

# CBRE RESEARCH PRODUCTS

## FORECASTING PLATFORM

### ECONOMETRIC ADVISORS

The goal of CBRE Research is to deliver a range of products that provide unique and actionable insights to clients. CBRE's Forecasting Platform at Econometric Advisors (EA) garners industry-wide respect for its outlooks across commercial real estate sectors and markets. Investors across the globe rely on EA's research to assist in evaluating capital markets, acquisitions and dispositions.

## ABOUT THE PLATFORM

EA delivers its proprietary research to clients across the globe via a permission-based subscription built for market analysis, due diligence, and strategic planning.



### SECTOR COVERAGE

- U.S. and Canada: Office, Industrial, Apartment, Retail, and Hotel sectors
- EMEA: Office, Industrial, and Retail



### QUARTERLY OUTLOOK AND SCENARIOS

- Macroeconomic assumptions and forecast narratives
- Multiple forecast scenarios, including EA baseline, Oxford baseline, EA upside, EA downside, EA severe downside



### THOUGHT LEADERSHIP

- Macro economists, sector economists and sector heads of research
- Product managers and data engineers
- Software engineers



### TIME-SERIES DATASETS BY MSA

- Market Fundamentals (under construction, stock, completions, net absorption, vacancy, availability, asking rents, rent index)
- Investment Performance (cap rate, cash flow, gross income, NOI, total return, value)
- Construction (pre-planning, planning, final planning, bidding, underway, completed, deferred and abandoned)
- Economic Drivers (employment, population, income)
- U.S. Competitive Set (aggregates by building class, age, size, year built, characteristics)



### DOCUMENTATION AND SUPPORT

- Methodology papers
- Backtest papers
- Definitions documents
- Client care network

## ABOUT ECONOMETRIC ADVISORS

CBRE Econometric Advisors (EA) monitors and analyzes trends in historical commercial real estate data to forecast real estate market fundamentals and investment performance across sectors and markets. EA applies a demand and supply framework to commercial real estate market forecasting. The resultant forecasts produced at scale are widely used by CBRE professionals and CBRE clients to inform investment decisions across the industry.

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## PUBLISHED DATASETS AND ANALYSIS

The platform offers a series of datasets for sector analysis. The platform is configurable to meet client needs and user groups. Access is granted under annual subscription agreements. The primary datasets are comprised of the following:

### CBRE FORECASTING PLATFORM FOR OFFICE, INDUSTRIAL, APARTMENT, RETAIL, HOTEL



#### Market Fundamentals

U.S. and Canada: 71 (62\*) office, 70 (65\*) industrial, 66 apartment, 61 retail and 65 hotel markets and 3,014 submarkets.

EMEA: 60 office markets, 37 industrial, and 43 retail

\* Tier 2 markets – smaller cities



#### Investment Performance

U.S. and Canada: 73 office, 74 industrial, 66 apartment, 64 retail and 65 hotel markets.



#### New Supply

U.S. and Canada: 78 office, 78 industrial, 78 apartment, 78 retail, 79 hotel markets, 78 senior and student housing. In partnership with Dodge Analytics.



#### Macro Outlook, Sector Outlooks & Forecast Scenarios

A house view on the economy and major factors driving the sector and current forecast scenarios.



#### Vacancy Index

A first look at the previous-quarter change in vacancy across markets for each sector.



#### Market Reports

Detailed sector and market overviews of key statistics and the forecast of fundamentals and performance employment growth rates vs. the nation.

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## PLATFORM ANALYTICAL TOOLS

The analytical tools within CBRE's Forecasting Platform facilitate powerful interactions with the time series datasets and forecasts scenarios. These tools can also be configured to meet the needs of clients and their respective use cases. Standard options are:

### CBRE FORECASTING PLATFORM FOR OFFICE, INDUSTRIAL, APARTMENT, RETAIL, HOTEL

#### LOCATOR

##### Address Finder

Pin locations to a map and see where they sit within EA submarket definitions by sector.

##### Sectors & Markets

Refocus the map to drop a pin and load key stats relevant to your analysis.

##### Import

Upload a list of locations to place them on the map and discover relevant summary statistics.

##### Saved Collections

Keep your pins as a collection for future use.

##### Building Filter (premium)

Select a dataset and apply parameters to create customized time-series aggregates.

##### Append (premium)

Add relevant summary statistics to a list of pins.

##### API (premium)

Connect directly to our warehouse to sync your systems to published datasets.

#### FORECASTER

##### EA Baseline Forecasts by Market

Explore EA's baseline forecasts in charts and grids for easy analysis.

##### Scenario Adjustment

Adjust demand and supply variables to drive EA's forecast model, testing what-if scenarios and producing exportable custom forecasts.

##### Scenario Save & Import (premium)

Save and manage your custom scenarios on the platform. Upload lists of scenarios from Excel.

##### Publish Scenarios (premium)

Share your scenarios with colleagues within the platform.

##### API (premium)

Connect directly to our warehouse to sync your systems to published datasets.

#### BUILDER

##### DataViews

Discover, sort and filter a catalog of 1,500+ reports by region, sector and market for easy export.

##### Export Queue

Add and export a series of reports for sharing with colleagues and clients.

##### API (premium)

Connect directly to our warehouse to sync your systems to published datasets.

##### Benchmarker (premium)

Obtain average revenue, expense and profit information presented in summary operating statement format.

##### Extracts Explorer (premium)

Download and sync a series of queries in a workbook for easy updating of cross market aggregate datasets.

##### DataDriver (premium)

Enhanced query builder to sync your workbooks to published datasets.

AVAILABLE AT: [WWW.CBRE.COM/FORECASTING](http://WWW.CBRE.COM/FORECASTING)  
PLATFORM CONNECTIONS VIA EXCEL AND API

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## FORECASTING PLATFORM

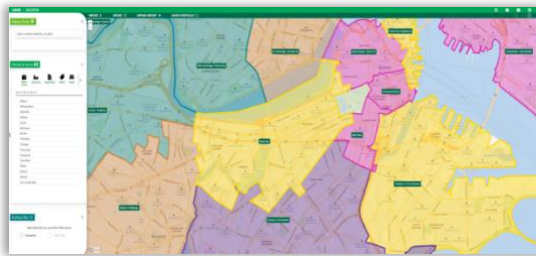
### ECONOMETRIC ADVISORS

## BENEFITS OF THE PLATFORM

### Assemble data in a flash.

Choose from a variety of market fundamentals, investment performance, construction and economic reports in DataViews. Sort, refine and export DataViews to workbooks. Use forecasts to evaluate potential outcomes under a range of economic scenarios.

Submarket	Inventory		Completions		Net Absorption		Vacancy Rate		Adding Supply	
	# Bldg	NBA (SF x 1000)	Current Qtr	YTD (SF x 1000)	Current Qtr	YTD (SF x 1000)	Current Qtr (%)	YTD Ctg (BPS)	Net (T)	Gross (T)
Downtown	45	14,981	0	0	-106	120	14.2	-70	15.84	2798
Midtown	69	18,537	232	1,374	399	1,283	8.0	0	28.51	3519
Subtotal Downtown	114	33,518	232	1,374	293	1,403	10.7	-60	24.59	3087
Airport South...	91	3,405	0	48	22	540	16.2	-200	18.42	2011
Buckhead	41	10,223	0	0	-45	-269	13.8	180	30.85	3440
Central Parkway	177	24,264	0	0	-41	-559	16.8	220	25.20	2654
Cumberland/Galleria	156	20,144	0	0	97	234	17.4	-110	32.23	2516
East Atlanta	14	389	0	0	-6	10	12.9	-260	14.50	1410
East Cobb/Johnson...	24	606	0	0	8	-19	5.1	100	na	1620
Midtown West	19	859	0	89	51	41	10.8	220	28.66	2923
North Fulton	279	19,391	30	132	122	186	12.9	-40	17.82	2303
Northwest	164	7,024	0	15	236	300	16.4	-400	12.79	2092
Northlake	163	10,266	0	48	-95	-139	15.3	170	17.41	2298

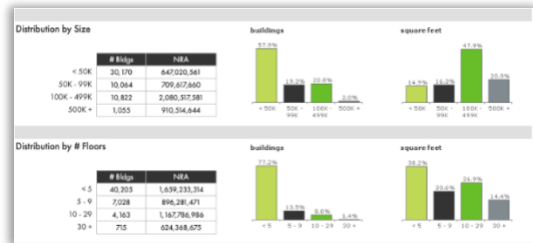


### Connect your locations to CBRE market insights.

Visualize market definitions and access data concepts to compare performance at the market and submarket levels. Upload properties, save and export customized insights for further analysis.

### Identify trends for a subset of properties.

Select a group of properties by address and property characteristics. A snapshot, historical trends and frequency distributions are at your fingertips. Save peer groups to make refreshing easier in future editions.



DataDrive... Atlanta			
	A	B	C
1	Atlanta		
2	Geographies	Time	Stock - Class A (sf x 1000)
3	Atlanta - Airport South Atlanta	2009.1	718
4	Atlanta - Airport South Atlanta	2009.2	718
5	Atlanta - Airport South Atlanta	2009.3	846
6	Atlanta - Airport South Atlanta	2009.4	846
7	Atlanta - Airport South Atlanta	2010.1	846
8	Atlanta - Airport South Atlanta	2010.2	846
9	Atlanta - Airport South Atlanta	2010.3	846
10	Atlanta - Airport South Atlanta	2010.4	846
11	Atlanta - Airport South Atlanta	2011.1	846
12	Atlanta - Airport South Atlanta	2011.2	846
13	Atlanta - Airport South Atlanta	2011.3	846

### Speed your work with a direct connection to our data warehouse.

Managing your analytical tools is easy when you can pour data directly into your workbooks. Create queries and update your workbooks at the click of a button. Clone, edit and share queries with your team.

### Leverage your knowledge to drive new scenarios.

Interact with CBRE's forecast in new ways by adjusting demand drivers based on your set of assumptions. Learn which levels will produce a given outcome. For office, input remote-work and space-per-worker assumptions. Save and compare scenarios.

