ULI Real Estate Economic Forecast (end-of-year)

A Survey of Leading Real Estate Economists/Analysts

uli.org/economicforecast

January 2019

ULI Center for Capital Markets and Real Estate



ULI Real Estate Economic Forecast

- A three-year forecast ('20-'22) of 9 economic and real estate indicators.
- An end-of-year forecast: Completed December 13-December 23, 2019, mid-way between the two full semiannual surveys of 27 economic and real estate indicators; next full release planned for April 2020.
- A consensus forecast based on the median of the forecasts from 27 economists/analysts at 24 leading real estate organizations.
- Respondents represent major real estate investment, advisory, and research firms and organizations.
- This is the 17th survey.
- Forecasts for:
 - Broad economic indicators
 - Real estate capital markets
 - Total property investment returns
 - Rent growth for four property types



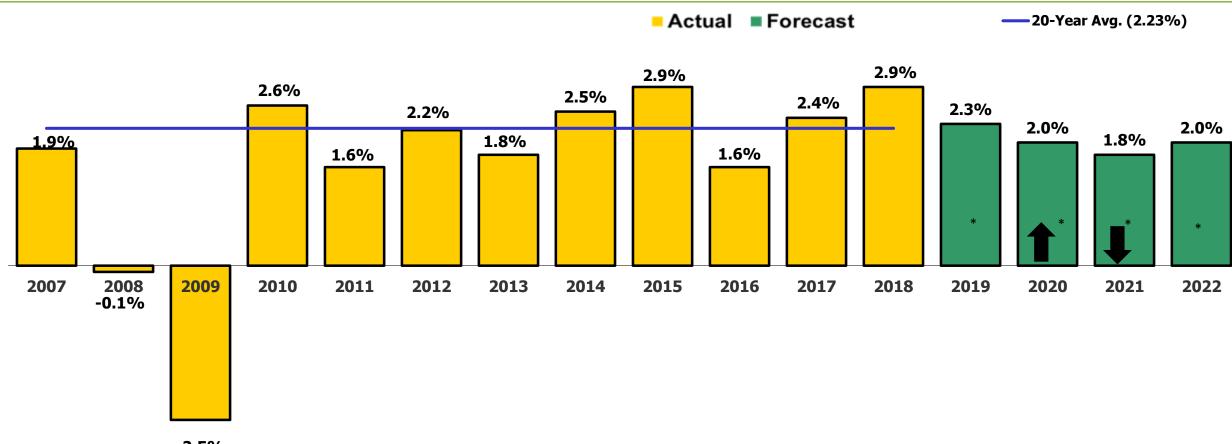
Forecasts vs. Long-Term Averages

| 2020 Forecast | | | |
|---|----------------------------------|--|--|
| Better than long-term averages | Worse than long-term averages | | |
| | GDP Growth | | |
| Employment Growth | | | |
| Transaction Volume | | | |
| CPPI Growth | | | |
| | NCREIF Total Returns | | |
| Rental Rate Growth: Industrial, Office, Apartment, Retail | | | |

2022 ForecastBetter than long-term
averagesWorse than long-term
averagesaveragesGDP GrowthFmployment GrowthCPPI GrowthTransaction VolumeCPPI GrowthNCREIF Total ReturnsNCREIF Total ReturnsRental Rate Growth:
Industrial, Apartment,
Office*Rental Rate Growth:
Retail



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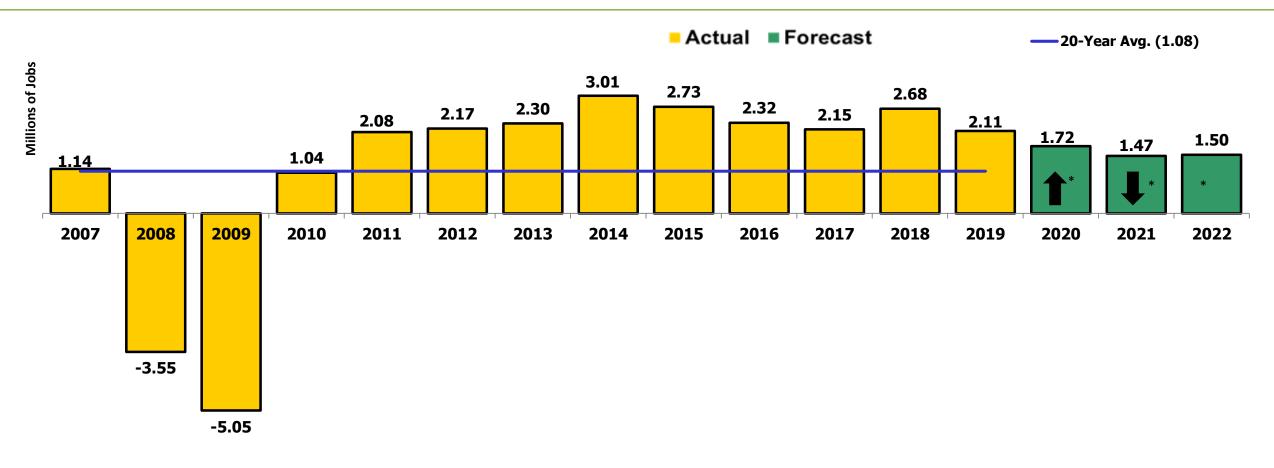
-2.5%

* The previous ULI Real Estate Economic Forecast, released in September 2019, projected through 2019, 2020 and 2021. The current ULI Real Estate Forecast reforecasts 2020 and 2021 and adds 2022. This chart shows the previous ULI Real Estate Economic Forecast for 2019 and the new projections for 2020, 2021, and 2022. Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous Forecast: Previous projections for 2020 and 2021 and 2021 and 2021 and 2021 and 2021.



Sources: 1999-2018, Bureau of Economic Analysis; 2019-2022, ULI Real Estate Economic Forecasts.

ULI Real Estate Economic Forecast Employment Growth



* The previous ULI Real Estate Economic Forecast, released in September 2019, projected through 2019, 2020 and 2021. The current ULI Real Estate Forecast reforecasts 2020 and 2021 and adds 2022. This chart shows preliminary 2019 employment, released by BLS on 1/10/20, and new ULI Real Estate Forecast projections for 2020, 2021, and 2022. Indicated directions (↑ ↓ =) refer to the current forecast relative to the previous Forecast: Previous projections for 2020 and 2021 were 1.44 and 1.50 million, respectively.

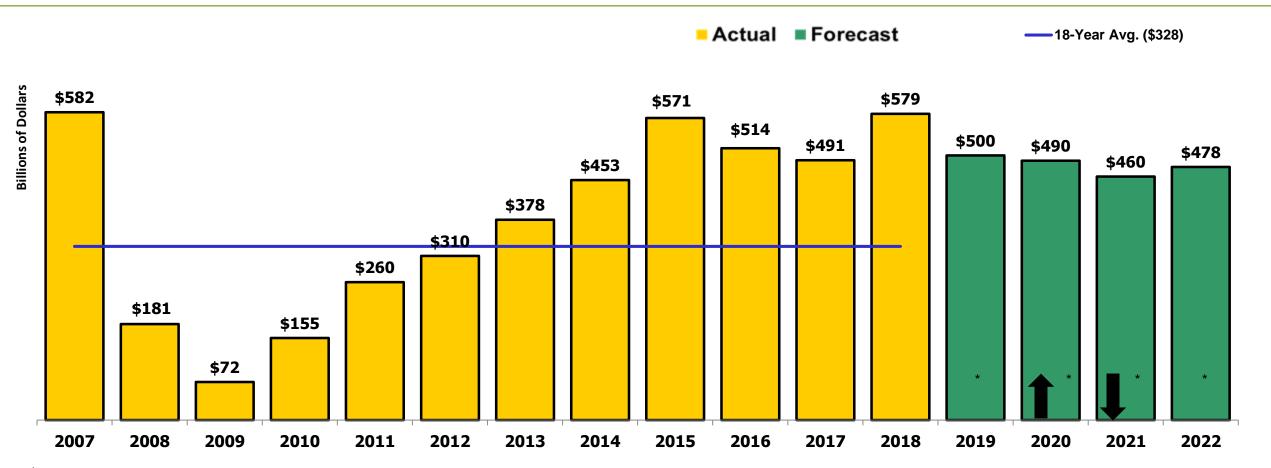
Sources: 1999-2019, Bureau of Labor Statistics; 2020-2022 ULI Real Estate Economic Forecasts.

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ULI Real Estate Economic Forecast Commercial Real Estate Transaction Volume



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Sources: 2001-2018, Real Capital Analytics; 2019-2022, ULI Real Estate Economic Forecasts.

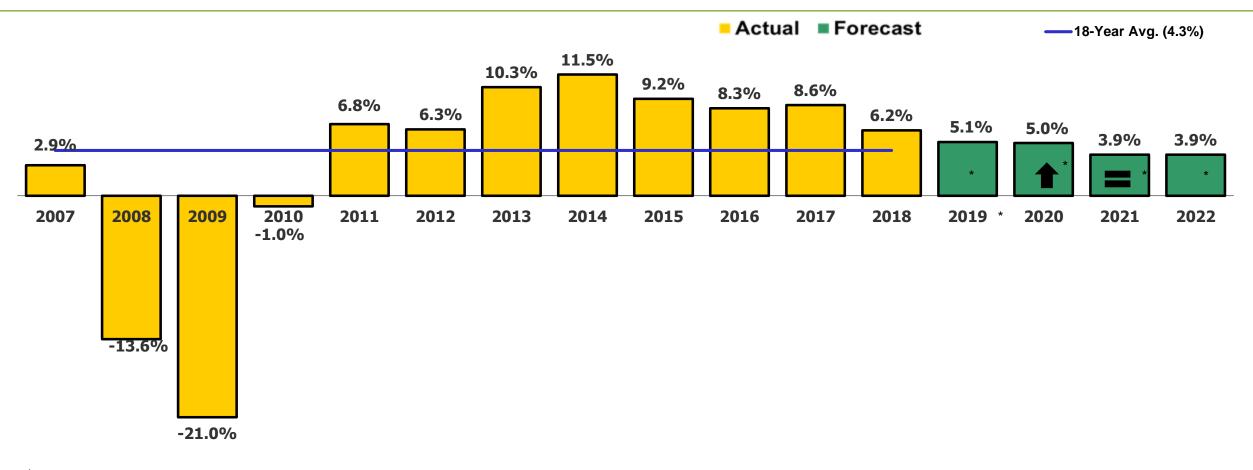
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RCA Commercial Property Price Index (annual change)

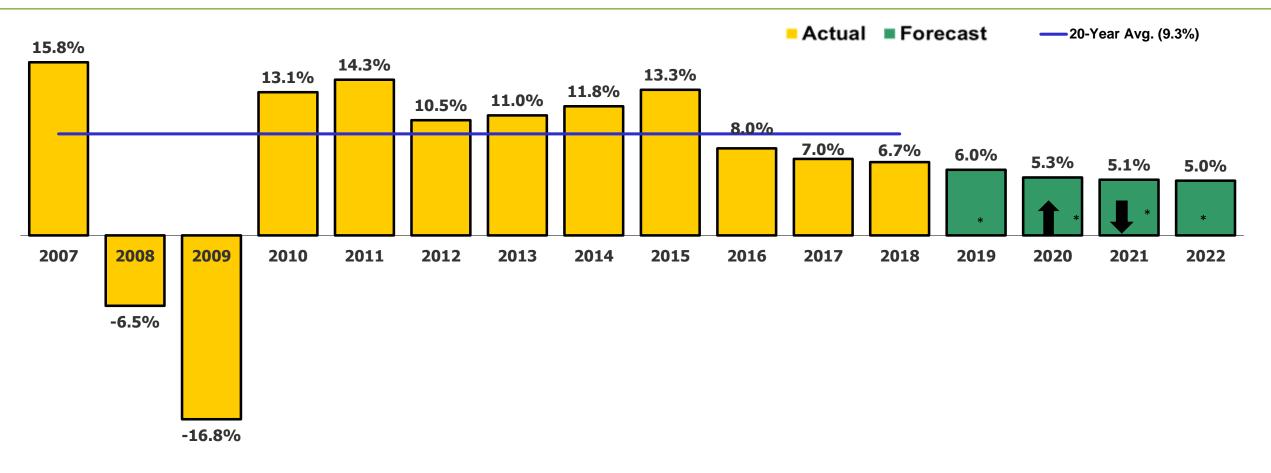


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Sources: 2001-2018, Real Capital Analytics; 2019-2022, ULI Real Estate Economic Forecasts.

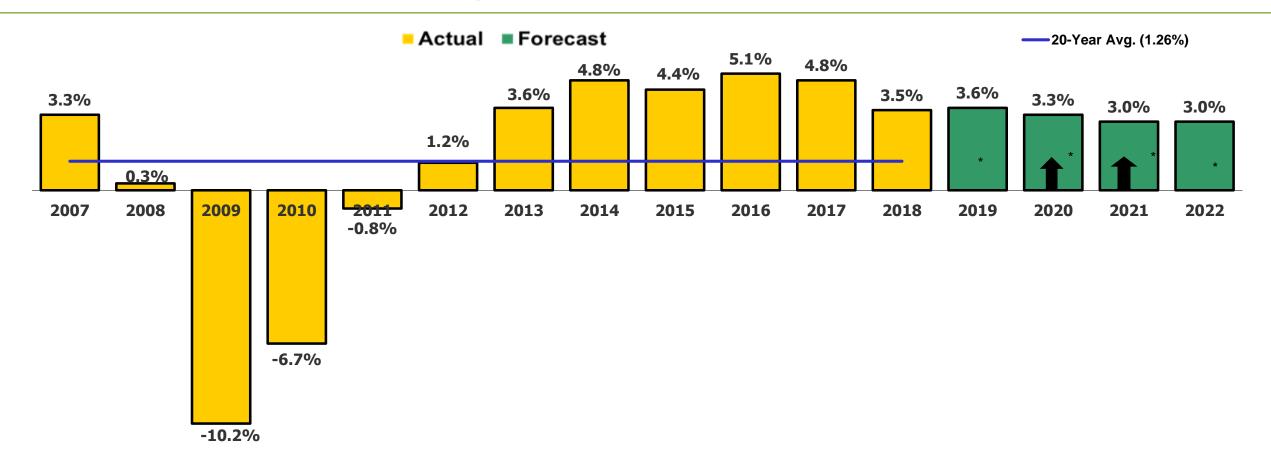


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Sources: 1999-2018 National Council of Real Estate Investment Fiduciaries (NCREIF); 2019-2022, ULI Real Estate Economic Forecasts.

ULI Real Estate Economic Forecast Industrial/Warehouse Rental Rate Change



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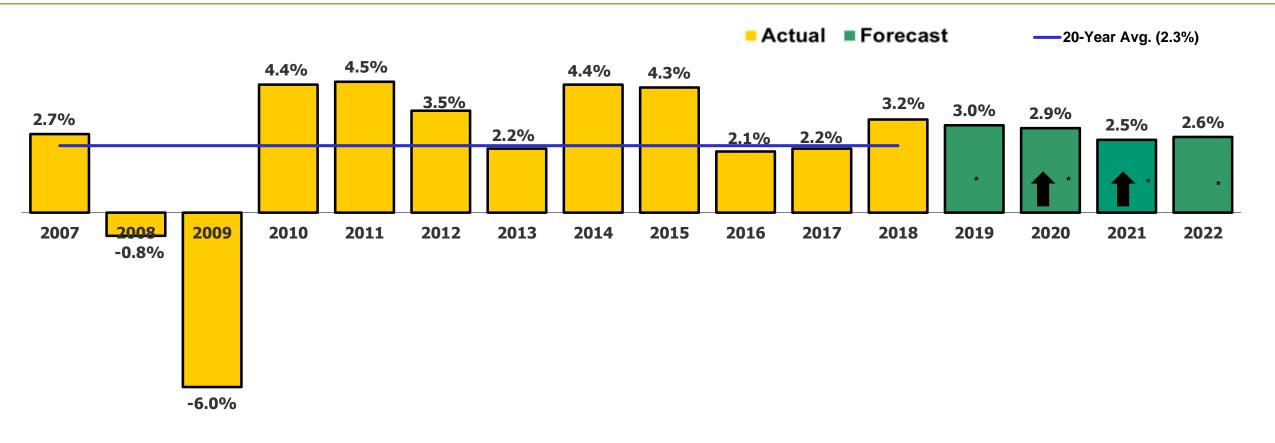


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Sources: 1999-2018, CBRE; 2019-2022, ULI Real Estate Economic Forecasts.

ULI Real Estate Economic Forecast Apartment Rental Rate Change

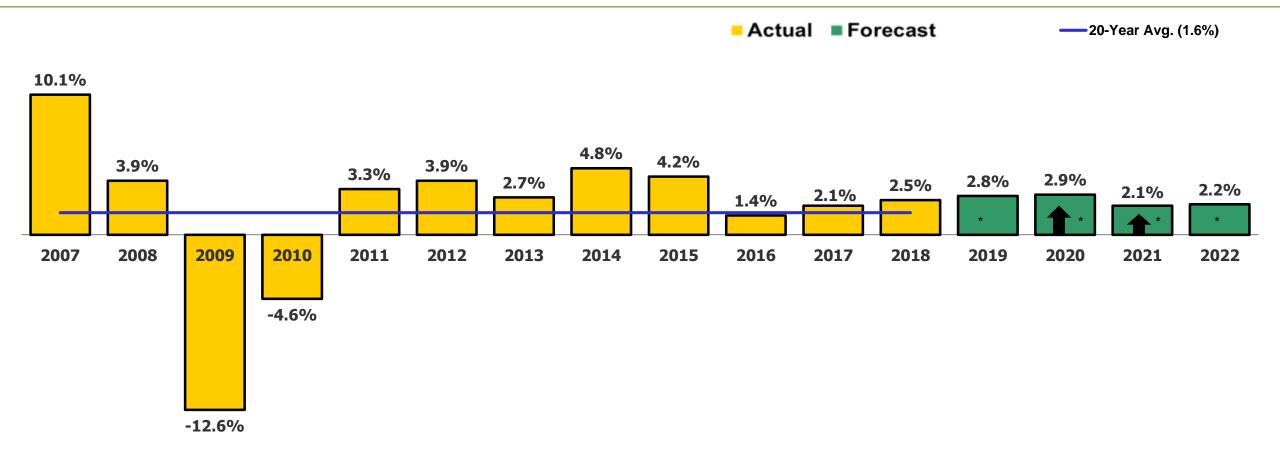


*The previous ULI Real Estate Economic Forecast, released in September 2019, projected through 2019, 2020 and 2021. The current ULI Real Estate Forecast reforecasts 2020 and 2021 and adds 2022.

This chart shows the previous ULI Real Estate Economic Forecast for 2019 and the new projections for 2020, 2021, and 2022. Indicated directions ($\uparrow \downarrow =$) refer to the current forecast relative to the previous Forecast: Previous projections for 2020 and 2021 were 2.3% and 2.3%, respectively.

Sources: 1999-2018, CBRE; 2019-2022, ULI Real Estate Economic Forecasts.





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Sources: 1999-2018, CBRE; 2019-2022, ULI Real Estate Economic Forecasts.



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Sources: 1999-2018, CBRE; 2019-2022, ULI Real Estate Economic Forecasts.

Firms That Participated in the ULI Real Estate Economic Forecast

| Organization | Lead Economist/Analyst | Title |
|------------------------------------|------------------------|--|
| Aberdeen Standard Investments | Carlos Ortea | Head of Real Estate Investment Research – Americas |
| Avalon Bay Communities | Craig Thomas | Senior Vice President, Market Research |
| Bentall Green Oak | Douglas Poutasse | Head of Strategy and Research |
| Berkshire Residential Investments | Gleb Nechayev | Head of Research, Chief Economist |
| CCIM Institute | Kiernan Conway | Chief Economist |
| Clarion Partners | Tim Wang | Managing Director & Head of Investment Research |
| CoreLogic, Inc. | Frank E. Nothaft | Chief Economist |
| Cushman & Wakefield | Revathi Greenwood | Head of Americas Research |
| | Rebecca Rockey | Economist, Global Head of Forecasting |
| DWS | Kevin White | Co-Head of Research & Strategy, Alternatives |
| | Mark Roberts | Head of Research & Strategy |
| Eigen 10 Advisors, LLC | Paige Mueller | Managing Director |
| Everest Healthcare Properties, LLC | David J. Lynn | CEO, President and Founder |

continued......



Firms That Participated in the ULI Real Estate Economic Forecast

| Organization | Lead Economist/Analyst | Title |
|-------------------------------|------------------------|--|
| Green Street Advisors | Peter Rothemund | Senior Analyst |
| Harrison Street Real Estate | Thomas Errath | Director |
| Laposa Realty Advisors | Stephen Laposa | Principal |
| LaSalle Investment Management | Richard Kleinman | Managing Director, Research & Strategy |
| | William Maher | Director, Strategy & Research |
| Marcus & Millichap | John T. Chang | Senior Vice President, National Director Research Services |
| | Peter Tindall | Vice President, Research Data & Analytics |
| NAREIT | Calvin Schnure | Senior Vice President, Research & Economic Analysis |
| | | |
| Oxford Economics | Aran Ryan | Director, Lodging Analytics |
| PNC Financial Services Group | Augustine Faucher | Chief Economist |
| PwC, LLP | Andrew Warren | Director, Real Estate Research |
| Rosen Consulting Group | Kenneth T. Rosen | Chairman |
| | Randall Sakamoto | President |

continued.....



Firms That Participated in the ULI Real Estate Economic Forecast

| Organization | Lead Economist/Analyst | Title |
|-----------------------------|------------------------|-------|
| Stockbridge Associates, LLC | George Casey | CEO |
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