

Perspectives on US Multifamily and CRE Key Dynamics and Predictions for the Near Term

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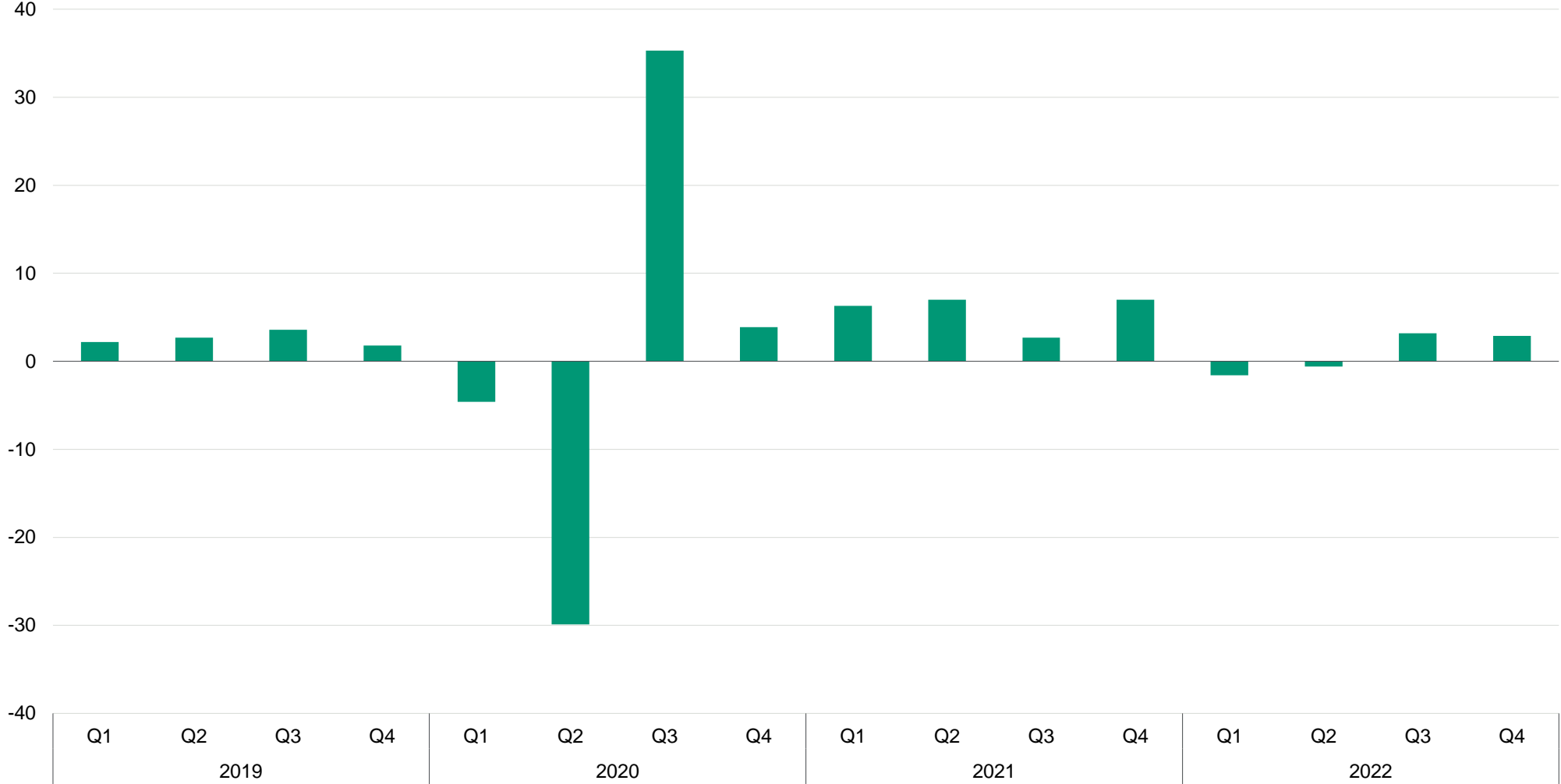
<https://www.linkedin.com/company/moodysanalytics-cre/>

January 26, 2023

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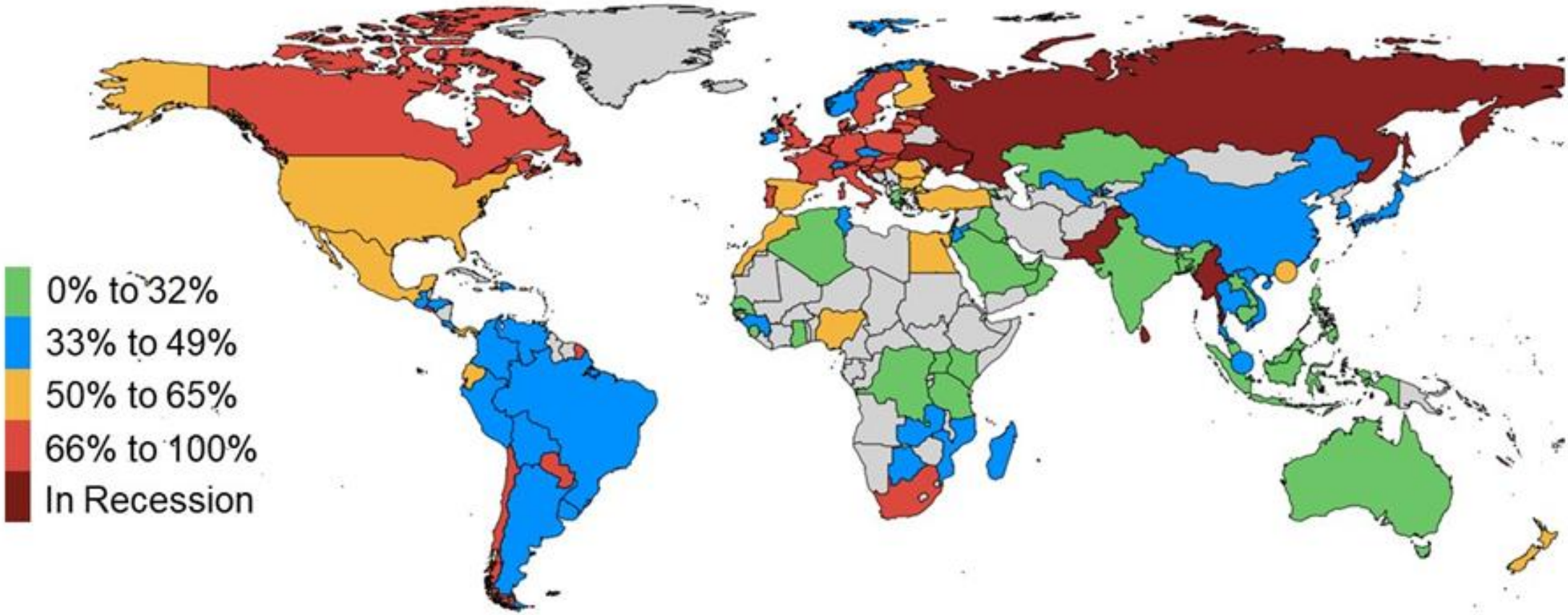
Perspectives on the
Economy

How Do You Think 2022 Turned Out?



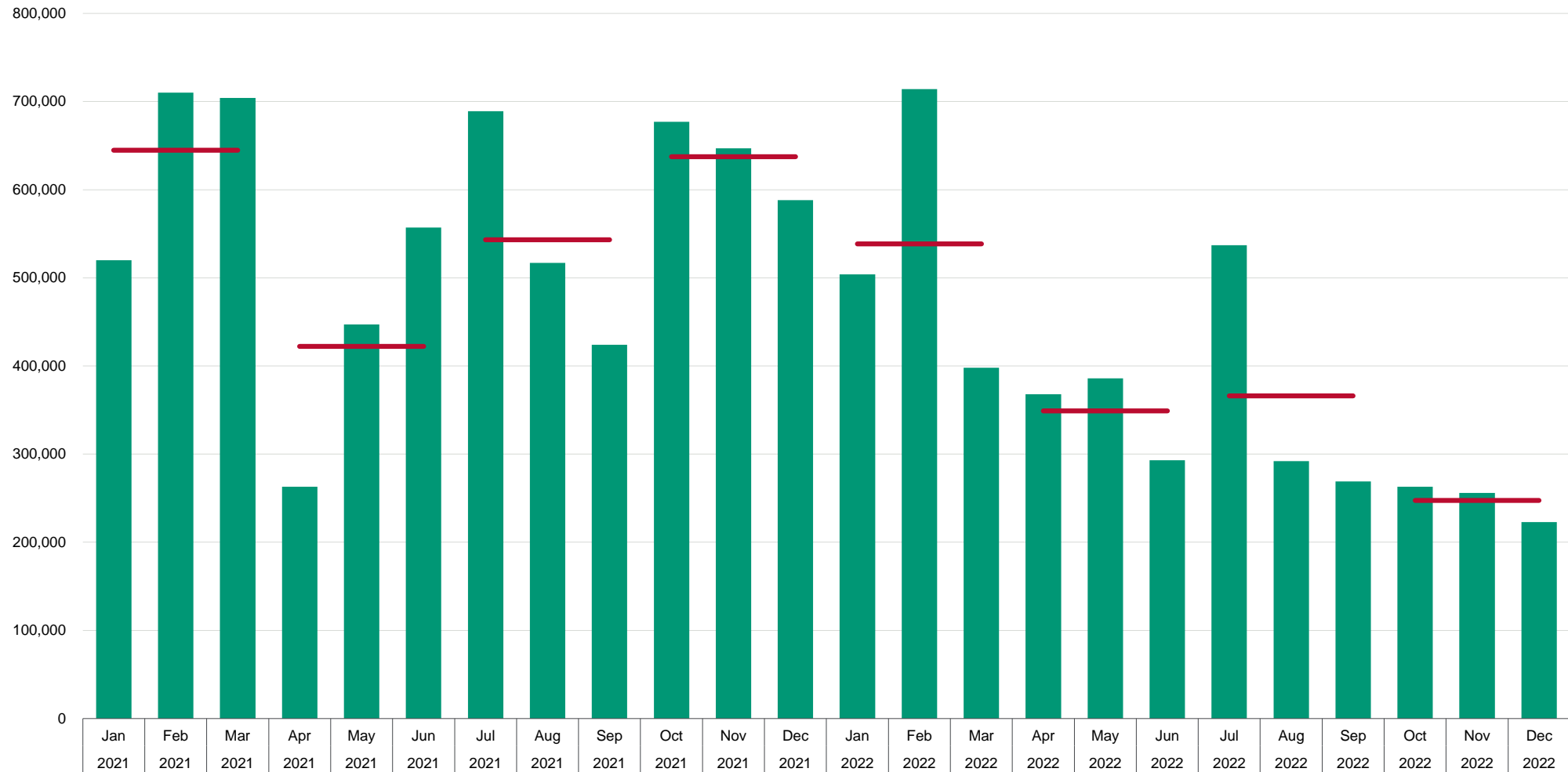
Source: Bureau of Economic Analysis

Recession Probabilities Across the World



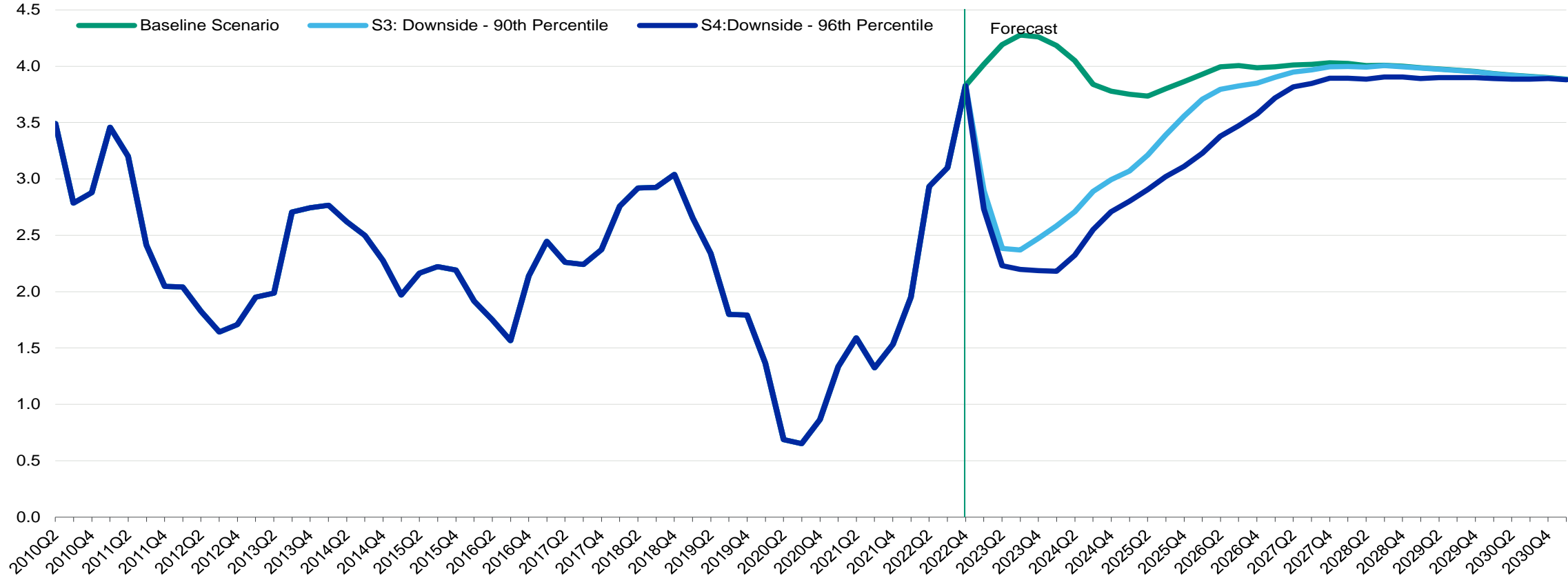
Source: Moody's Analytics

Job Creation Trends from 2021 to the Present



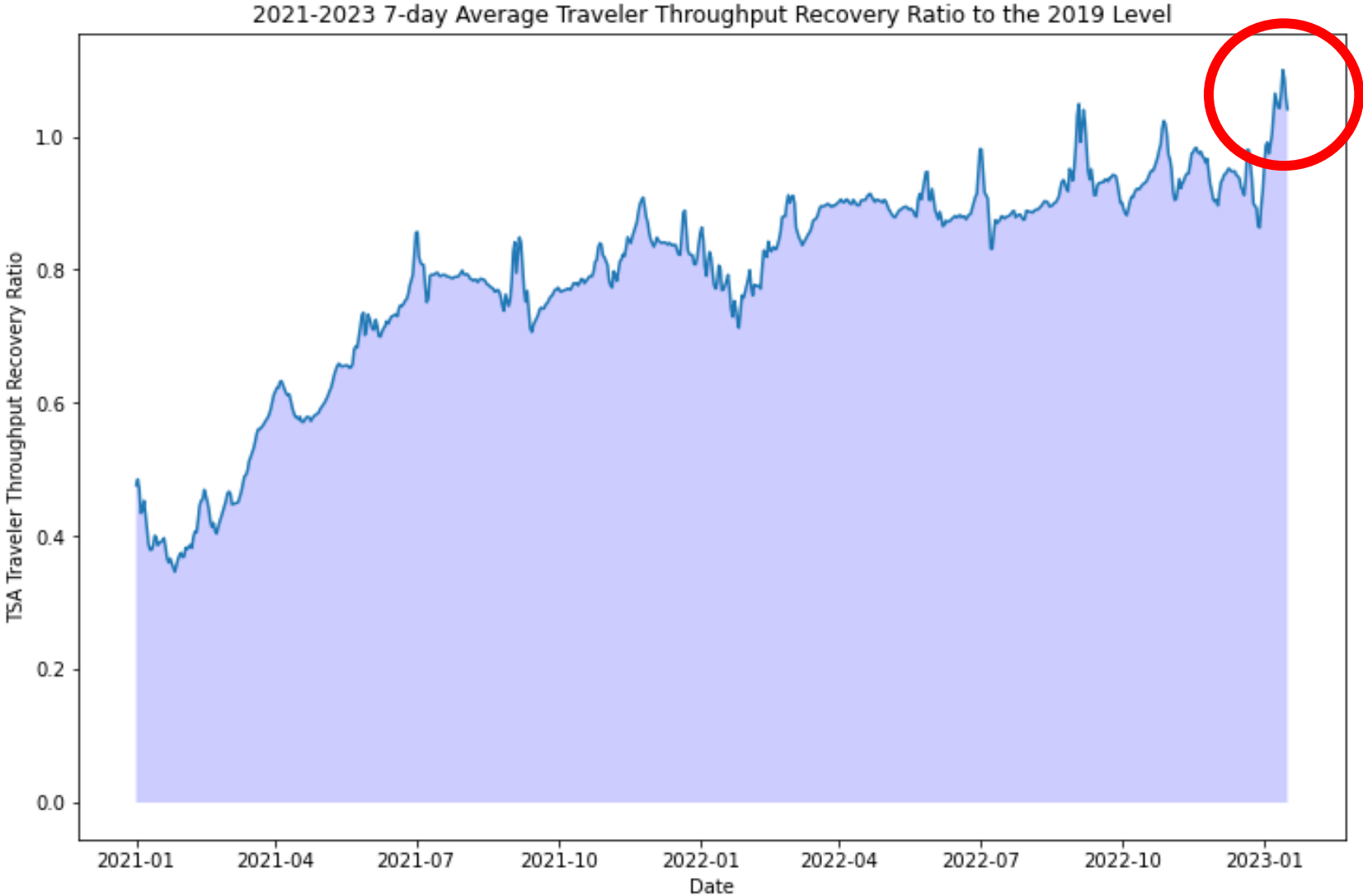
Source: Bureau of Labor Statistics

Updated Forecasts for the US 10 YR TSY



Source: Moody's Analytics

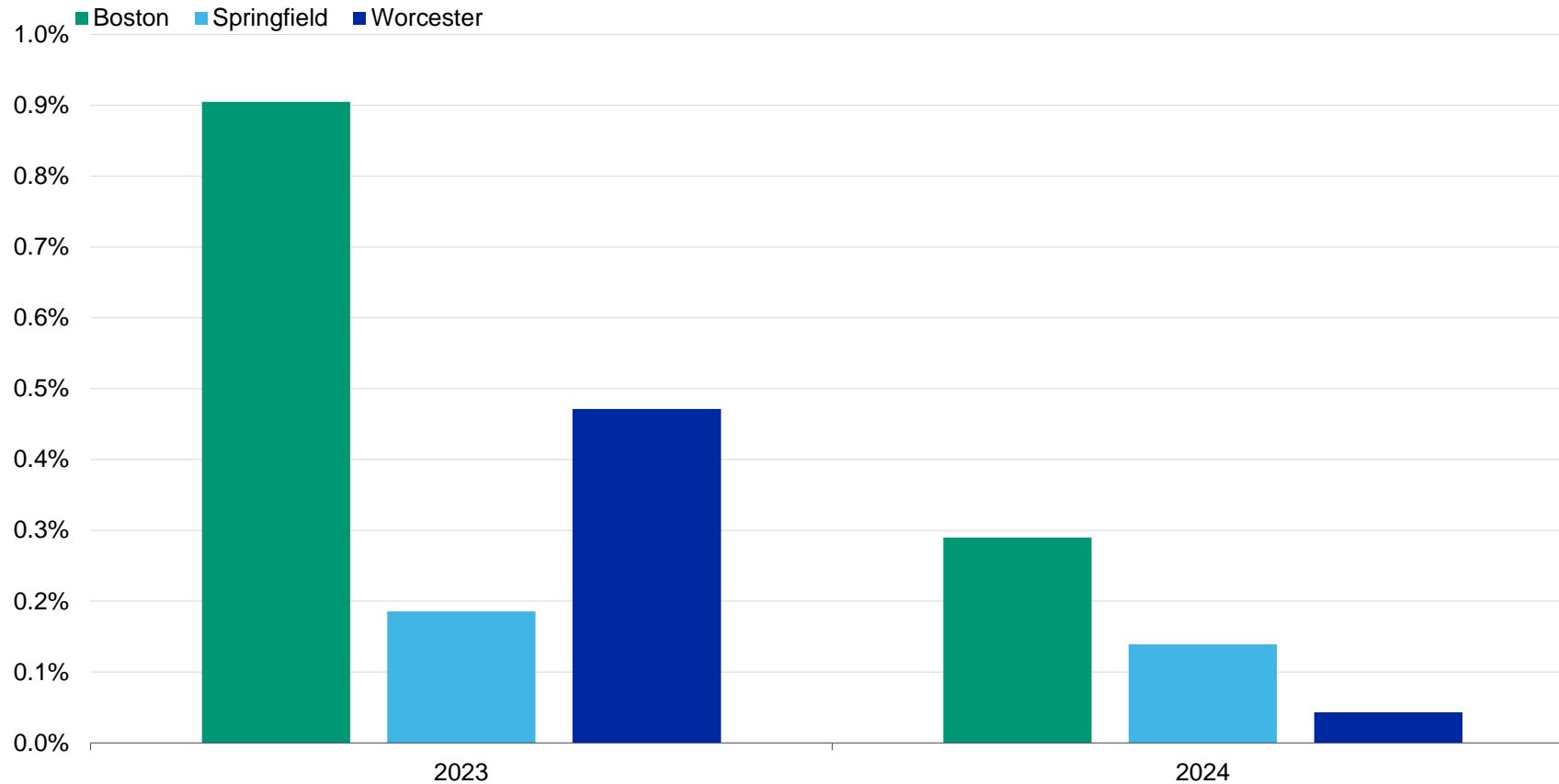
New High of 109.98% last January 13!



Source: Transportation Security Administration

Massachusetts Markets Employment Change

Year-Over-Year Change (%)



Source: Moody's Analytics

The Economic Outlook & Policy Environment

Key Takeaways

- » Despite fears (and record low consumer sentiment measures in mid-2022), it doesn't look like we entered a recession in 2022. But what about 2023?
- » Advanced estimates from the BEA released on January 26 put US GDP growth for 2022 at +1.00% (we expected the US economy to grow by +3.4% back in January 2022).
- » There was a “rate head fake” in the third quarter, but now market players are preparing for a future where higher cost of funds is the norm. Even with downside scenarios, there is likely a floor for rates if inflation persists.
- » <What does this mean for various geographies and US sectors?>

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The Built Environment and Various Changes

National Apartment Market

Quarterly & Annual Market Conditions

- » Vacancies inched upwards to 4.5% in the fourth quarter.
- » National rent growth remained positive when one considers new and existing leases, but some negative changes at the MSA level (and for new leases being signed) suggest that multifamily didn't escape the economic slowdown unscathed.

Quarterly

Year	Qtr	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2015	4	\$1,262	1.0%	\$1,213	1.1%	4.3%
2016	1	\$1,274	1.0%	\$1,223	0.8%	4.3%
2016	2	\$1,292	1.4%	\$1,240	1.4%	4.2%
2016	3	\$1,308	1.2%	\$1,255	1.2%	4.2%
2016	4	\$1,313	0.4%	\$1,260	0.4%	4.2%
2017	1	\$1,325	0.9%	\$1,268	0.6%	4.4%
2017	2	\$1,345	1.5%	\$1,285	1.3%	4.4%
2017	3	\$1,364	1.4%	\$1,301	1.2%	4.4%
2017	4	\$1,374	0.7%	\$1,310	0.7%	4.6%
2018	1	\$1,389	1.1%	\$1,324	1.1%	4.7%
2018	2	\$1,411	1.6%	\$1,344	1.5%	4.7%
2018	3	\$1,431	1.4%	\$1,362	1.3%	4.7%
2018	4	\$1,446	1.0%	\$1,375	1.0%	4.8%
2019	1	\$1,455	0.6%	\$1,383	0.6%	4.7%
2019	2	\$1,475	1.4%	\$1,403	1.4%	4.6%
2019	3	\$1,489	0.9%	\$1,418	1.1%	4.6%
2019	4	\$1,497	0.5%	\$1,425	0.5%	4.7%
2020	1	\$1,504	0.5%	\$1,432	0.5%	4.7%
2020	2	\$1,499	-0.3%	\$1,428	-0.3%	4.9%
2020	3	\$1,477	-1.5%	\$1,406	-1.5%	5.0%
2020	4	\$1,462	-1.0%	\$1,391	-1.1%	5.2%
2021	1	\$1,460	-0.1%	\$1,390	-0.1%	5.3%
2021	2	\$1,477	1.2%	\$1,407	1.2%	5.3%
2021	3	\$1,591	7.7%	\$1,521	8.1%	4.8%
2021	4	\$1,639	3.0%	\$1,568	3.1%	4.8%
2022	1	\$1,680	2.5%	\$1,608	2.6%	4.7%
2022	2	\$1,728	2.9%	\$1,656	3.0%	4.5%
2022	3	\$1,759	1.8%	\$1,687	1.9%	4.4%
2022	4	\$1,794	2.0%	\$1,720	2.0%	4.5%

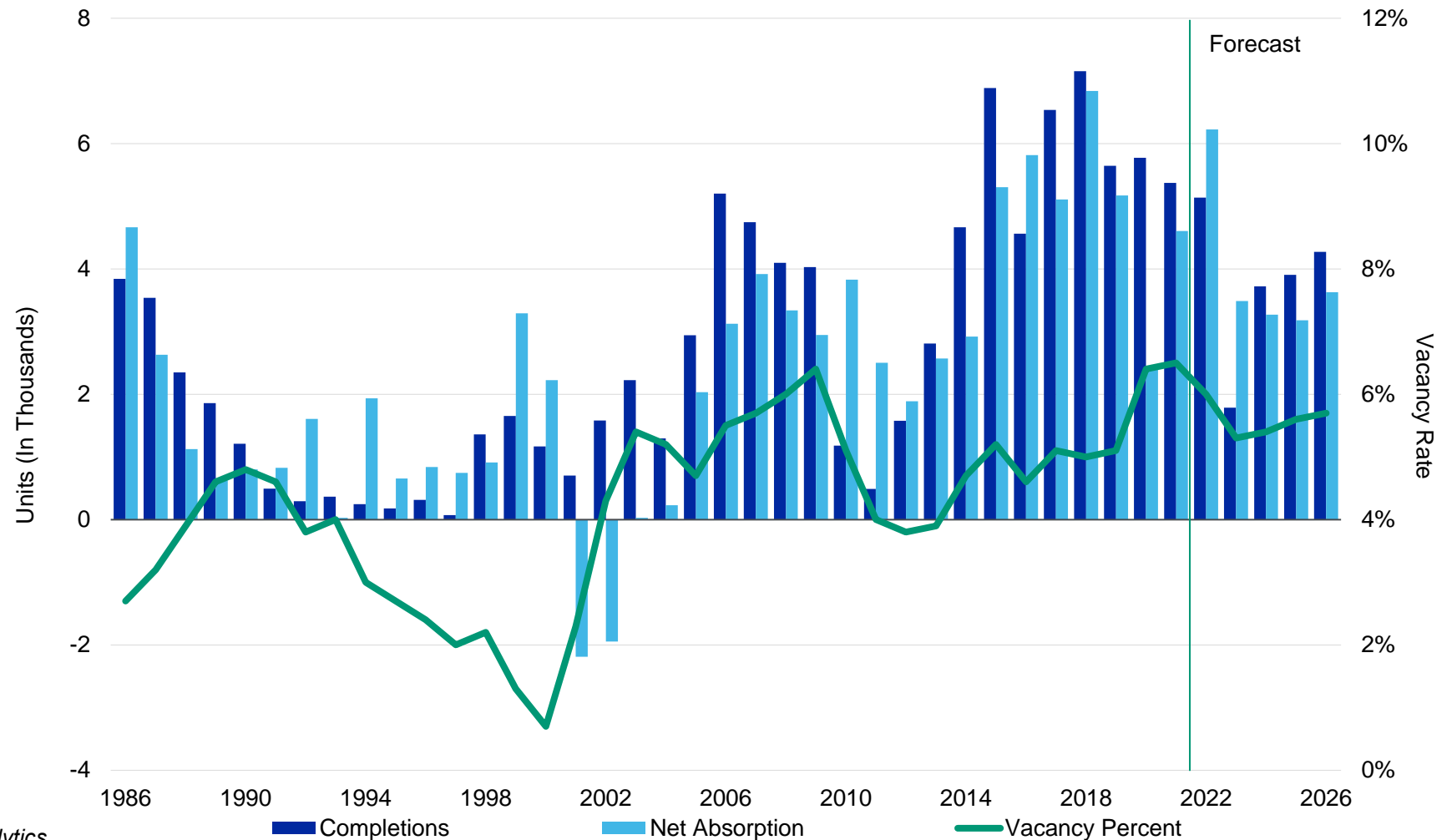
Annual

Year	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2012	\$1,107	3.5%	\$1,061	4.1%	4.1%
2013	\$1,146	3.5%	\$1,100	3.7%	4.0%
2014	\$1,193	4.1%	\$1,146	4.2%	3.9%
2015	\$1,262	5.8%	\$1,213	5.8%	3.9%
2016	\$1,313	4.0%	\$1,260	3.9%	4.1%
2017	\$1,374	4.6%	\$1,310	4.0%	4.7%
2018	\$1,446	5.2%	\$1,375	5.0%	4.9%
2019	\$1,497	3.5%	\$1,425	3.6%	4.8%
2020	\$1,462	-2.3%	\$1,391	-2.4%	4.8%
2021	\$1,639	12.1%	\$1,568	12.7%	4.4%
2022	\$1,794	9.5%	\$1,720	9.7%	4.1%
2023	\$1,822	1.6%	\$1,745	1.5%	4.6%
2024	\$1,876	3.0%	\$1,798	3.0%	4.7%
2025	\$1,936	3.2%	\$1,854	3.1%	4.9%
2026	\$2,000	3.3%	\$1,917	3.4%	4.9%

Source: Moody's Analytics REIS;
79 of 275 Apartment Markets

Boston Apartment Market

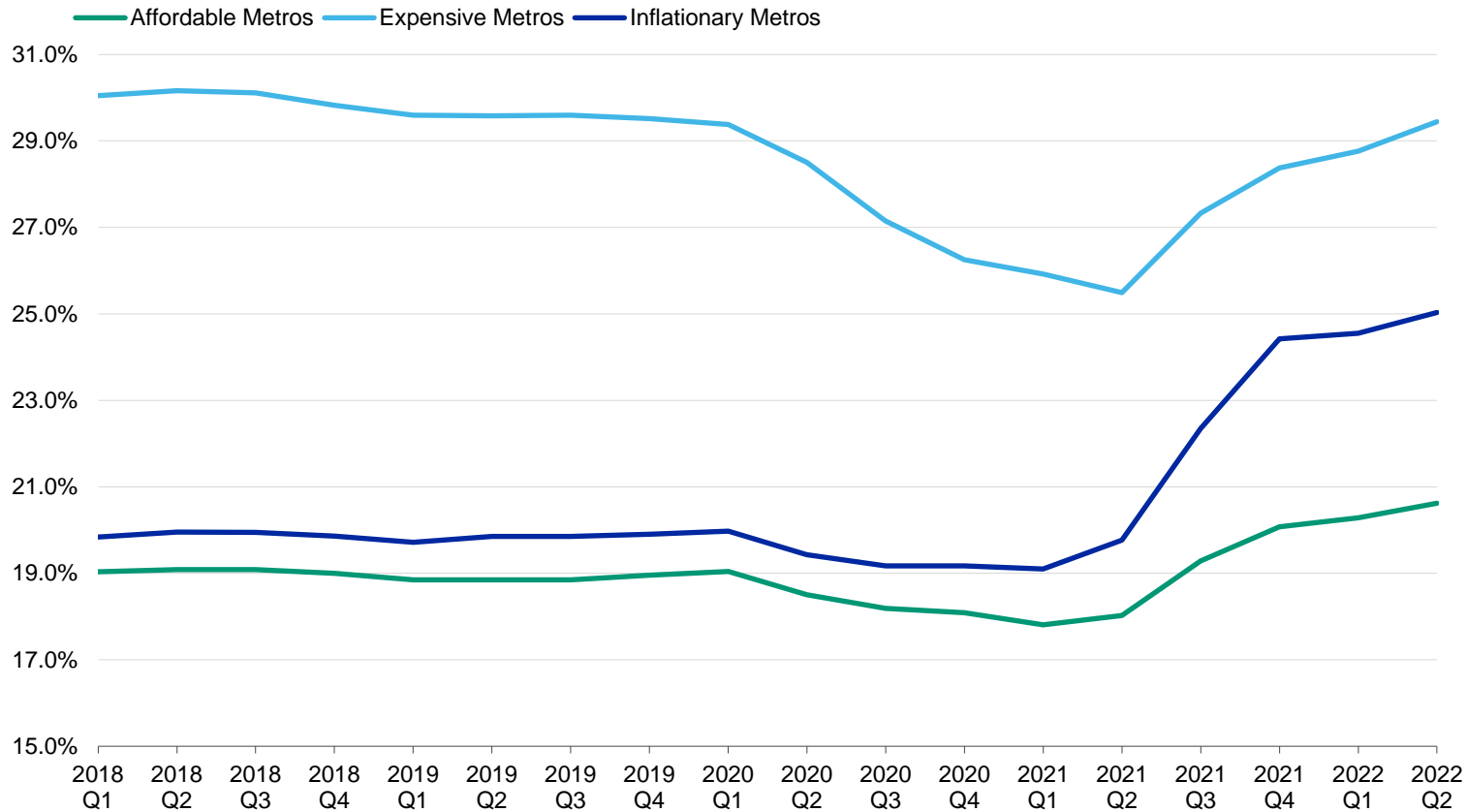
Supply & Demand Trends



Source: REIS, Real Estate Solutions by Moody's Analytics

National Apartment Market

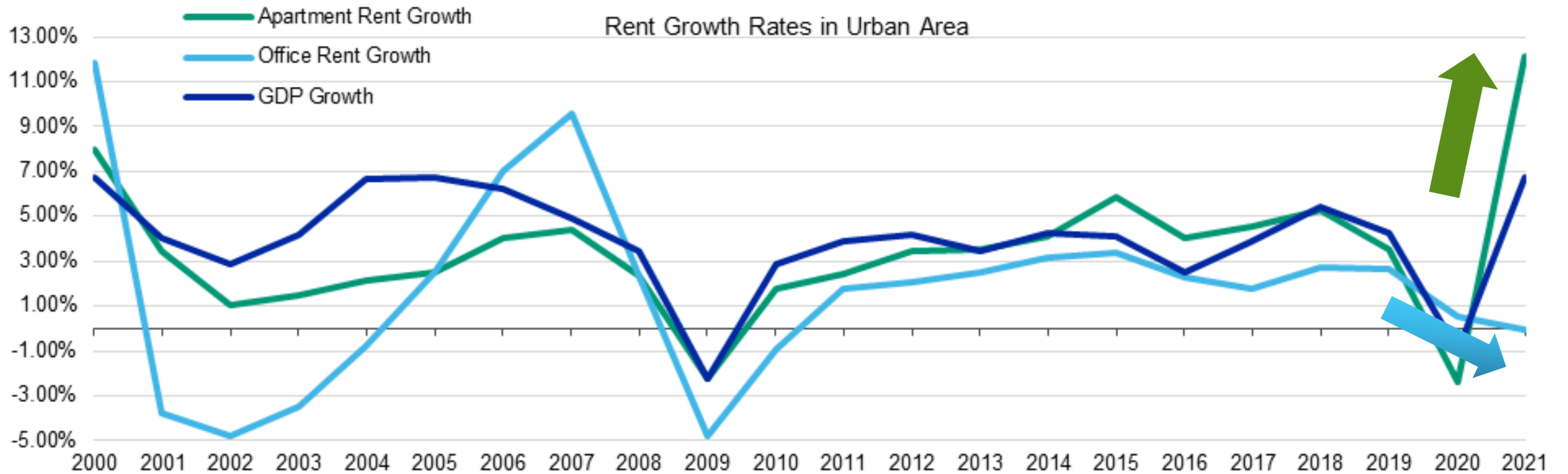
Affordability Concerns



Source: Moody's Analytics REIS

- » Slowing **sunbelt** rent growth has decreased upward pressure on the rent-to-income ratio.
- » “**Expensive**” metros realized accelerating rent growth bringing their ratio back to pre-pandemic levels
- » The **convergence of ratios** during the pandemic has reduced some affordability advantages and may be slowing migration

The Great Divergence



Source: Moody's Analytics CRE

National Office Market

Quarterly & Annual Market Conditions

- » The national vacancy rate hit 18.7% in the fourth quarter – higher than pandemic highs.
- » Very hard to value office investments at this point given general uncertainty around the future of work.

Quarterly

Year	Qtr	Net Absorption	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2015	4	12.7	\$31.28	0.9%	\$25.32	0.9%	16.5%
2016	1	8.2	\$31.57	0.9%	\$25.58	1.0%	16.4%
2016	2	5.1	\$31.76	0.6%	\$25.74	0.6%	16.4%
2016	3	2.9	\$31.89	0.4%	\$25.85	0.4%	16.4%
2016	4	12.9	\$32.00	0.3%	\$25.95	0.4%	16.3%
2017	1	5.7	\$32.16	0.5%	\$26.08	0.5%	16.3%
2017	2	4.9	\$32.26	0.3%	\$26.16	0.3%	16.4%
2017	3	5.6	\$32.38	0.4%	\$26.26	0.4%	16.4%
2017	4	7.3	\$32.57	0.6%	\$26.42	0.6%	16.4%
2018	1	6.2	\$32.85	0.9%	\$26.65	0.9%	16.5%
2018	2	3.0	\$33.09	0.7%	\$26.84	0.7%	16.6%
2018	3	5.2	\$33.22	0.4%	\$26.96	0.4%	16.7%
2018	4	9.7	\$33.46	0.7%	\$27.14	0.7%	16.7%
2019	1	5.1	\$33.59	0.4%	\$27.27	0.5%	16.7%
2019	2	5.3	\$33.88	0.9%	\$27.50	0.8%	16.8%
2019	3	10.3	\$34.15	0.8%	\$27.73	0.8%	16.8%
2019	4	15.4	\$34.35	0.6%	\$27.90	0.6%	16.8%
2020	1	0.8	\$34.50	0.4%	\$28.02	0.4%	17.0%
2020	2	3.4	\$34.49	0.0%	\$27.93	-0.3%	17.1%
2020	3	-4.3	\$34.56	0.2%	\$27.89	-0.1%	17.4%
2020	4	-6.4	\$34.53	-0.1%	\$27.75	-0.5%	17.8%
2021	1	-13.5	\$34.44	-0.3%	\$27.54	-0.8%	18.2%
2021	2	-2.0	\$34.46	0.1%	\$27.48	-0.2%	18.5%
2021	3	23.0	\$34.50	0.1%	\$27.54	0.2%	18.2%
2021	4	12.9	\$34.53	0.1%	\$27.58	0.1%	18.1%
2022	1	6.2	\$34.61	0.2%	\$27.65	0.3%	18.1%
2022	2	0.0	\$34.89	0.8%	\$27.87	0.8%	18.4%
2022	3	3.1	\$35.05	0.5%	\$28.00	0.5%	18.5%
2022	4	-7.1	\$35.14	0.3%	\$28.04	0.1%	18.7%

Annual

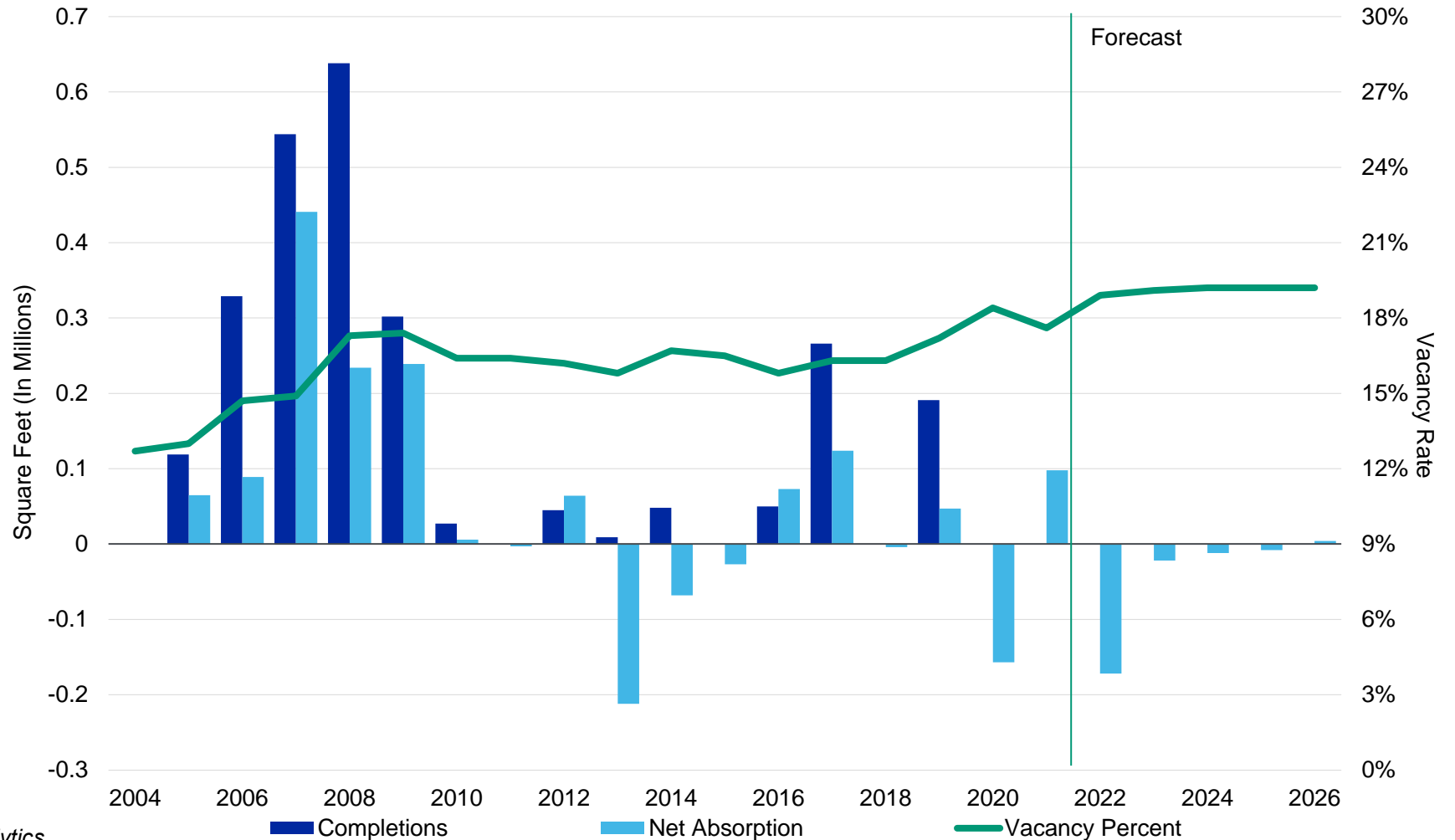
Year	Net Absorption	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2012	15.4	\$28.60	2.1%	\$23.09	2.3%	17.2%
2013	25.1	\$29.32	2.5%	\$23.69	2.6%	17.0%
2014	29.3	\$30.25	3.2%	\$24.45	3.2%	16.9%
2015	38.0	\$31.28	3.4%	\$25.32	3.6%	16.5%
2016	29.1	\$32.00	2.3%	\$25.95	2.5%	16.3%
2017	23.4	\$32.57	1.8%	\$26.42	1.8%	16.4%
2018	24.1	\$33.46	2.7%	\$27.14	2.7%	16.7%
2019	35.8	\$34.35	2.7%	\$27.90	2.8%	16.8%
2020	-6.5	\$34.53	0.5%	\$27.75	-0.5%	17.8%
2021	20.4	\$34.53	0.0%	\$27.58	-0.6%	18.1%
2022	2.1	\$35.14	1.8%	\$28.04	1.7%	18.7%
2023	17.1	\$35.73	1.7%	\$28.48	1.6%	18.8%
2024	30.3	\$36.32	1.7%	\$29.00	1.8%	18.8%
2025	29.6	\$36.95	1.7%	\$29.58	2.0%	18.6%
2026	32.8	\$37.62	1.8%	\$30.25	2.3%	18.3%

Source: Moody's Analytics;
79 of 190 Office Markets

Net absorption figures are in millions of square feet.

Providence Office Market

Supply & Demand Trends



Source: REIS, Real Estate Solutions by Moody's Analytics

National Retail Market

Quarterly & Annual Market Conditions

Quarterly

Year	Qtr	Net Absorption	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2015	4	2.6	\$20.11	0.5%	\$17.55	0.5%	10.0%
2016	1	3.1	\$20.22	0.5%	\$17.66	0.6%	9.9%
2016	2	4.0	\$20.30	0.4%	\$17.73	0.4%	9.8%
2016	3	1.1	\$20.39	0.4%	\$17.81	0.5%	9.9%
2016	4	4.5	\$20.48	0.4%	\$17.90	0.5%	9.9%
2017	1	3.0	\$20.56	0.4%	\$17.98	0.4%	9.9%
2017	2	1.2	\$20.66	0.5%	\$18.07	0.5%	10.0%
2017	3	2.2	\$20.76	0.5%	\$18.16	0.5%	10.0%
2017	4	3.3	\$20.88	0.6%	\$18.27	0.6%	10.0%
2018	1	1.0	\$20.97	0.4%	\$18.36	0.5%	10.0%
2018	2	-4.0	\$21.03	0.3%	\$18.41	0.3%	10.2%
2018	3	2.7	\$21.13	0.5%	\$18.49	0.4%	10.2%
2018	4	1.5	\$21.22	0.4%	\$18.57	0.4%	10.2%
2019	1	1.0	\$21.34	0.6%	\$18.68	0.6%	10.2%
2019	2	2.7	\$21.42	0.4%	\$18.76	0.4%	10.2%
2019	3	2.4	\$21.48	0.3%	\$18.82	0.3%	10.2%
2019	4	0.7	\$21.50	0.1%	\$18.84	0.1%	10.2%
2020	1	1.4	\$21.54	0.2%	\$18.87	0.2%	10.2%
2020	2	-0.3	\$21.44	-0.5%	\$18.76	-0.6%	10.3%
2020	3	-2.3	\$21.40	-0.2%	\$18.69	-0.4%	10.4%
2020	4	-1.6	\$21.34	-0.3%	\$18.61	-0.4%	10.5%
2021	1	-0.2	\$21.31	-0.1%	\$18.57	-0.2%	10.6%
2021	2	1.6	\$21.33	0.1%	\$18.59	0.1%	10.6%
2021	3	5.1	\$21.36	0.1%	\$18.64	0.3%	10.4%
2021	4	2.3	\$21.36	0.0%	\$18.66	0.1%	10.3%
2022	1	0.7	\$21.38	0.1%	\$18.68	0.1%	10.3%
2022	2	2.1	\$21.40	0.1%	\$18.70	0.1%	10.3%
2022	3	0.5	\$21.41	0.0%	\$18.71	0.1%	10.3%
2022	4	0.7	\$21.45	0.2%	\$18.74	0.2%	10.3%

Neighborhood & Community Shopping Centers

Annual

Year	Net Absorption	Asking Rent	Percent Change	Effective Rent	Percent Change	Vacancy Rate
2012	11.3	\$19.08	0.5%	\$16.59	0.5%	10.7%
2013	12.7	\$19.35	1.4%	\$16.83	1.4%	10.4%
2014	13.5	\$19.70	1.8%	\$17.17	2.0%	10.2%
2015	12.3	\$20.11	2.1%	\$17.55	2.2%	10.0%
2016	12.7	\$20.48	1.8%	\$17.90	2.0%	9.9%
2017	9.7	\$20.88	2.0%	\$18.27	2.1%	10.0%
2018	1.2	\$21.22	1.6%	\$18.57	1.6%	10.2%
2019	6.7	\$21.50	1.3%	\$18.84	1.5%	10.2%
2020	-2.7	\$21.34	-0.7%	\$18.61	-1.2%	10.5%
2021	8.7	\$21.36	0.1%	\$18.66	0.3%	10.3%
2022	4.0	\$21.45	0.4%	\$18.74	0.4%	10.3%
2023	6.2	\$21.66	1.0%	\$19.00	1.4%	10.2%
2024	8.1	\$21.99	1.5%	\$19.32	1.7%	10.1%
2025	7.3	\$22.38	1.8%	\$19.72	2.1%	10.0%
2026	8.0	\$22.79	1.8%	\$20.15	2.2%	10.0%

Neighborhood & Community Shopping Centers

Year	Quarter	Asking Rent	Percent Change	Vacancy Rate
2012	Y	\$39.31	1.0%	8.6%
2013	Y	\$39.95	1.6%	7.9%
2014	Y	\$40.66	1.8%	8.0%
2015	Y	\$41.54	2.2%	7.8%
2016	Y	\$42.38	2.0%	7.8%
2017	Y	\$43.00	1.5%	8.3%
2018	Y	\$43.35	0.8%	9.0%
2019	Y	\$43.84	1.1%	9.7%
2020	Y	\$43.05	-1.8%	10.5%
2021	Y	\$43.26	0.5%	11.2%
2022	Q4	\$43.34	0.1%	11.2%

Regional/Super Regional Malls

Source: Moody's Analytics;
77 of 190 Retail Markets
Net absorption figures are in millions of square feet.

National Hotel Market

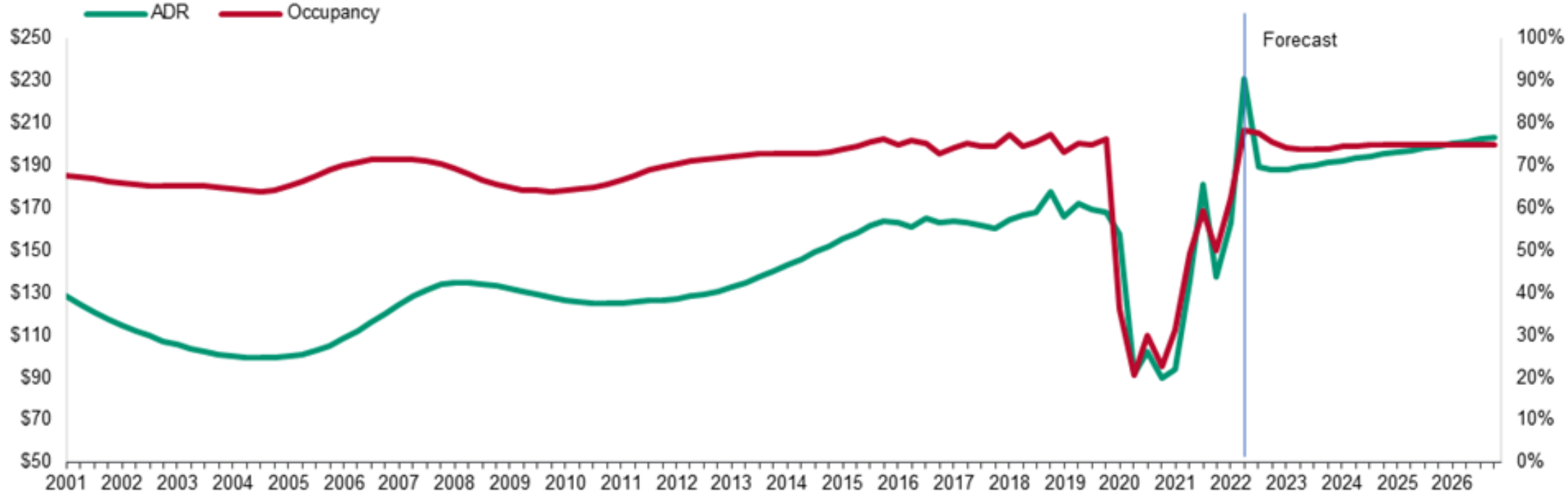
Quarterly Market Conditions

- Hotel performance metrics recovered (massively) in the first half of 2022. ADRs are now at record highs – much higher than pre-pandemic levels.
- Occupancies hit a very tight 67.6% in the second quarter.
- Will there be a climbdown from these stratospheric (record) highs? Back down to historic averages? Or will this persist and be the ‘new normal’ for survivors of the last two years, which has been positively Darwinian for the hotel sector?

Source: Moody's Analytics

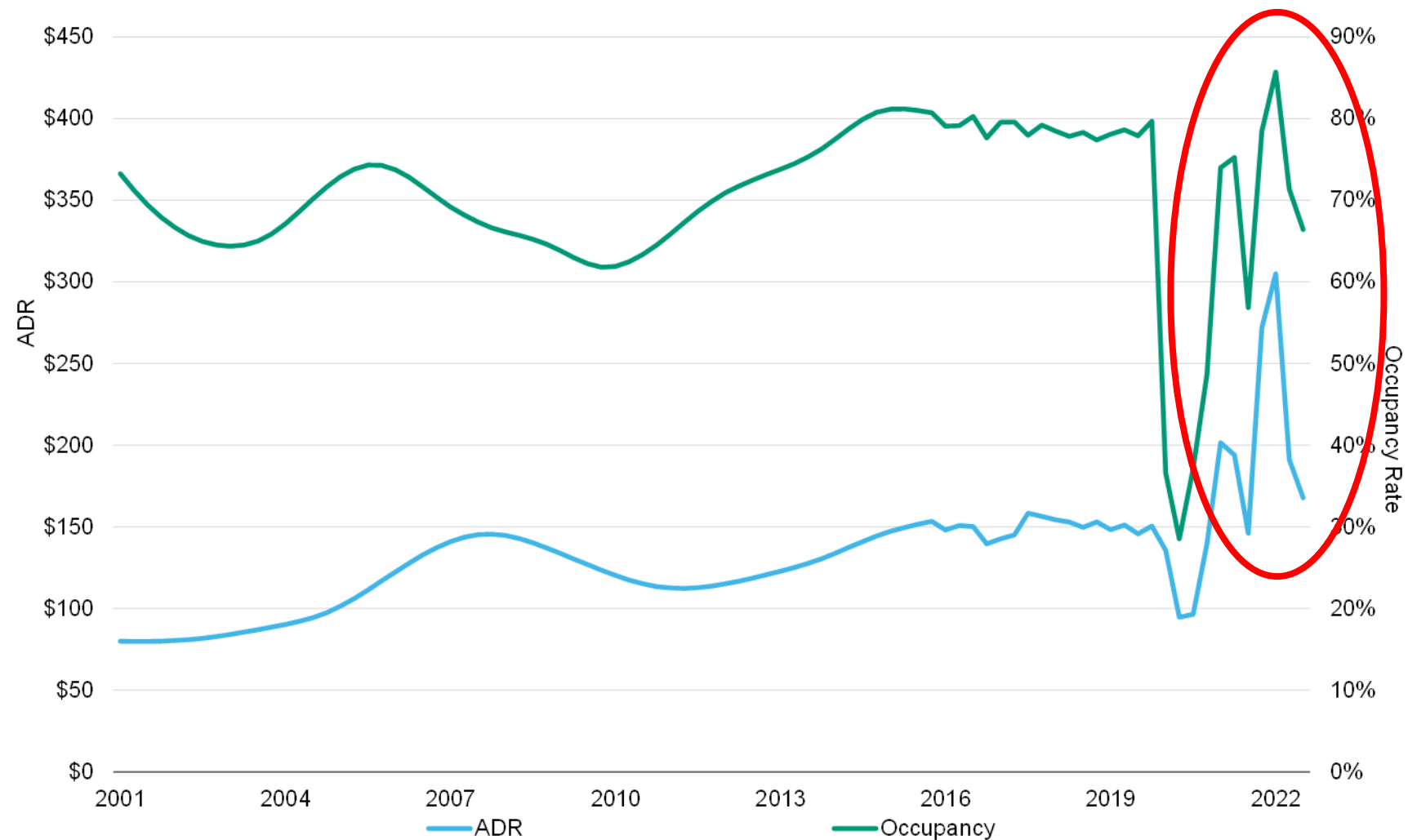
Year	Qtr	ADR	Percent Change	Occupancy Rate	PCT PT Change	RevPAR	Percent Change
2017	3	\$124	0.7%	66.7%	1.4%	\$82	2.8%
2017	4	\$125	1.4%	65.4%	-1.3%	\$82	-0.6%
2018	1	\$127	1.0%	65.6%	0.2%	\$83	1.3%
2018	2	\$127	0.2%	65.7%	0.1%	\$83	0.3%
2018	3	\$127	0.3%	64.0%	-1.7%	\$81	-2.3%
2018	4	\$127	-0.4%	65.5%	1.5%	\$83	2.0%
2019	1	\$127	0.6%	65.2%	-0.3%	\$83	0.2%
2019	2	\$128	0.1%	65.3%	0.1%	\$83	0.3%
2019	3	\$127	-0.4%	65.1%	-0.2%	\$83	-0.7%
2019	4	\$128	0.8%	66.0%	0.9%	\$85	2.2%
2020	1	\$106	-17.3%	36.7%	-29.3%	\$39	-54.0%
2020	2	\$88	-16.9%	38.4%	1.7%	\$34	-13.1%
2020	3	\$93	5.9%	45.4%	7.0%	\$42	25.2%
2020	4	\$86	-7.5%	34.6%	-10.8%	\$30	-29.5%
2021	1	\$100	16.4%	52.1%	17.5%	\$52	75.2%
2021	2	\$123	22.1%	64.0%	11.9%	\$78	50.0%
2021	3	\$126	2.9%	59.8%	-4.2%	\$75	-3.9%
2021	4	\$128	1.7%	51.9%	-7.9%	\$67	-11.7%
2022	1	\$140	9.3%	63.3%	11.4%	\$89	33.3%
2022	2	\$149	6.3%	67.6%	4.3%	\$101	13.5%
2022	3	\$142	-4.9%	67.4%	-0.2%	\$96	-5.2%
2022	4	\$140	-1.1%	65.7%	-1.7%	\$92	-3.6%
2023	1	\$140	0.0%	64.9%	-0.8%	\$91	-1.3%
2023	2	\$141	0.6%	65.5%	0.6%	\$92	1.5%

Boston ADRs and Occupancies



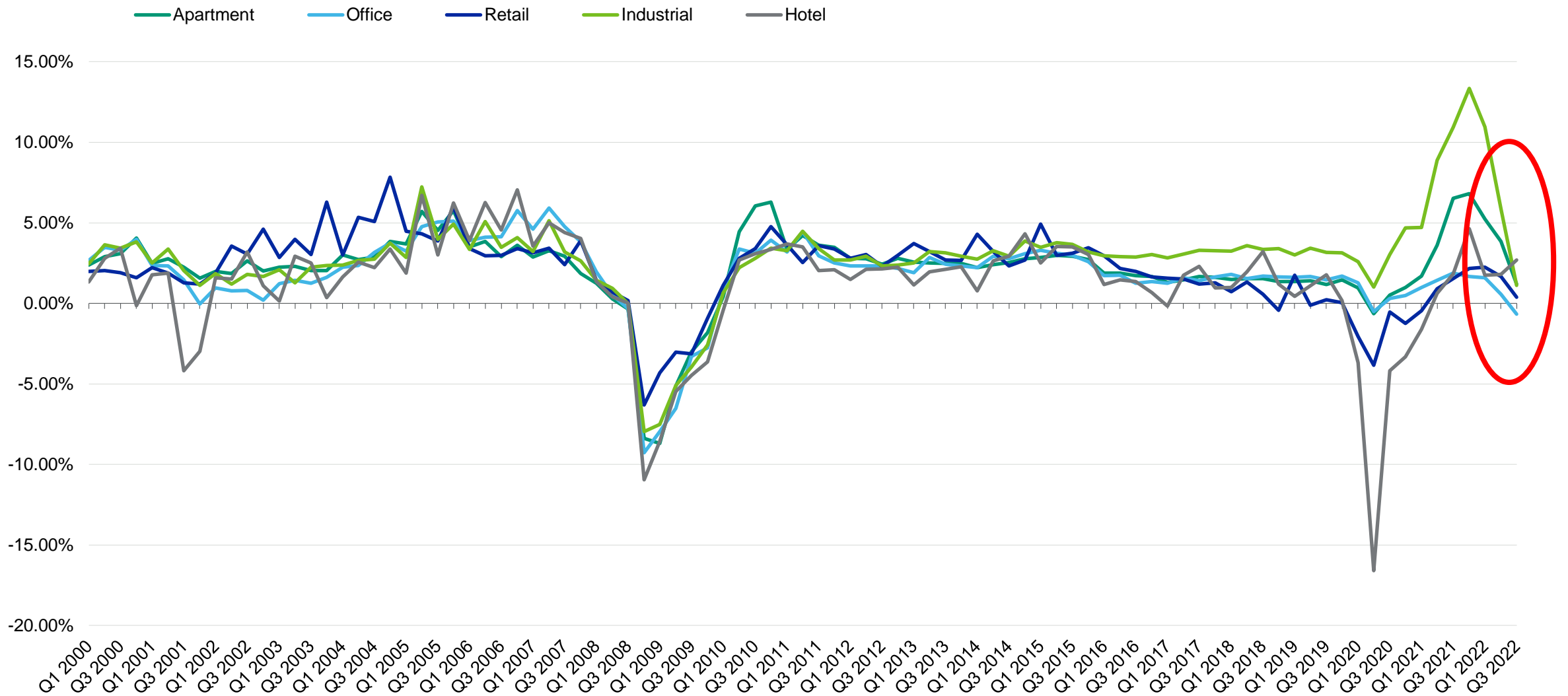
Source: Kalibri, Moody's Analytics CRE

Why Mean Reversion? The Case of Miami



Source: Kalibri, Moody's Analytics CRE

But What About Values?



Source: National council of Real Estate Investment Fiduciaries (NCREIF)

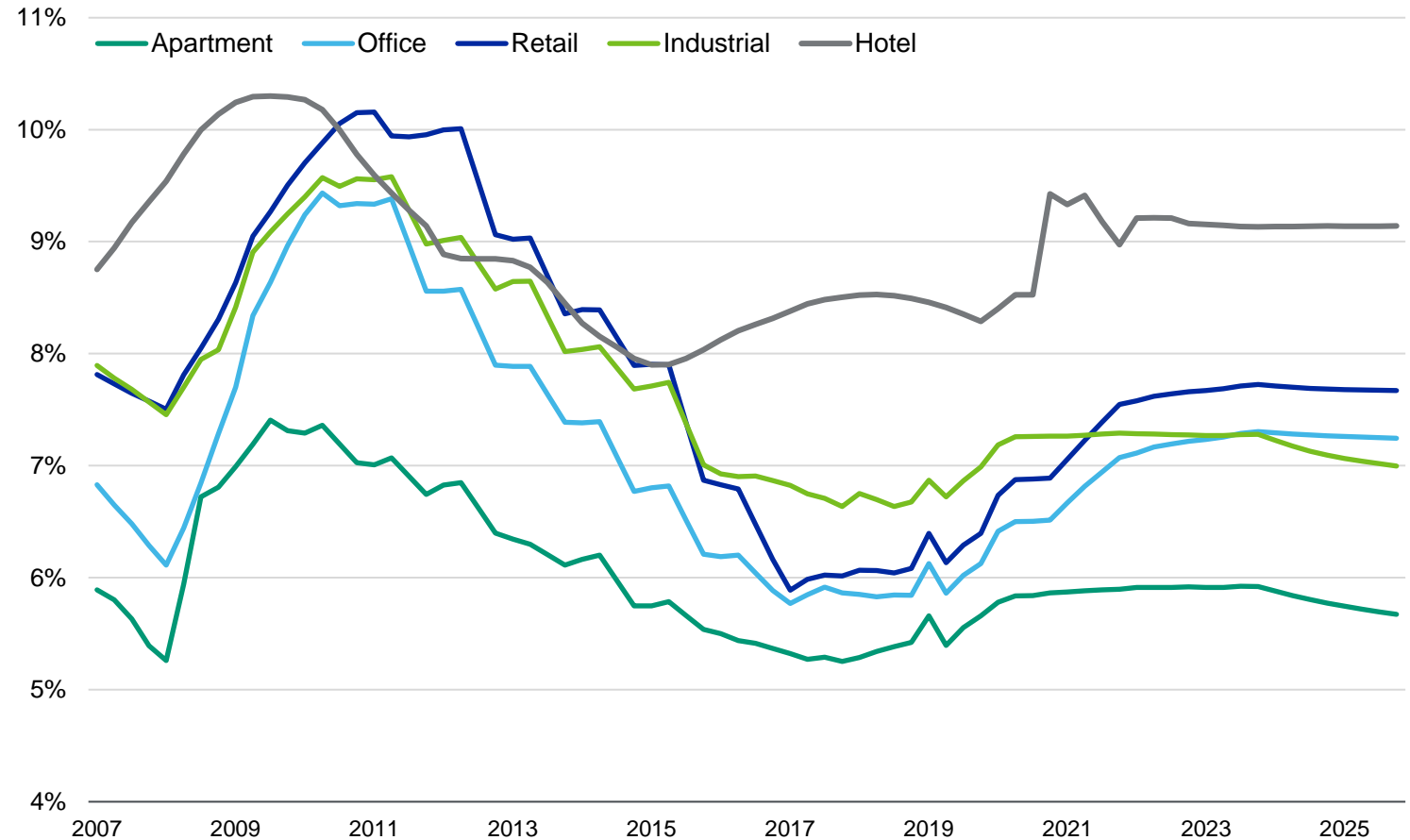
3

Interest Rates, Capital Markets, and Transaction Activity

Cap Rate Forecasts

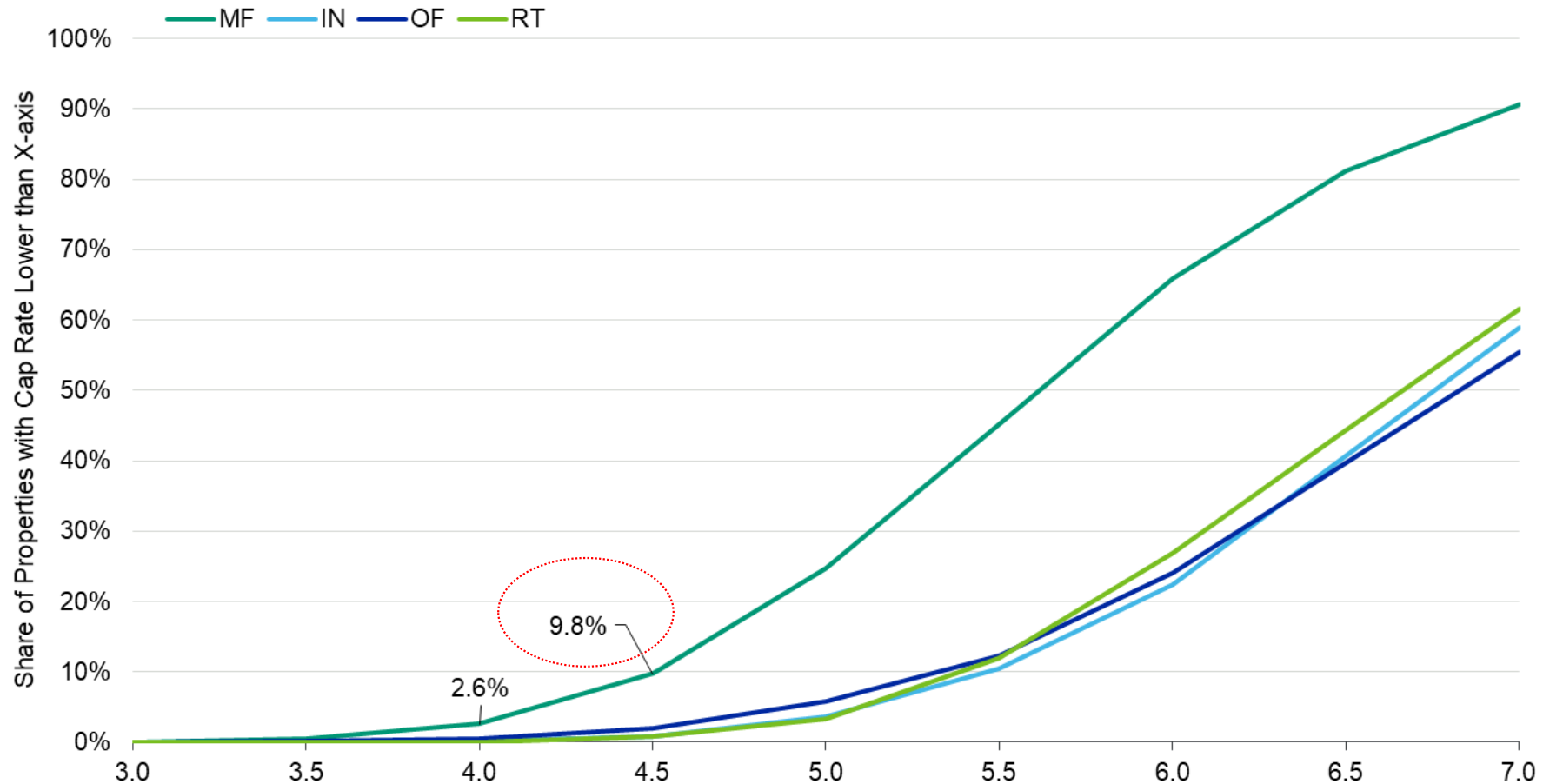
General Flatness – but Beware the Fed

- » Cap rates expected to post modest increases through 2023.
- » But what is our 10 yr TSY outlook and when does that risk-free benchmark peak?
- » What are the push and pull dynamics around cap rate trends? Where do you believe things will end up?



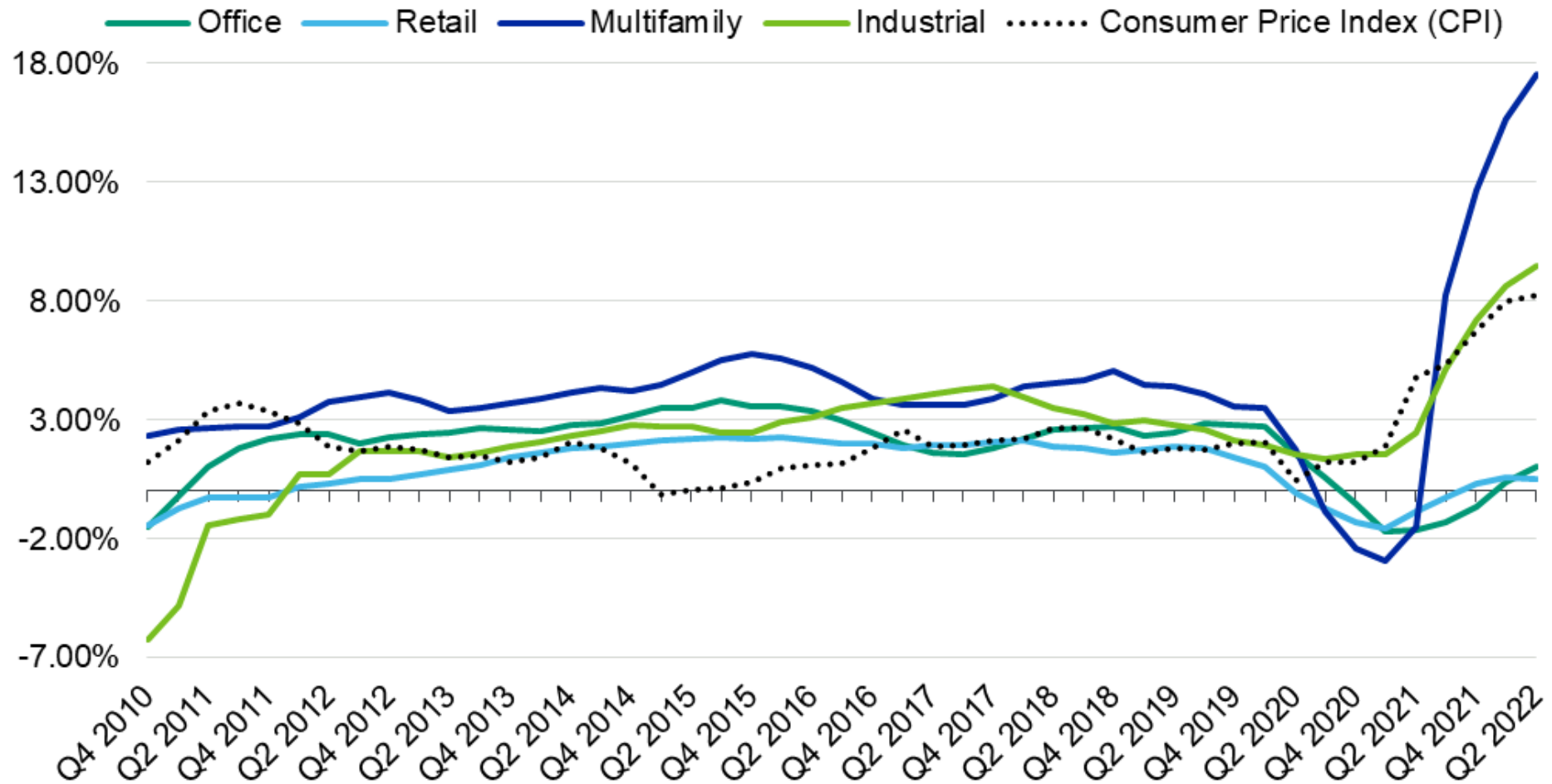
Source: Moody's Analytics REIS

MF cap rates skew low



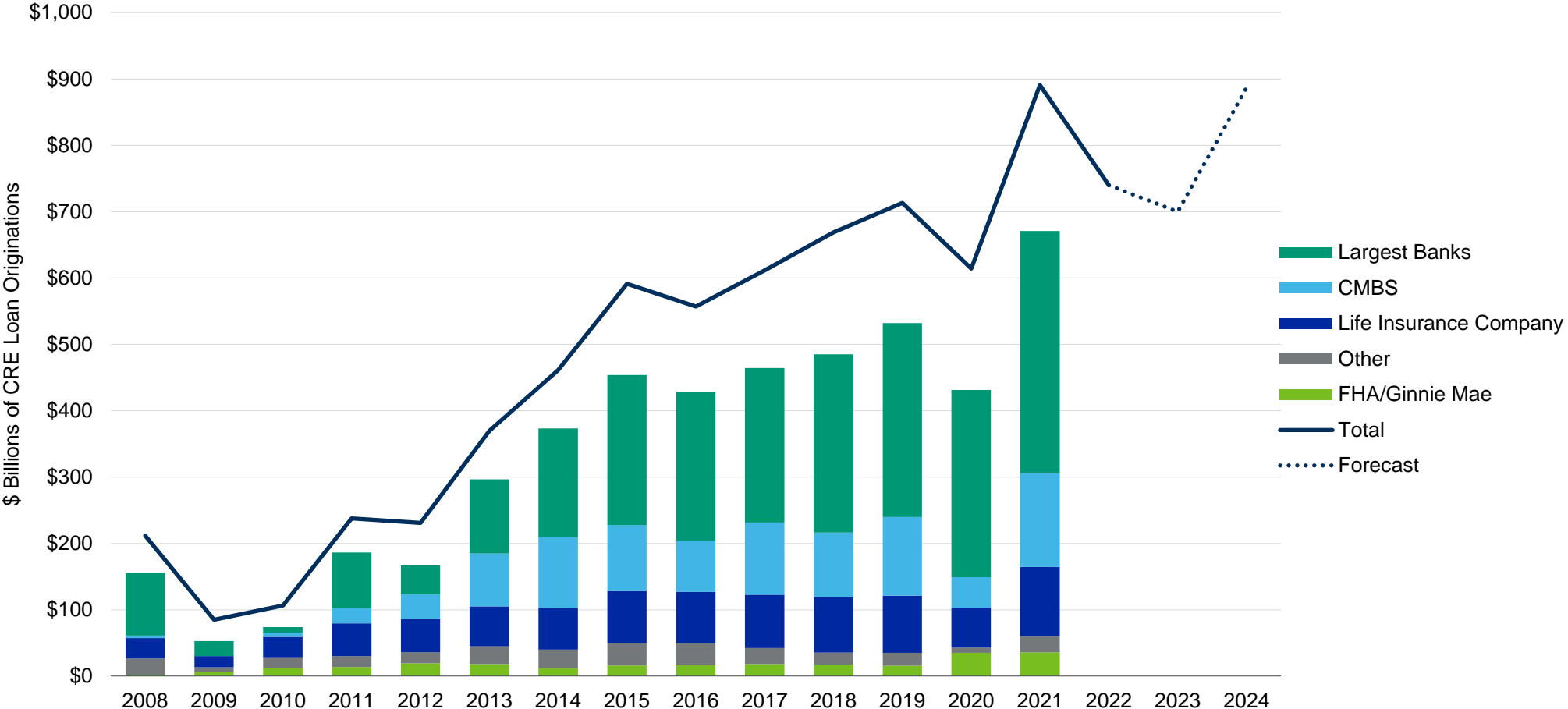
Source: Moody's Analytics CRE/CMBS. Data thru March 15, 2022.

Rent Growth and Sticky Cap Rates Buoy Values



Sources: Moody's Analytics CRE, Bureau of Labor and Statistics (BLS)

The Latest Forecasts for CRE/MF Originations



Sources: Mortgage Bankers Association, Moody's Analytics CRE

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