

Downturns, Delays, and the COVID-19 Pandemic

Why Delays Occur, and the Effect on Performance Metrics

Agenda

1. Welcoming Remarks
2. The Economics of Construction Delays
3. The Effect of COVID-19 on Construction and Supply Growth
4. Impact on Performance Metrics
5. Questions & Answers

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Welcoming Remarks

Cristina Pieretti, *Managing Director | Head of REIS*
Moody's Analytics

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The Economics of Construction Delays

Victor Calanog PhD, *Head of CRE Economics*
Moody's Analytics

Incidence of Construction Delays

Data from 2003 to 2019

Property Type	Encountered Delays	Finished Early	Finished On Time
Apartment	82%	15%	3%
Industrial	45%	15%	40%
Office	73%	16%	11%
Retail	79%	15%	6%

Source: Moody's Analytics REIS

Expected versus Actual Construction Times

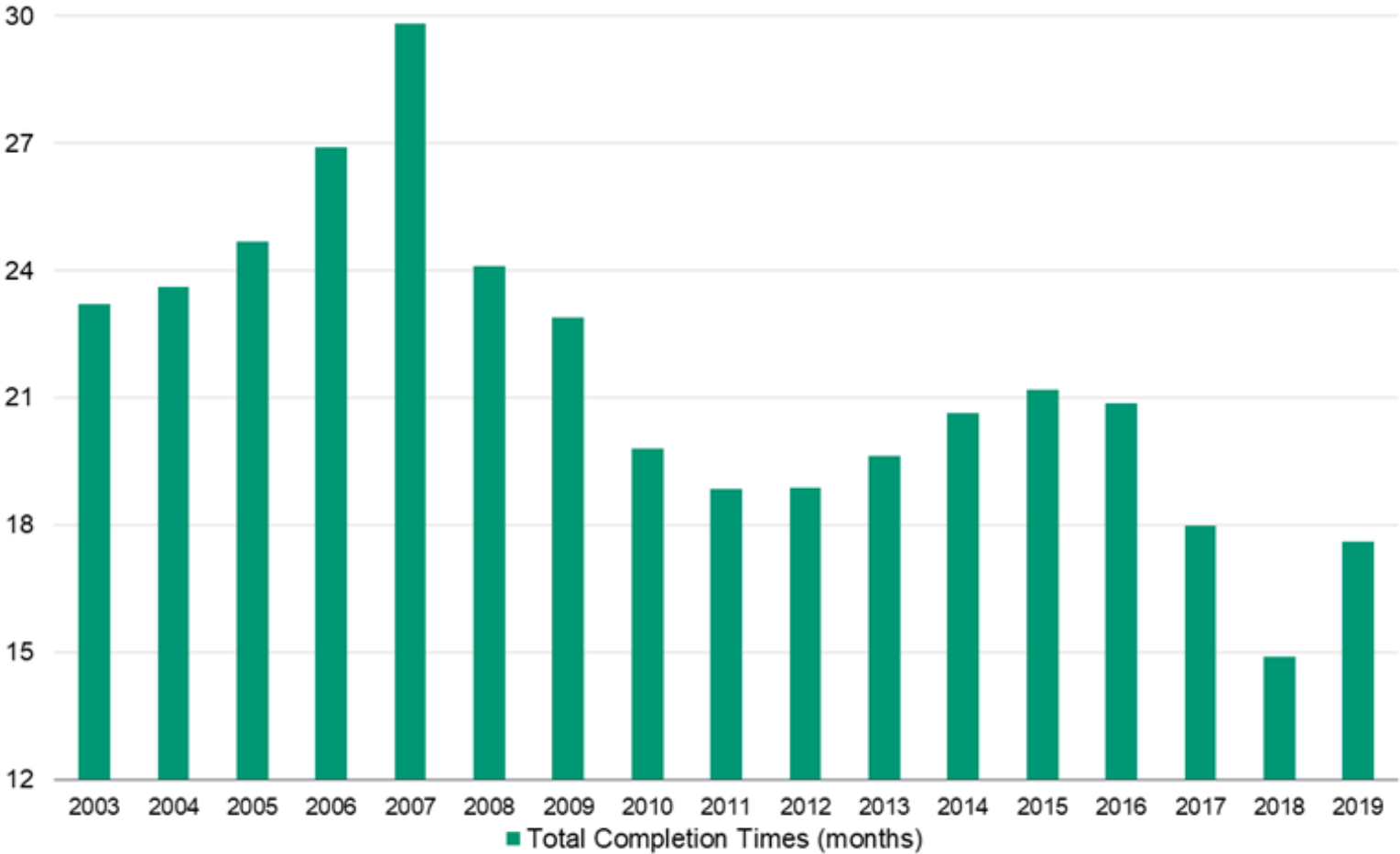
Data from 2003 to 2019

Property Type	Expected Construction Time	Average Actual Construction Time
Apartment	12 to 18 months	22.2 months
Industrial	3 to 6 months	9.9 months
Office	6 to 12 months	15.1 months
Retail	6 to 12 months	13.9 months

Source: Moody's Analytics REIS

Total Completion Times (in Months)

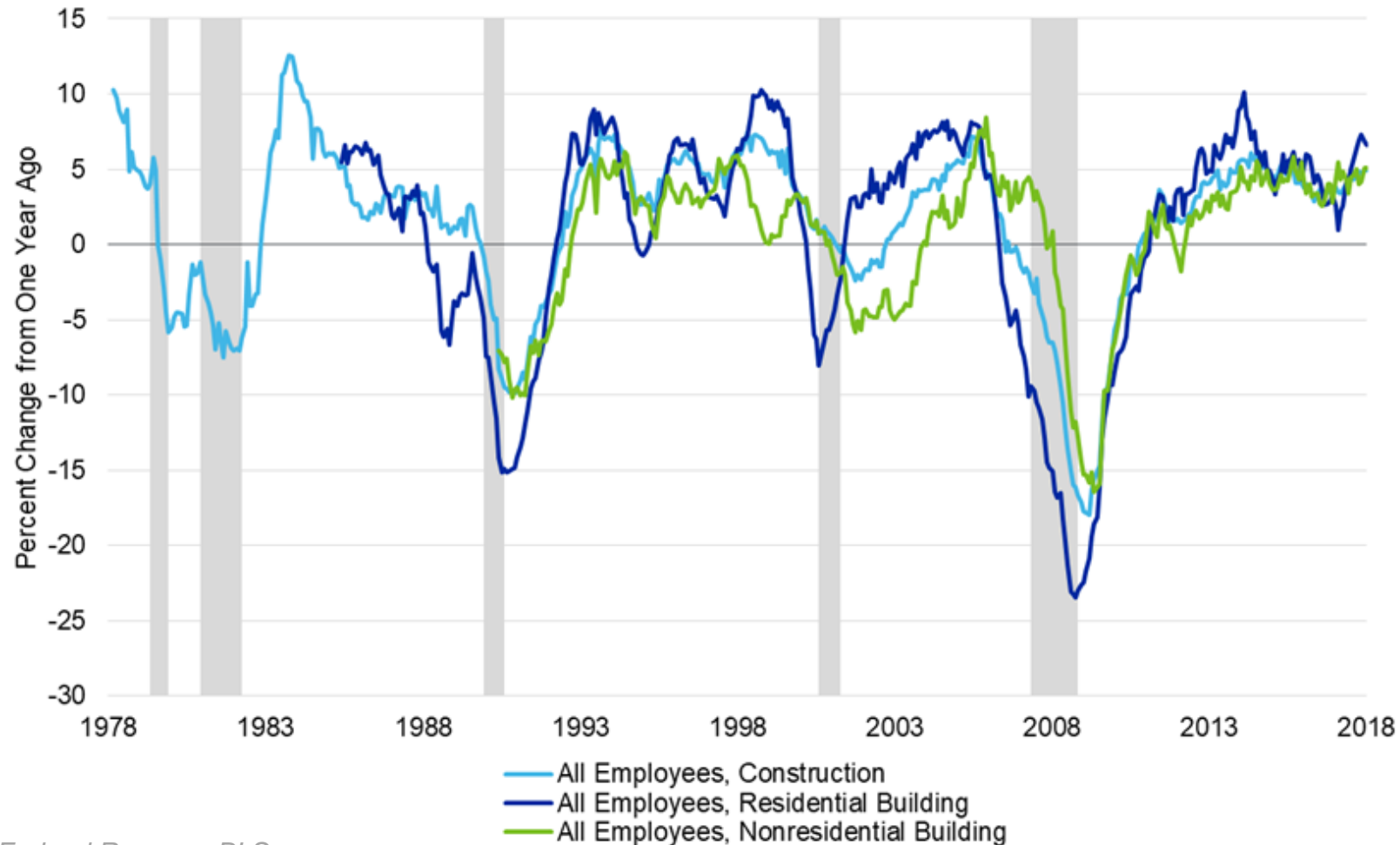
Apartment Sector, 2003 to 2019



Source: Moody's Analytics REIS

Construction Employment and Recessions

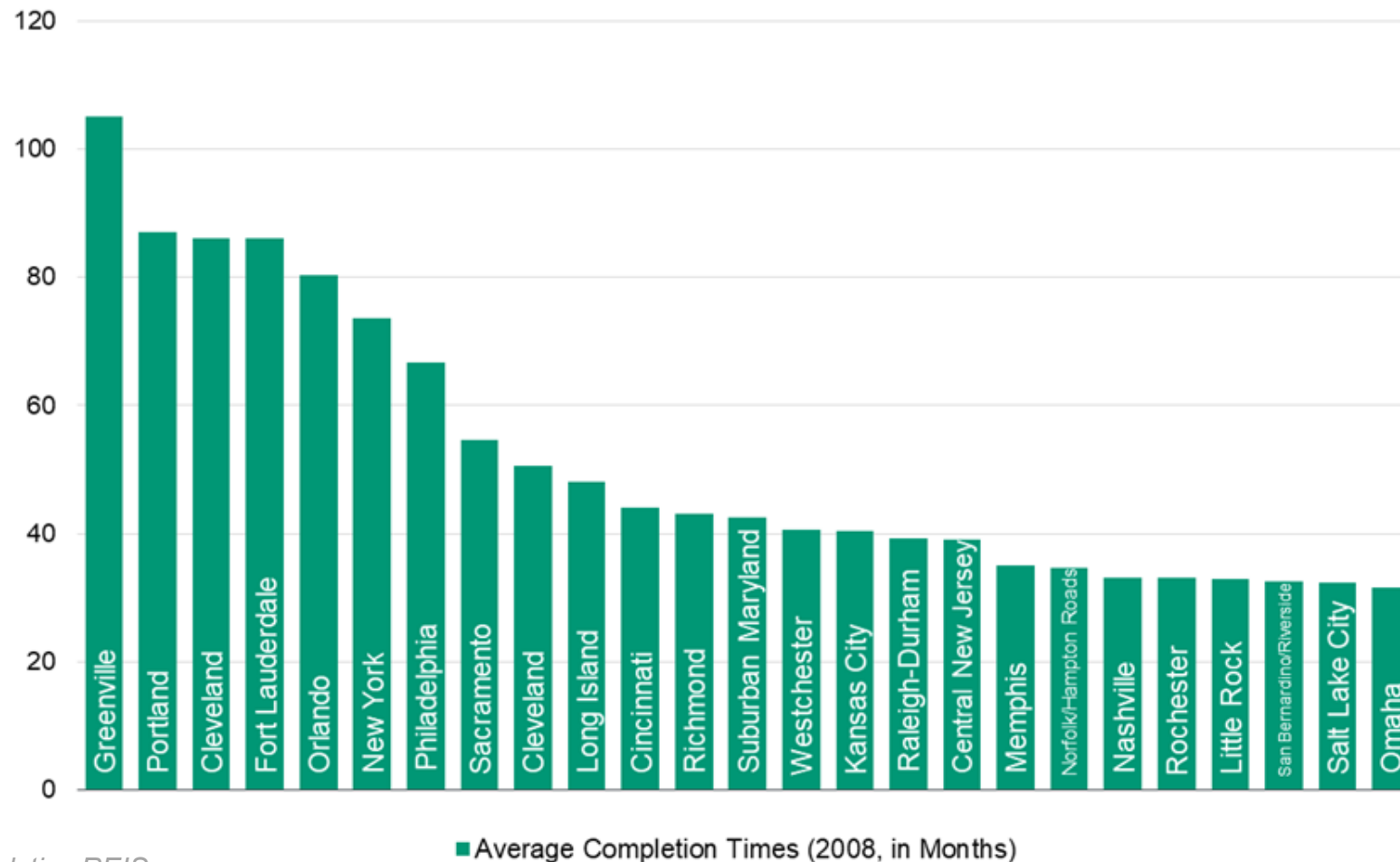
Recessionary Periods are Highlighted in Grey



Source: FRED, St Louis Federal Reserve; BLS

Top 25 Markets for 2008-2009 Delays

Office Sector



Source: Moody's Analytics REIS

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The Effect of COVID-19 on Construction and Supply Growth

Construction Stoppages

Select Places, REIS data

Geography REIS MSA	State	Construction Halted?	Date of Work Stoppage	Date of Construction Restart	Notes
New York	NY	Yes	27-Mar	27-Apr	Projects with 30% affordable housing need not stop
Northern New Jersey	NJ	Depends	8-Apr	27-Apr	Schools, hospitals, affordable housing, emergency repairs exempt
Philadelphia	PA	No			
Detroit	MI	Yes	24-Mar	7-May	
San Francisco	CA	Case by case	20-Mar	4-May	

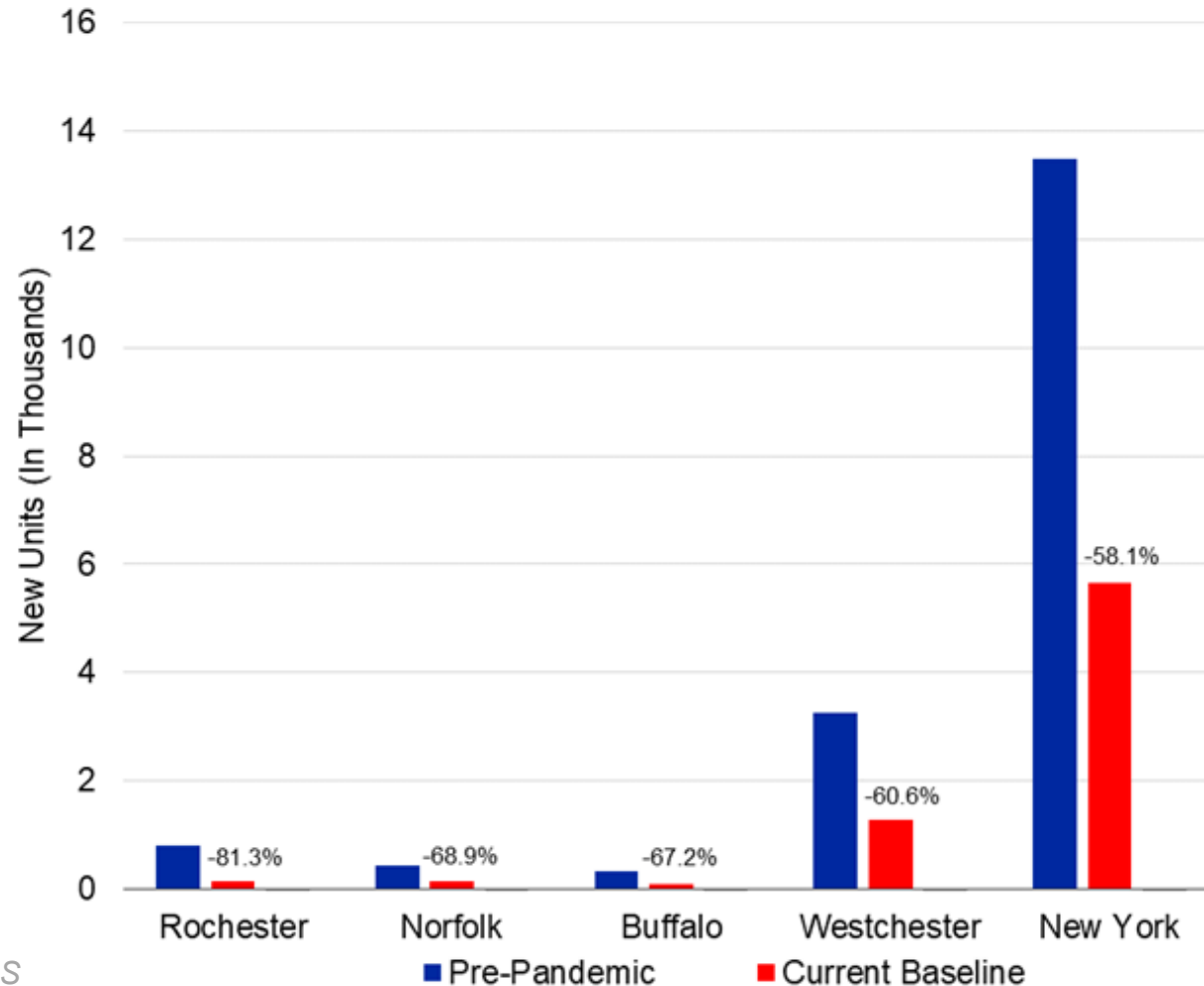
Source: Moody's Analytics REIS

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Impact on Performance Metrics

Changes in Construction Estimates

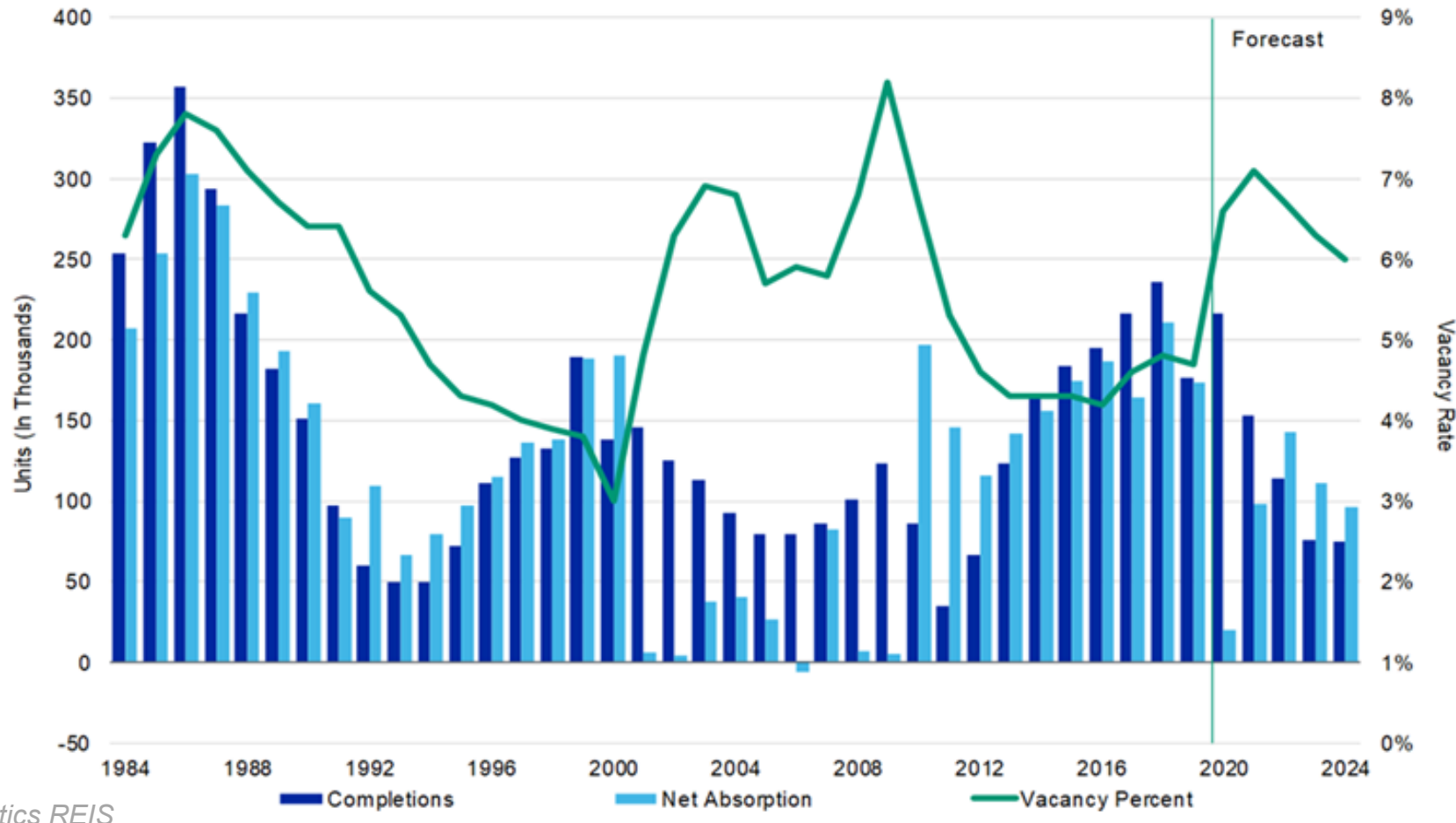
Apartment Sector, Pre- and Post-COVID (Largest % Reduction in Construction Projections)
(Numbers above red columns indicate % change from pre-pandemic to current baseline)



Source: Moody's Analytics REIS

Apartment Sector Fundamentals

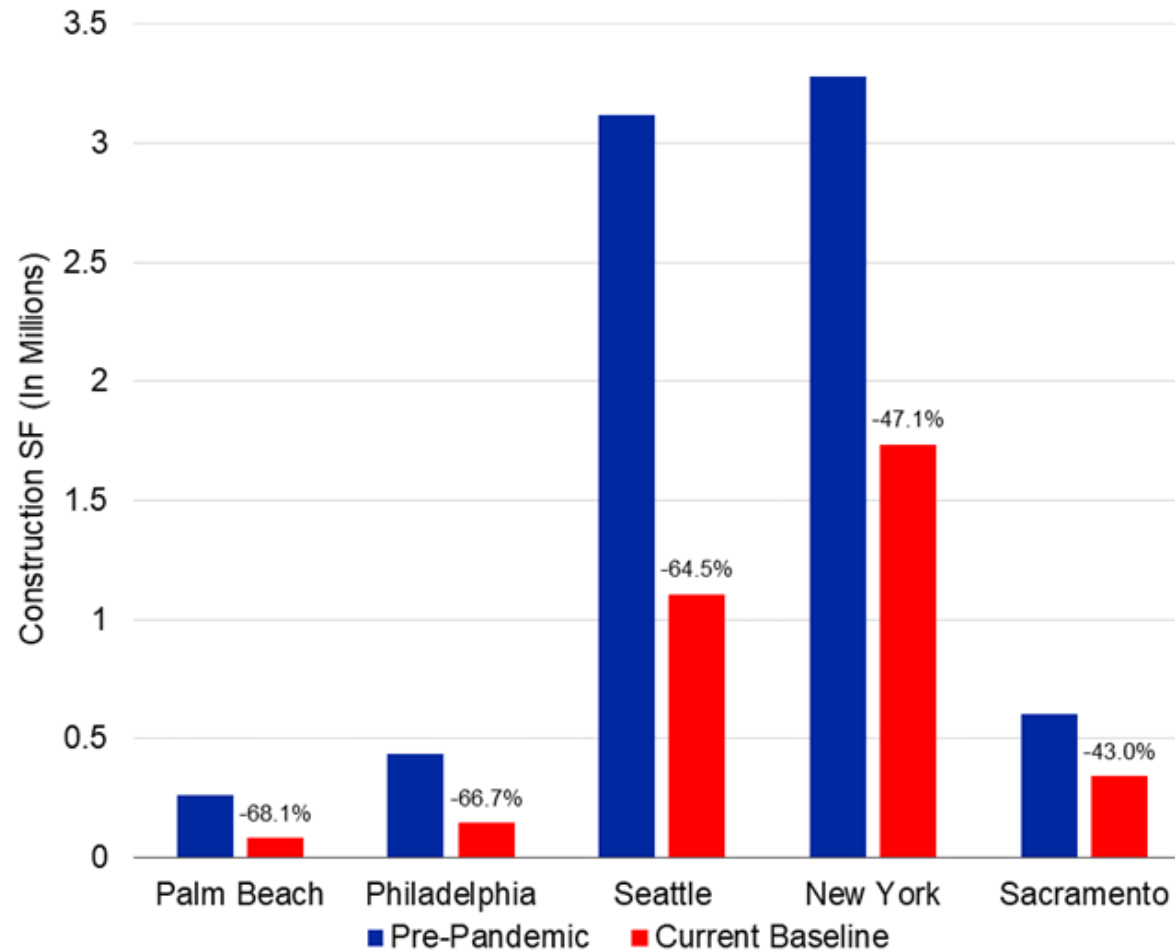
Completions, Absorption, and Vacancy (1984 to 2024)



Source: Moody's Analytics REIS

Changes in Construction Estimates

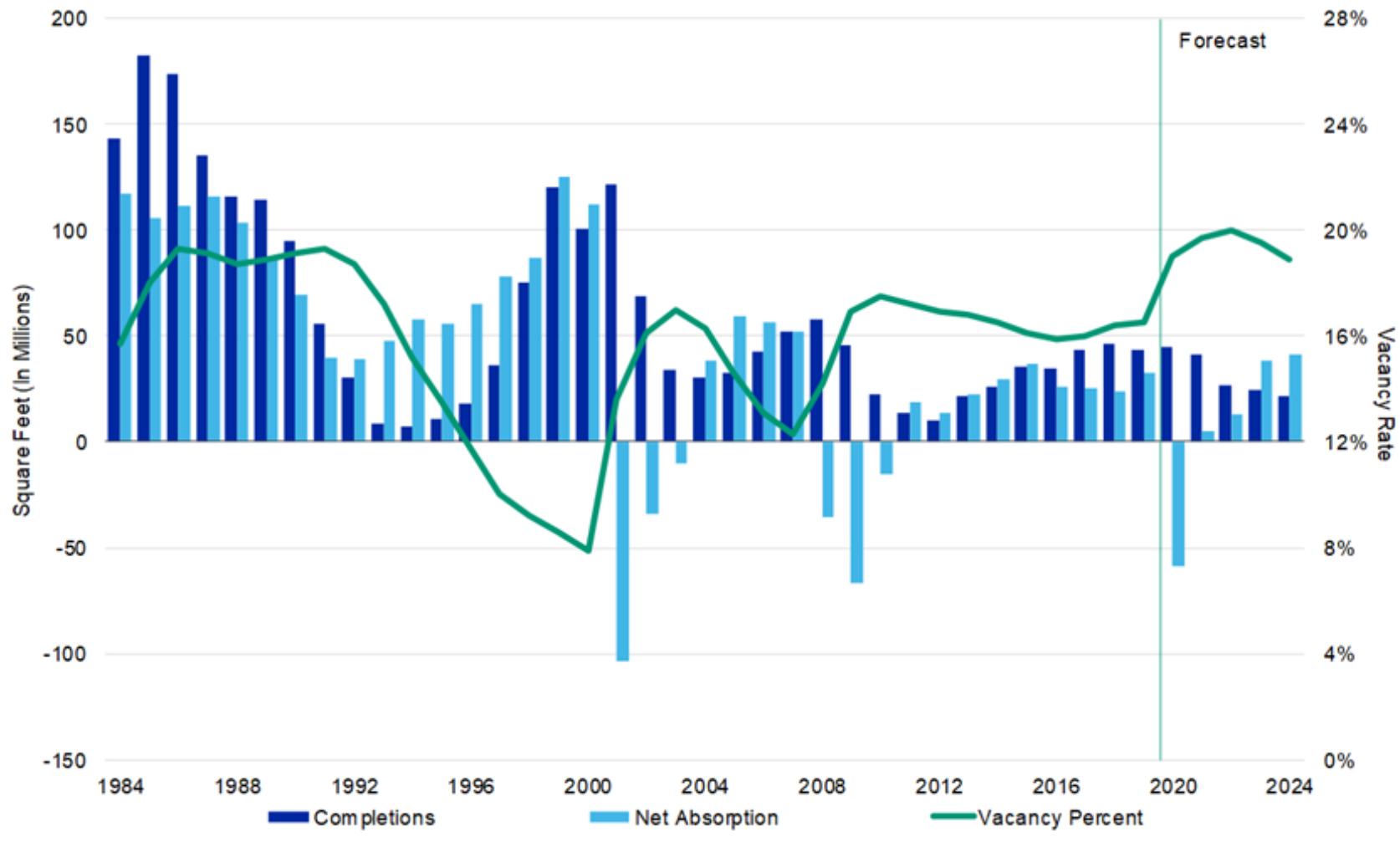
Office Sector, Pre- and Post-COVID (Largest % Reduction in Construction Projections)
(Numbers above red columns indicate % change from pre-pandemic to current baseline)



Source: Moody's Analytics REIS

Office Sector Fundamentals

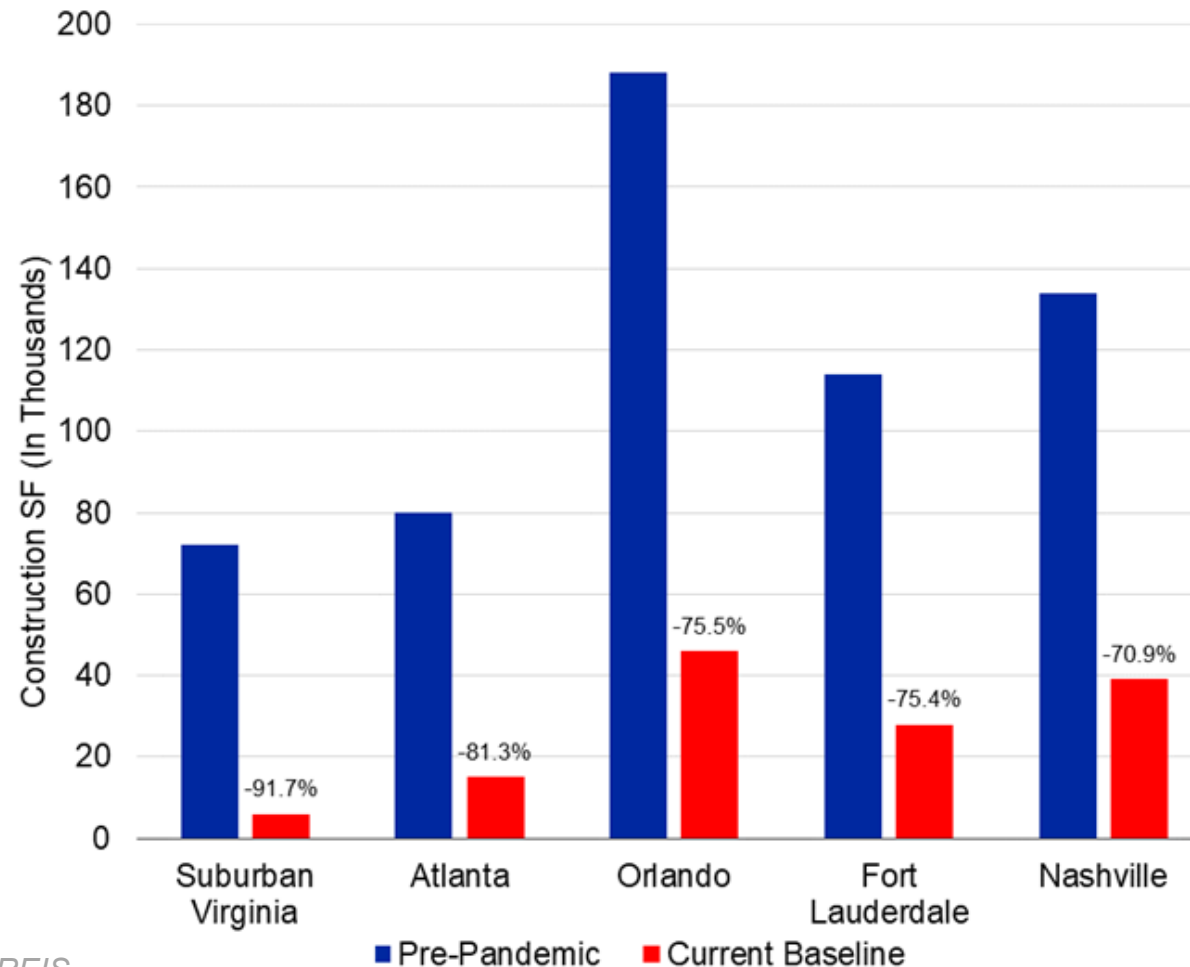
Completions, Absorption, and Vacancy (1984 to 2024)



Source: Moody's Analytics REIS

Changes in Construction Estimates

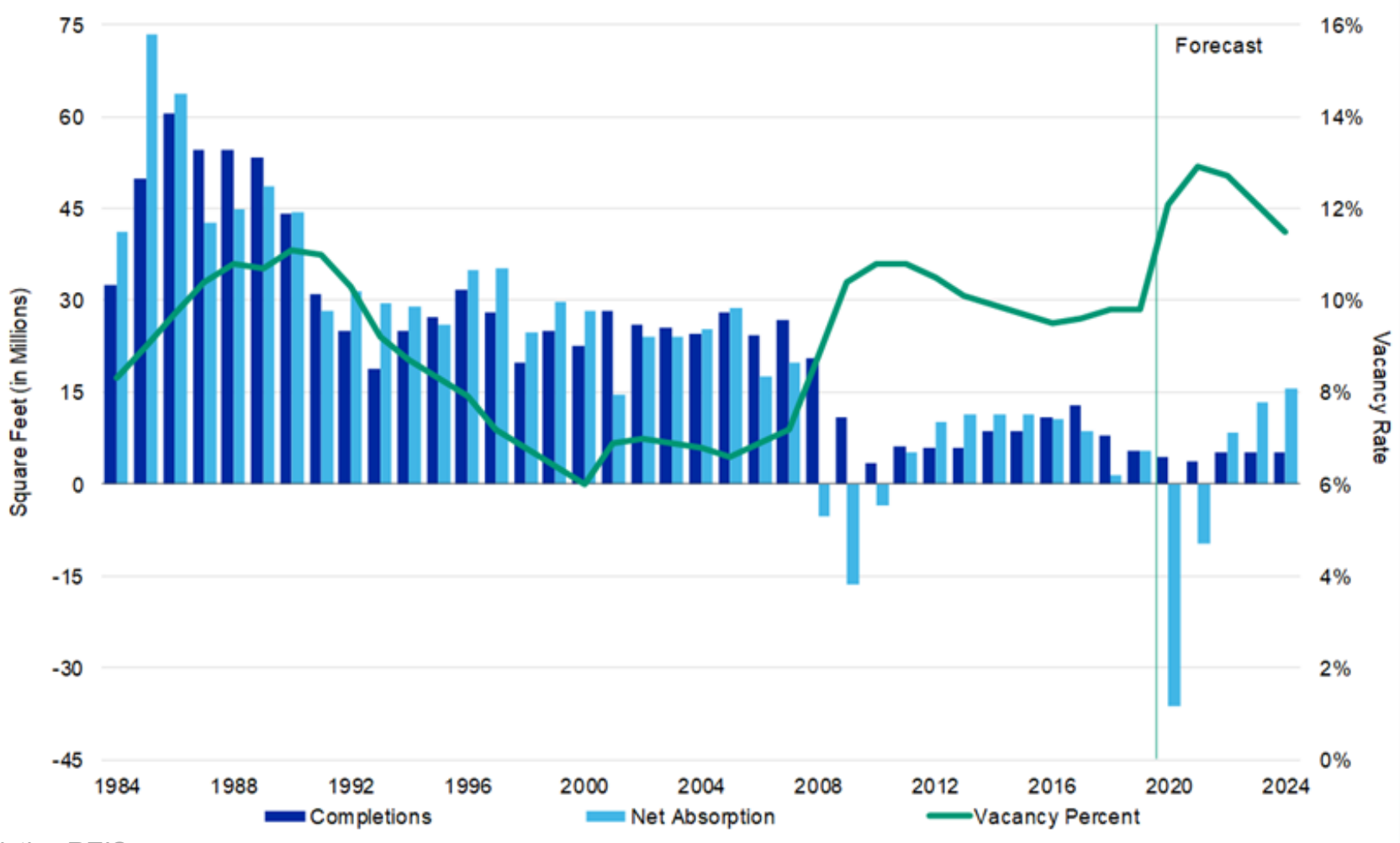
Retail Sector, Pre- and Post-COVID (Largest % Reduction in Construction Projections)
(Numbers above red columns indicate % change from pre-pandemic to current baseline)



Source: Moody's Analytics REIS

Retail Sector Fundamentals

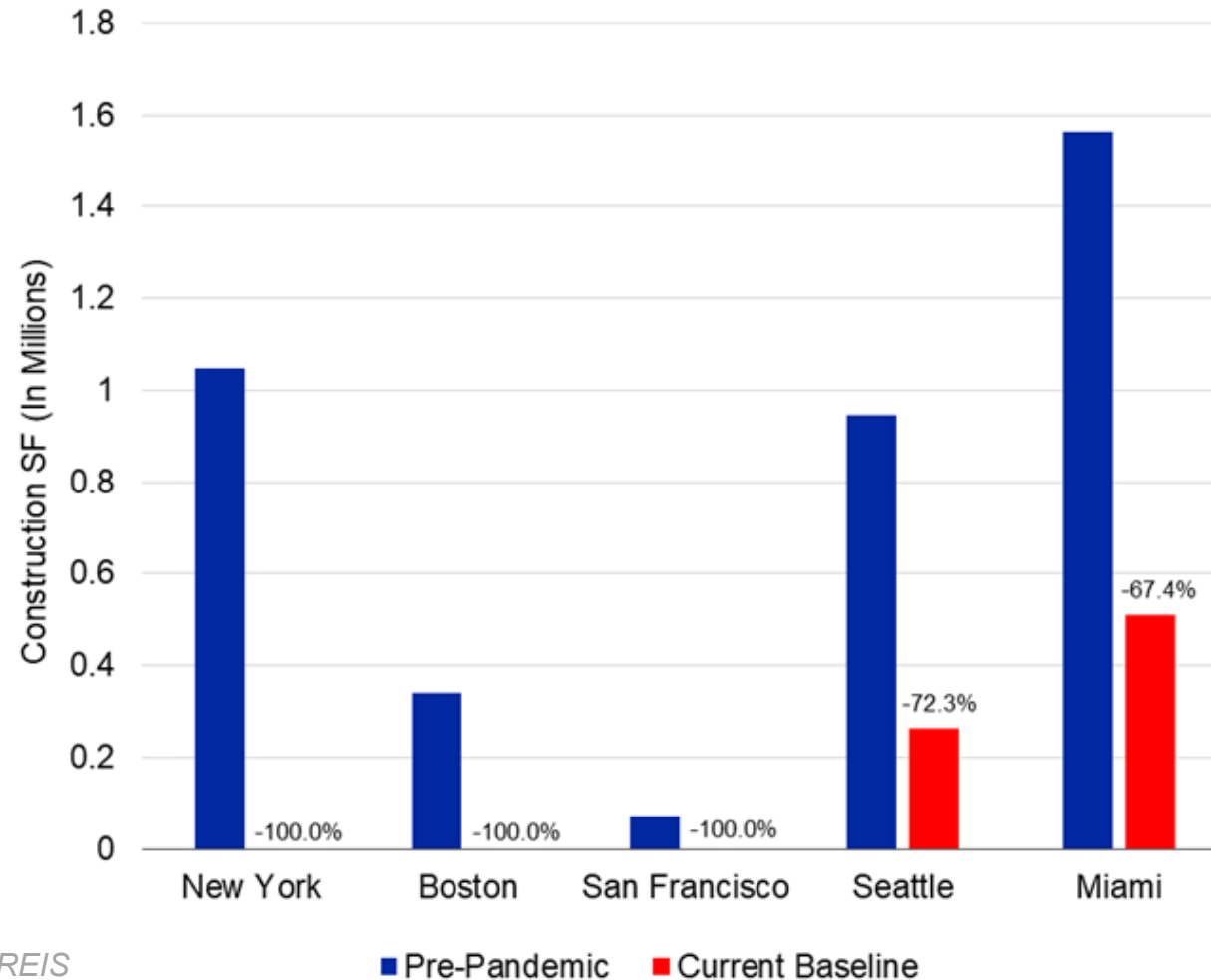
Completions, Absorption, and Vacancy (1984 to 2024)



Source: Moody's Analytics REIS

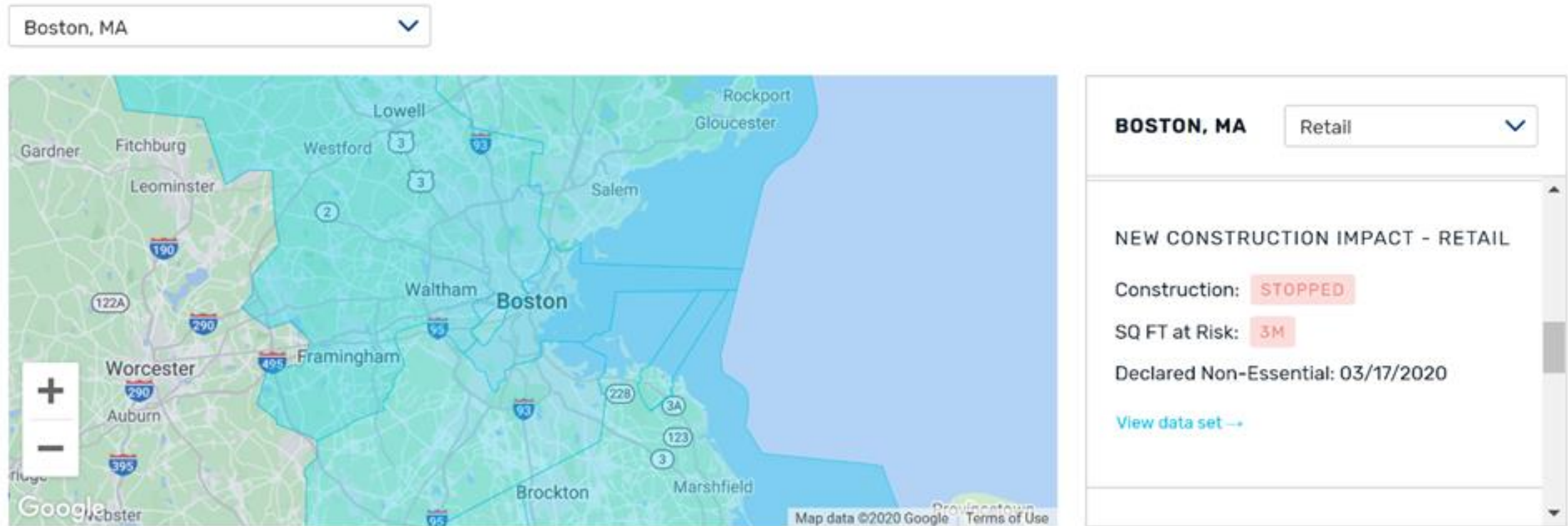
Changes in Construction Estimates

Industrial Sector, Pre- and Post-COVID (Largest % Reduction in Construction Projections)
(Numbers above red columns indicate % change from pre-pandemic to current baseline)



Source: Moody's Analytics REIS

COVID-19 Impact Assessment Tool



COVID-19 Impact on New Construction - Retail

<https://cre.reis.com/covid-19>

Source: Moody's Analytics REIS

Questions & Answers

Today's Speakers



Cristina Pieretti
MANAGING DIRECTOR / HEAD OF REIS



Victor Calanog
HEAD OF CRE ECONOMICS

Thank You

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