing 0.2% after 6 straight years of growth over 3%. Rental rate growth is expected to increase to 2.0% in '17, and stay flat at 2.0% in both 2018 and 2019.
- Compared to 6 months ago, the forecasted vacancy rate for 2017 is slightly less optimistic, while the forecast for 2018 remains unchanged. The forecasted rental rate growth for both 2017 and 2018 is lower than previously forecasted.



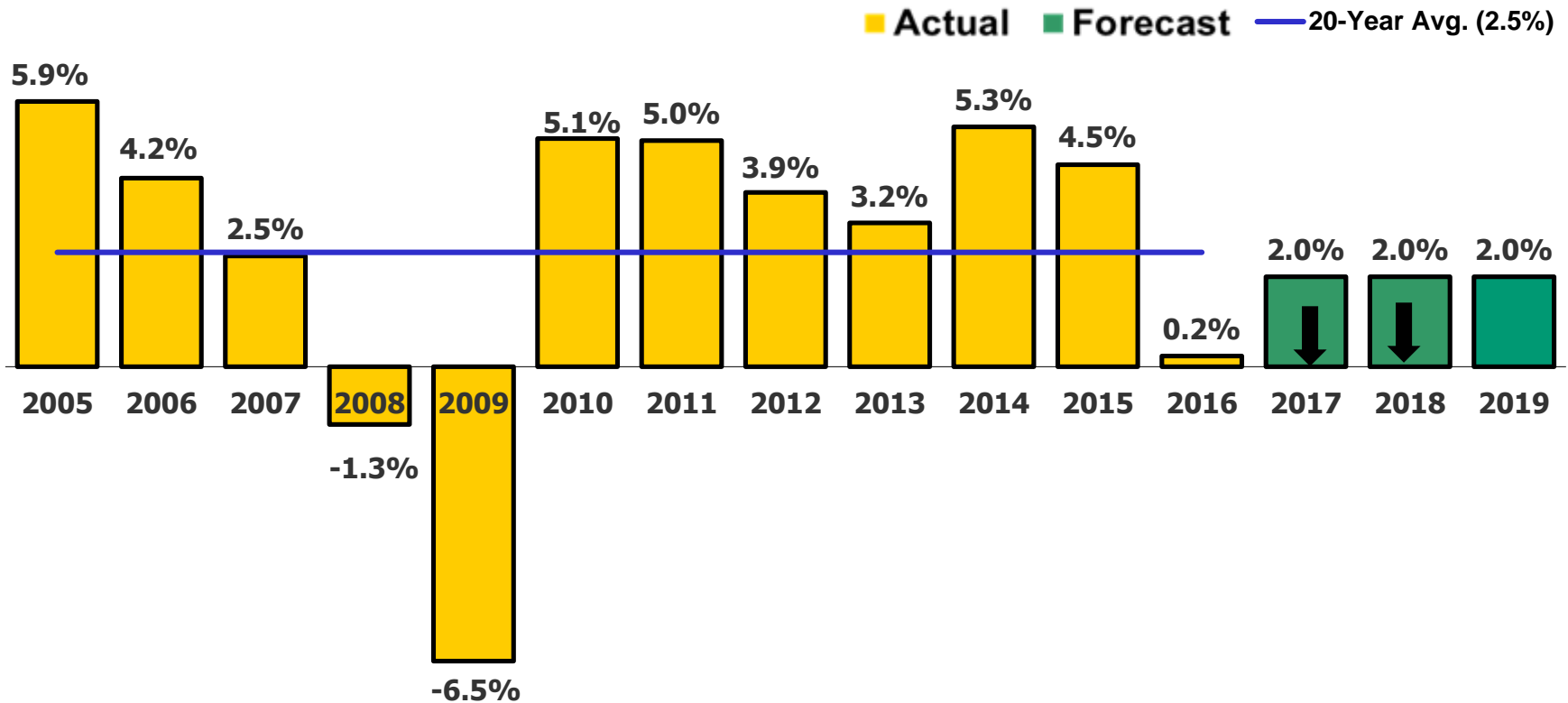
Apartment Vacancy Rates



Sources: 1997-2016 (Q4), CBRE; 2017-2019 (Q4), ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 5.0%, and 5.3%, respectively, for 2017 and 2018.

Apartment Rental Rate Change



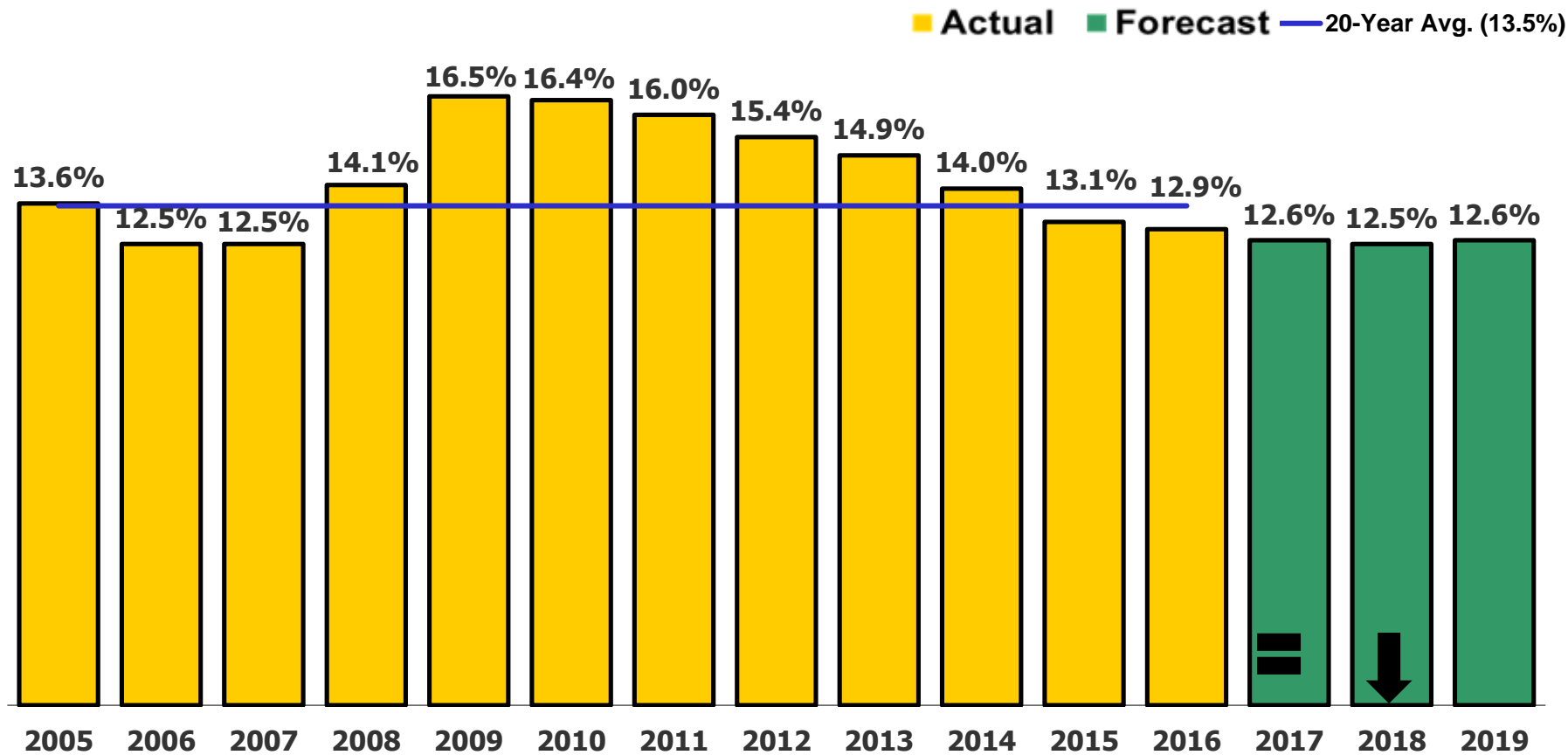
Sources: 1997-2016, CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 3.0% and 2.9% respectively, for 2017 and 2018.

Office Sector Fundamentals

- Office vacancy rates declined for the seventh straight year in 2016 to 12.9%, the lowest they have been since 2007. Rates are forecast to decline further to 12.6% in 2017 and then essentially plateau during the forecast period.
- Office rental rates increased 1.3% in 2016, a significant drop-off from the 4.0% increase in 2015. Rental rate growth is expected to recover to 2.5% in 2017, before moderating to 2.3% in '18 and falling below the long-term average to 2.0% in '19.
- Compared to 6 months ago, the forecasts for office vacancy rates in '17 remained the same, but decreased slightly for '18. The rental rate growth forecasts are less optimistic for '17, but slightly more optimistic for '18 than projected six months ago.

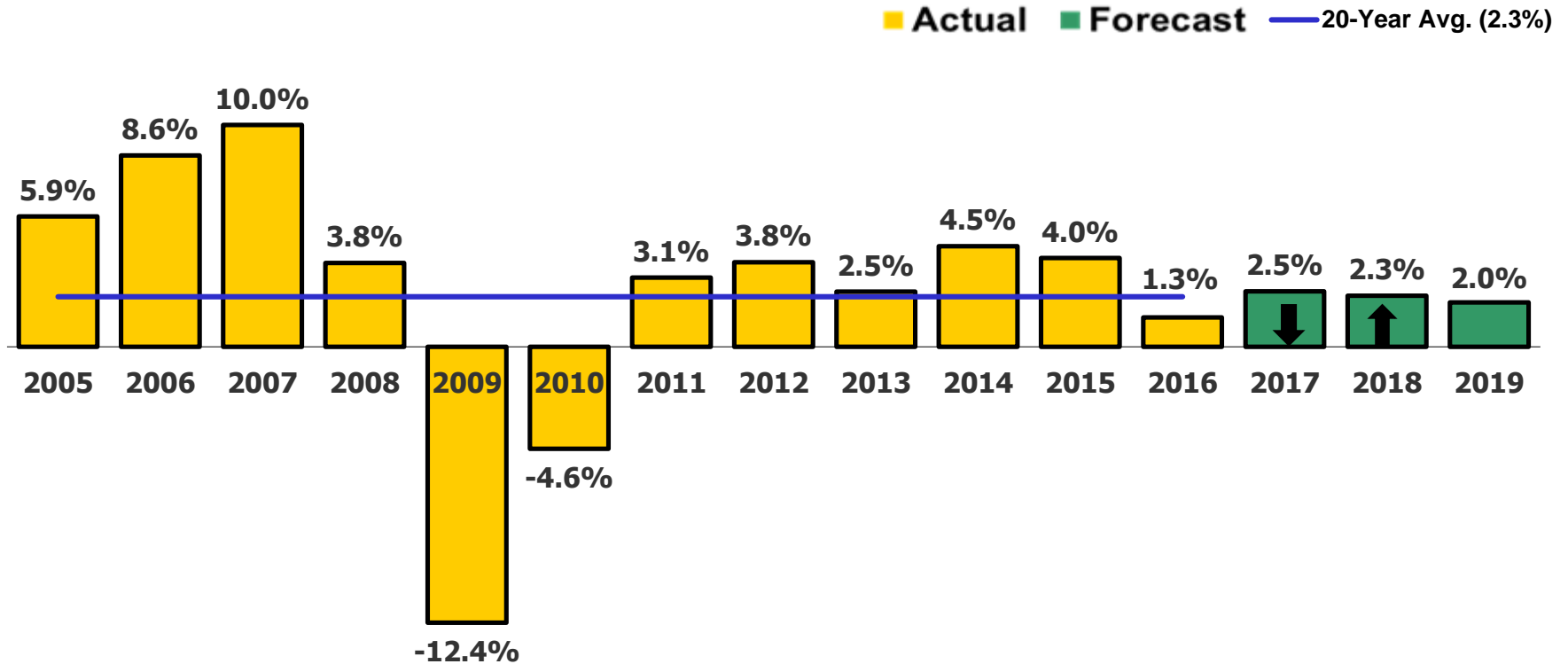




Sources: 1997-2016 (Q4), CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 12.6% and 12.8%, respectively, for 2017 and 2018.

Office Rental Rate Change

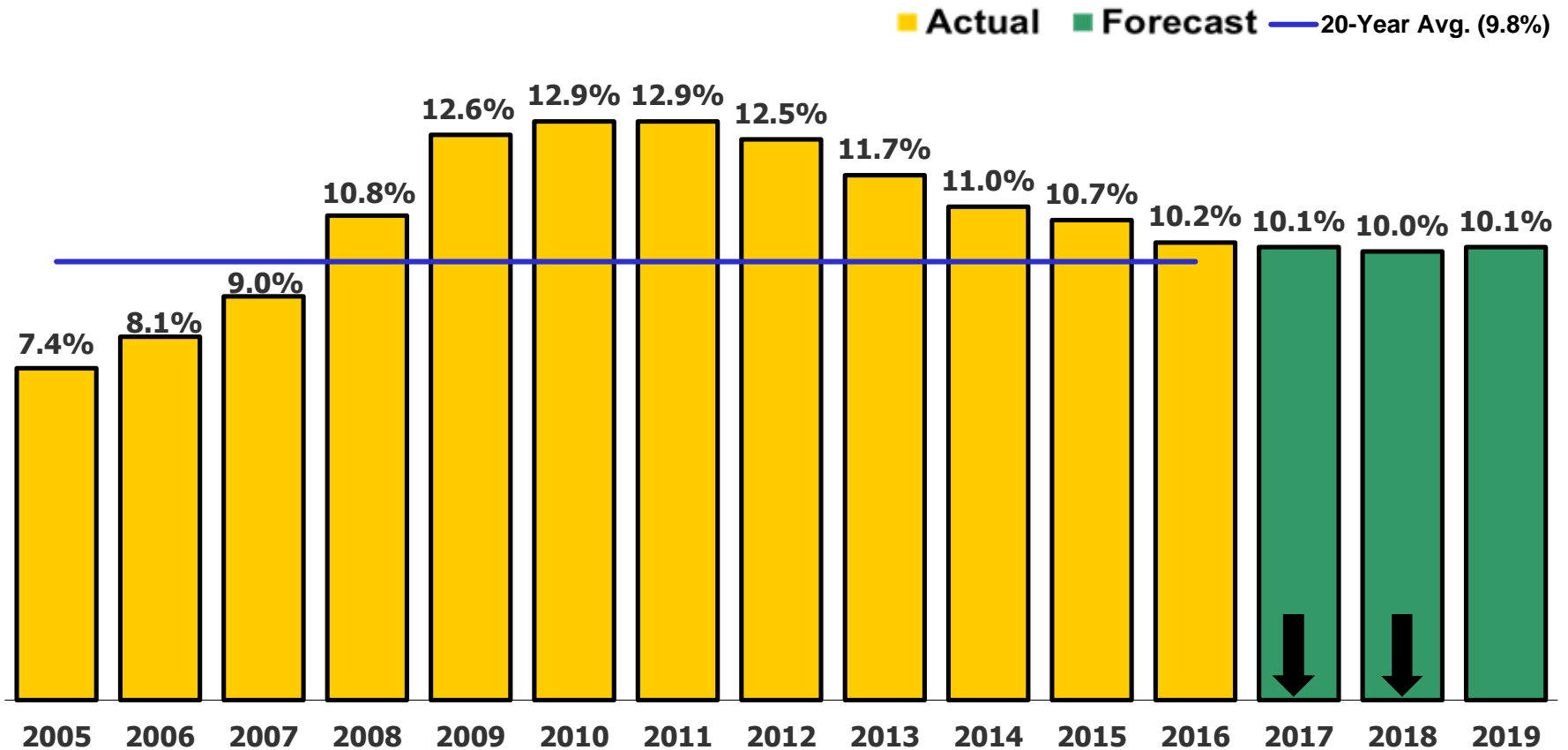


Sources: 1997-2016, CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 2.9% and 2.2%, respectively, for 2017 and 2018.

Retail Sector Fundamentals

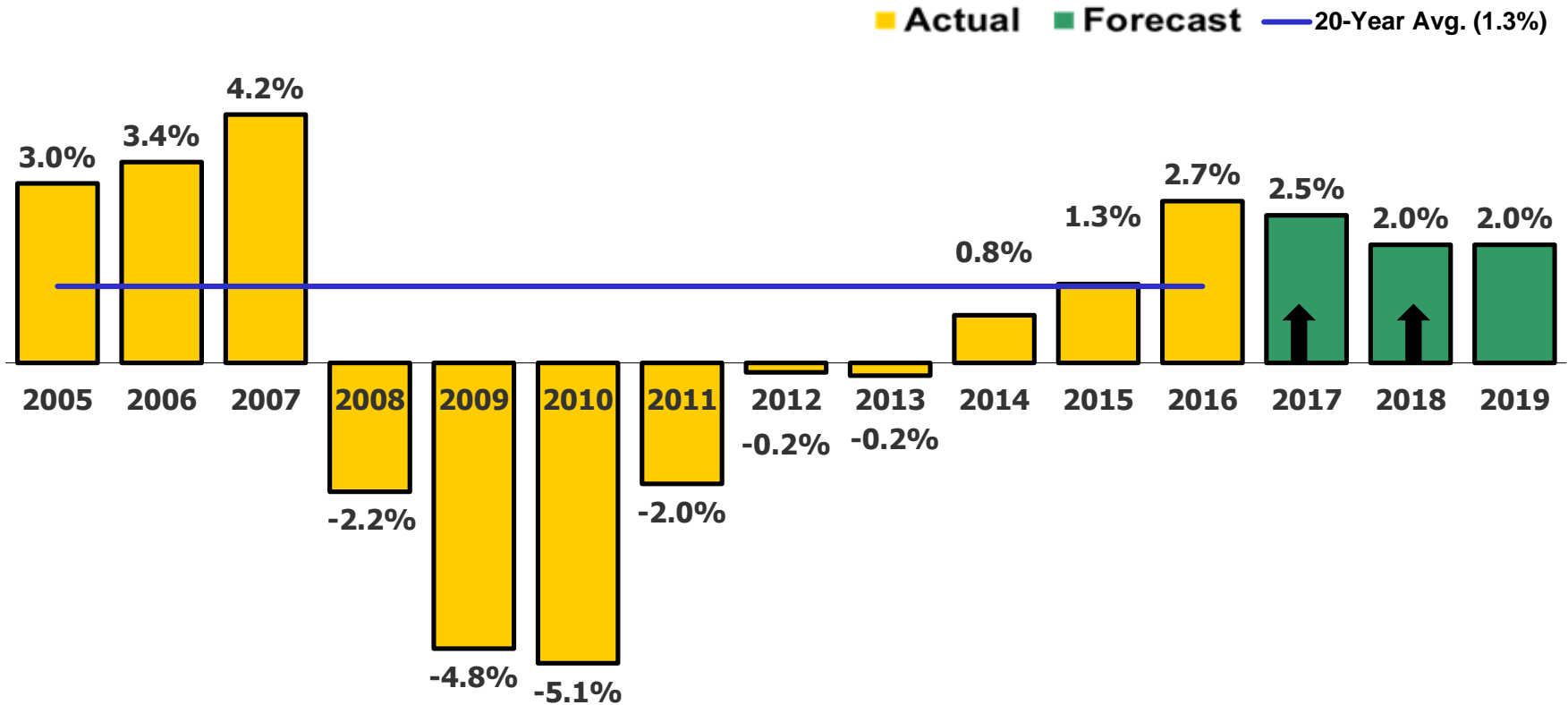
- Retail availability rates have been on a steady decline from a peak of 12.9% in 2011 to 10.2% in 2016. The forecast anticipates some continued improvement over the next two years, with year-end availability rates expected to decline to 10.1% by '17 and 10.0% by '18. Availability rates are forecast to tick up to 10.1% in '18. All these rates remain above the 20-year average.
- Retail rental rate growth was positive for the first time in seven years in 2014 and continued to be positive in 2015 and 2016, when it reached 2.7%. The forecast expects growth to moderate slightly in 2017 to 2.5%, and then further in 2018 to 2.0% and remain at 2.0% for 2019.
- Compared to 6 months ago, the forecasts of availability rates and rental rate growth are both more optimistic for both 2017 and 2018.



Sources: 1997-2016 (Q4), CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 10.6% and 10.7% respectively, for 2017 and 2018.

Retail Rental Rate Change

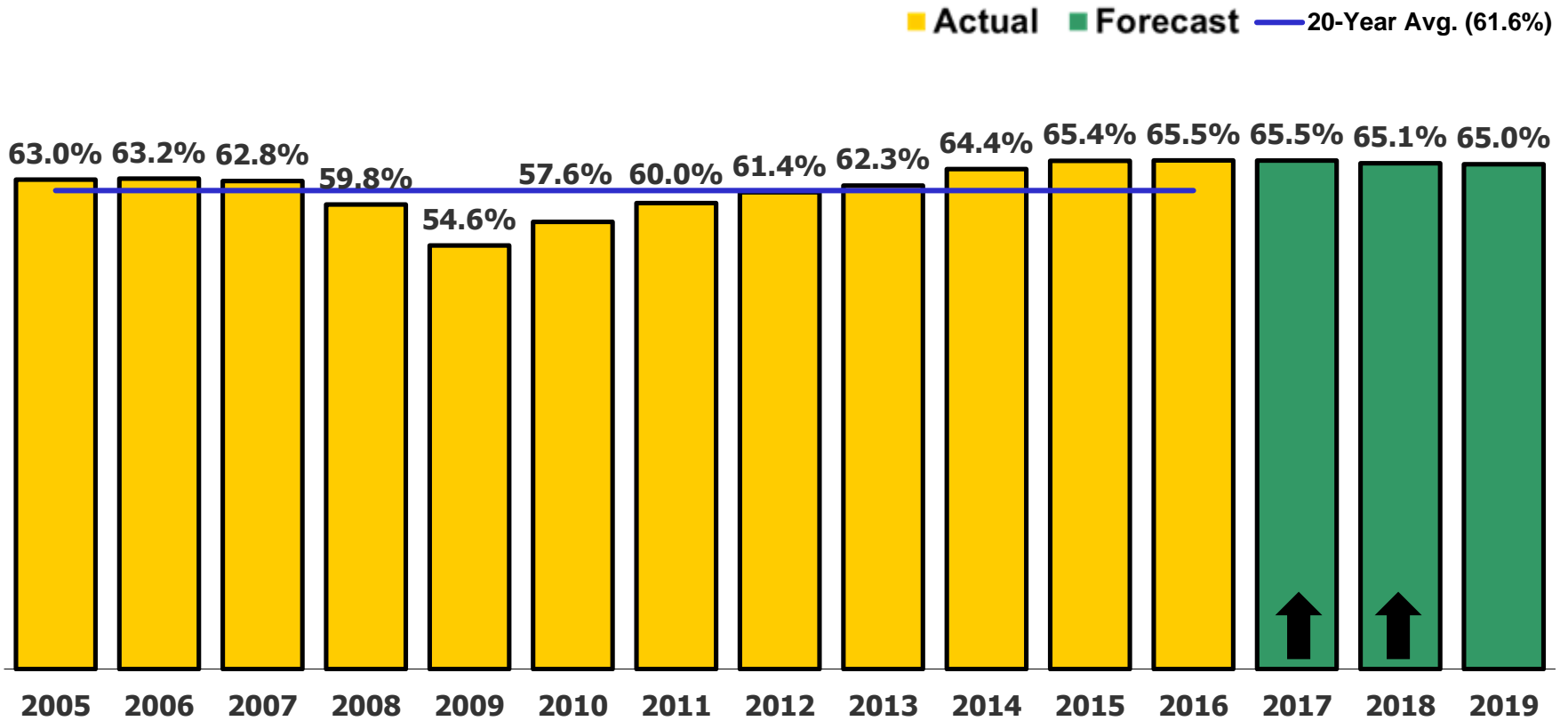


Sources: 1997-2016, CBRE; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 1.6%, and 1.3%, respectively, for 2017 and 2018.

Hotel Sector Fundamentals

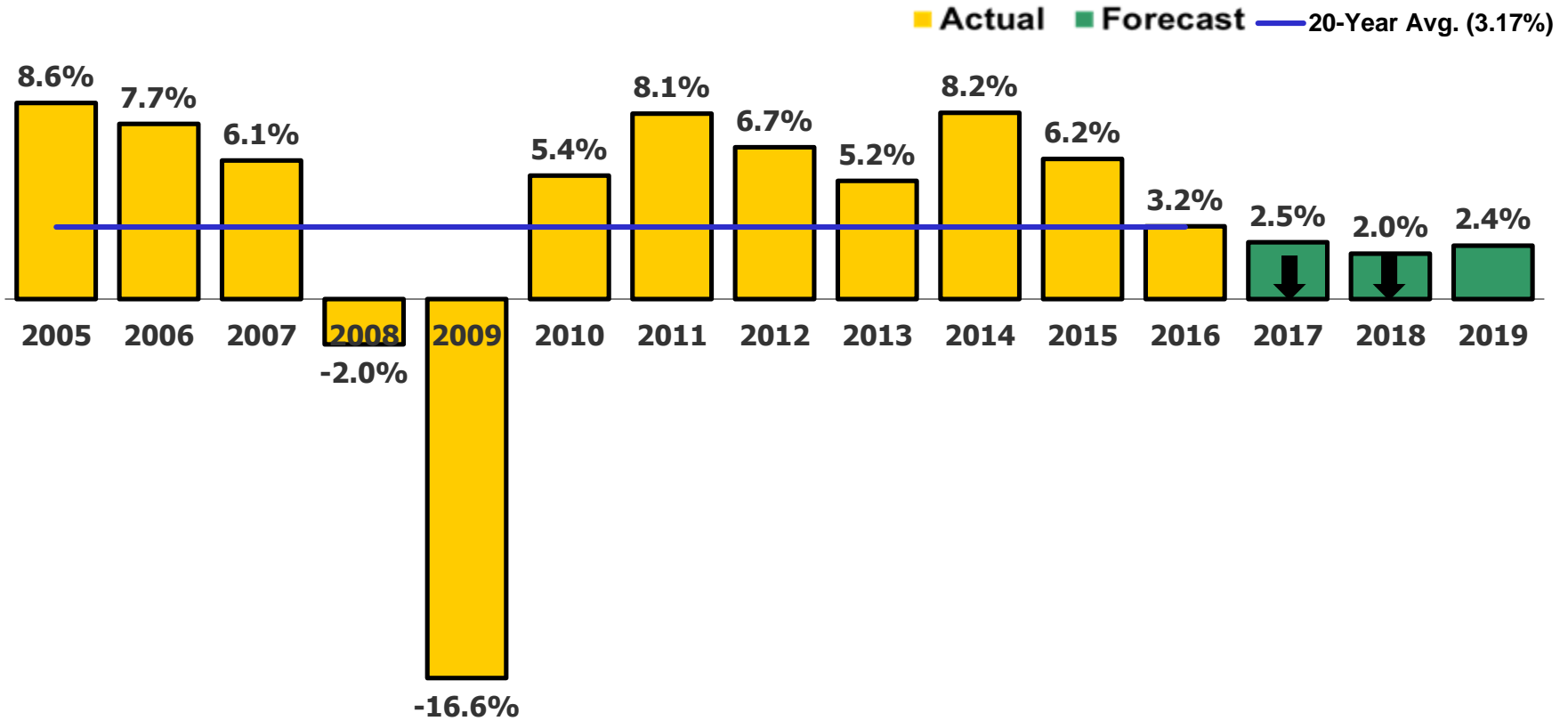
- Hotel occupancy rates, according to STR, have been steadily improving since reaching a recession low of 54.6% in 2009. Occupancy rates surpassed the twenty-year average in 2013 at 62.3% and came in at 65.5% in 2016. Rates are forecasted to remain strong over the next three years, although plateauing at 65.5% in '17 and then inching down to 65.1% in '18 and 65.0% in '19.
- Following six years of above-average hotel revenue per available room (RevPAR), RevPAR growth began to moderate in 2016 and is expected to continue moderating over the next three years, dipping below the long-term average in 2017 to 2.5%, and decreasing further in 2018 to 2.0% before a small rebound to 2.4% in '19.
- Compared to the forecast of 6 months ago, the current '17 and '18 forecasts for occupancy rates are more optimistic, but they are less optimistic for RevPAR growth in both years.



Sources: 1997-2016, (December, 12-month rolling average), STR; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 65.2% and 65.0%, respectively, for 2017 and 2018.

Hotel Revenue per Available Room (RevPAR) Change



Sources: 1997-2016, (December, 12-month rolling average), STR; 2017-2019, ULI Consensus Forecast.

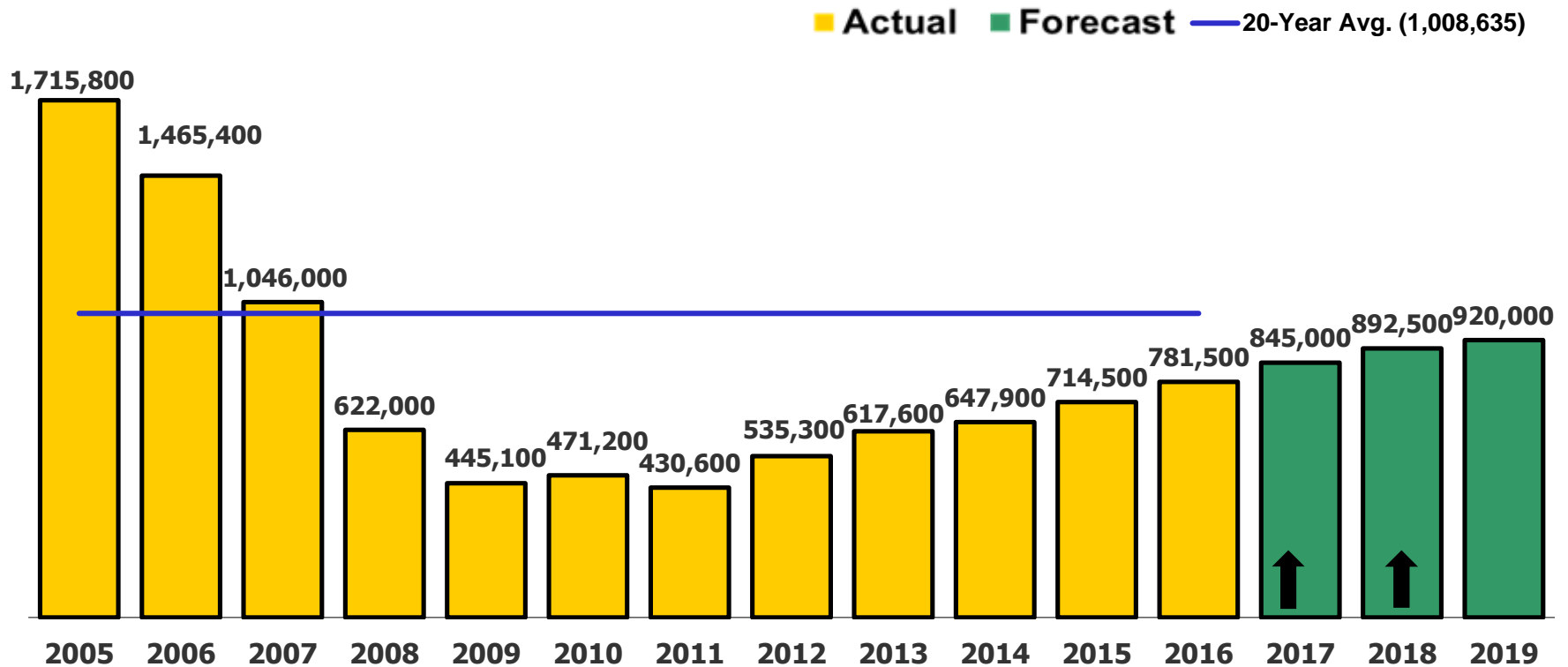
Note: The previous ULI Consensus Forecast (released in October, 2016) projected 3.1% and 3.0%, respectively, for 2017 and 2018.

Housing Sector

- The single-family housing sector experienced positive growth in starts for the fifth straight year in 2016. Growth is expected to continue, increasing to 845,000 in '17, 892,500 in '18, and 920,000 in '19. The 2019 level brings starts to within 10% of the 20-year average for the first time since 2007.
- According to the FHFA, growth in existing home prices increased on average by 6.2% in 2016. Price growth is expected to moderate to 5.0% in '17, 4.0% in '18, and 3.0% in '19.
- Compared to six months ago, forecasts for housing starts in '17 and '18 are slightly more optimistic, while forecasts for existing housing prices increases were unchanged.



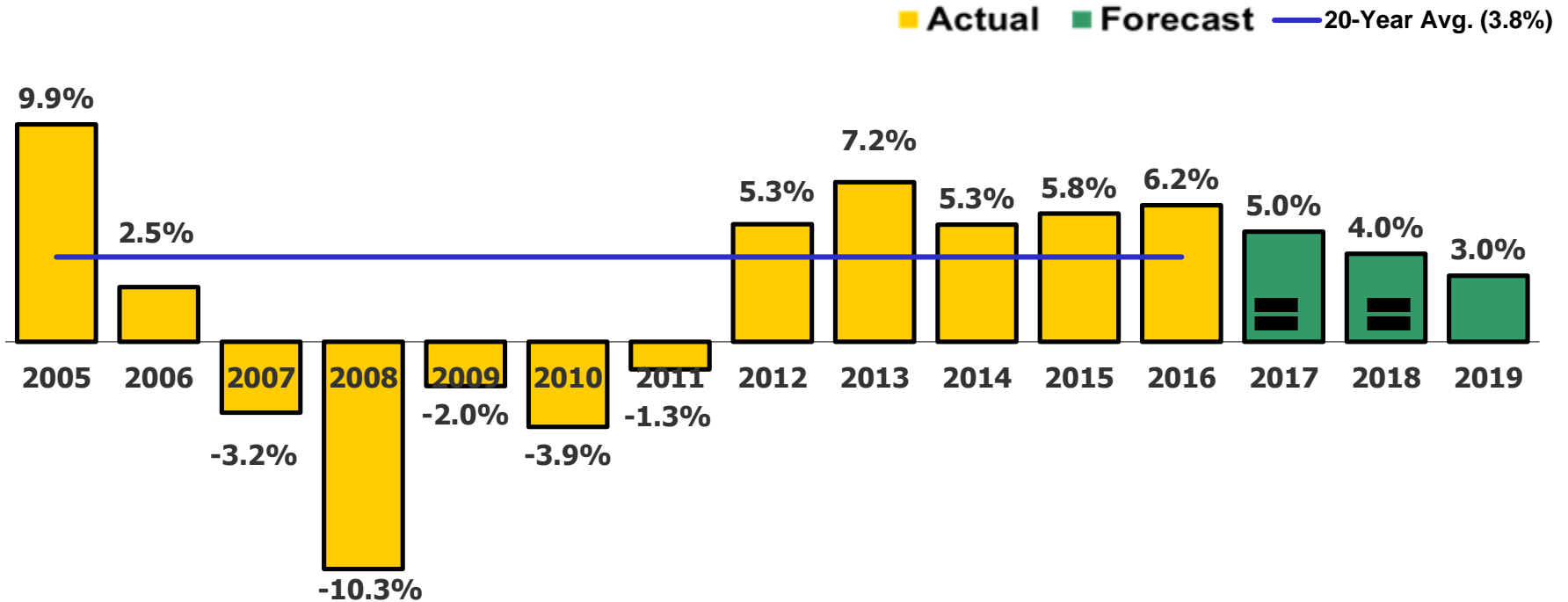
Single-Family Housing Starts



Sources: 1997-2016, (Structures w/ 1 Unit), U.S. Census; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 837,000 and 875,000, respectively, for 2017 and 2018.

Average Home Price Change



Sources: 1997-2016, (Seasonally Adjusted, December Y/Y), Federal Housing Finance Agency; 2017-2019, ULI Consensus Forecast.

Note: The previous ULI Consensus Forecast (released in October, 2016) projected 5.0% and 4.0% respectively, for 2017 and 2018.

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Alvarez & Marsal	Steven Lapos	Principal, Global Real Estate Knowledge Center
AvalonBay Communities	Craig Thomas	Senior VP, Market Research
Barclays	Ross Smotrich	Managing Director
Bentall Kennedy	Douglas Poutasse	EVP, Head of Strategy and Research
Berkshire Group	Gleb Nechayev	SVP, Head of Economic and Market Research
CBRE	Jeanette Rice	Americas, Head of Multifamily Research
	Jeffrey Havsy	Americas, Chief Economist and Managing Director
	Tim Savage	Senior Managing Economist
	Serguei Chervachidze	Head of Forecasting
Clarion Partners	Tim Wang	Director & Head of Investment Research
CoreLogic, Inc.	Frank E. Nothaft	SVP and Chief Economist
CoStar Portfolio Strategy	Hans Nordby	Managing Director
	Shaw Lupton	Managing Consultant
Cushman & Wakefield	Kevin Thorpe	Global Chief Economist
	Rebecca Rockey	Economist, Head of Forecasting (Americas)
Deutsche Asset & Wealth Management	Kevin White	Head of Americas Strategy, Alternatives
Dividend Capital	Glenn Mueller	Real Estate Investment Strategist
Everest Medical Core Properties	David J. Lynn	CEO

continued.....

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Green Street Advisors	Andrew McCulloch	Managing Director, Real Estate Analytics
	Peter Rothemund	Senior Analyst
Harrison Street Real Estate Capital Heitman	Thomas Errath	SVP, Research and Strategy
	Mary K. Ludgin	Managing Director
	Olin Needle	Director of North American Research
Hines	Chris Fruy	Senior Vice President
	Josh Scoville	Senior Managing Director
JLL	Ryan Severino	Chief Economist, Americas Research
	Josh Gelormini	Vice President, Americas Research
LaSalle Investment Management	William Maher	Director, Americas Research & Strategy
Linneman Associates	Peter Linneman	Principal
Lionstone Investments	Doug Prickett	Vice President, Research
MetLife Investment Management	Melissa Reagen	Head of Real Estate and Agricultural Research
Morgan Stanley Investment Management	Tony Charles	Managing Director
	Stephen Siena	Senior Associate
NAREIT	Calvin Schnure	Senior Vice President, Research & Economic Analysis
National Association of REALTORS	Lawrence Yun	Chief Economist
Newmark Grubb Knight Frank	Robert Bach	Director of Research, Americas

continued.....



**Urban Land
Institute**

ULI Center for Capital Markets
and Real Estate

Firms That Participated in the ULI Real Estate Consensus Forecast

Organization	Lead Economist/Analyst	Title
Oxford Economics	Matthew Mowell	Senior Economist
	Aran Ryan	Tourism Economics, Director of Lodging Analytics
PGIM Real Estate	Lee Menifee	Managing Director, Head Of Americas Research
PNC Financial	Stuart Hoffman	Chief Economist
Principal Global Investors	Jodi Airhart	Manager, Commercial Real Estate Research
PwC, LLP	Andrew Warren	Director, Real Estate Research
RCLCO	Taylor Mammen	Managing Director/Director, Institutional Advisory Services
Reis	Dr. Victor Calanog	VP, Research & Head of Economics
	Shan Ahmed	Senior Analyst
Rosen Consulting Group	Kenneth T. Rosen	Chairman
	Randall Sakamoto	Executive Vice President
Situs-RERC	Ken Riggs	President
	Jacey Heuer	AVP, Data Analytics
	Shradha Shrestha	Associate
Standard Life Investments	Donald Hall	Real Estate Investment Analyst, Americas
Trepp LLC	Matthew Anderson	Managing Director
Wells Fargo	Anika Khan	Senior Economist
Whitegate Real Estate Advisors	Paige Mueller	Founder

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.

Patrick Phillips, Global Chief Executive Officer
Urban Land Institute

© April 2017 by the Urban Land Institute.

This publication contains information in summary form and is therefore intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. The Urban Land Institute cannot accept any responsibility for loss occasioned to any person acting or refraining from action as a result of any material in this publication. On any specific matter, reference should be made to the appropriate advisor.

ULI Real Estate Consensus Forecast

A Survey of Leading Real Estate Economists/Analysts

uli.org/consensusforecast

April 2017

ULI Center for Capital Markets and Real Estate

Anita Kramer

Senior Vice President

Owen Bengé

Project Associate



Urban Land
Institute

ULI Center for Capital Markets
and Real Estate