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Stress on office real estate testing some local governments' budgetary resilience

September 2024



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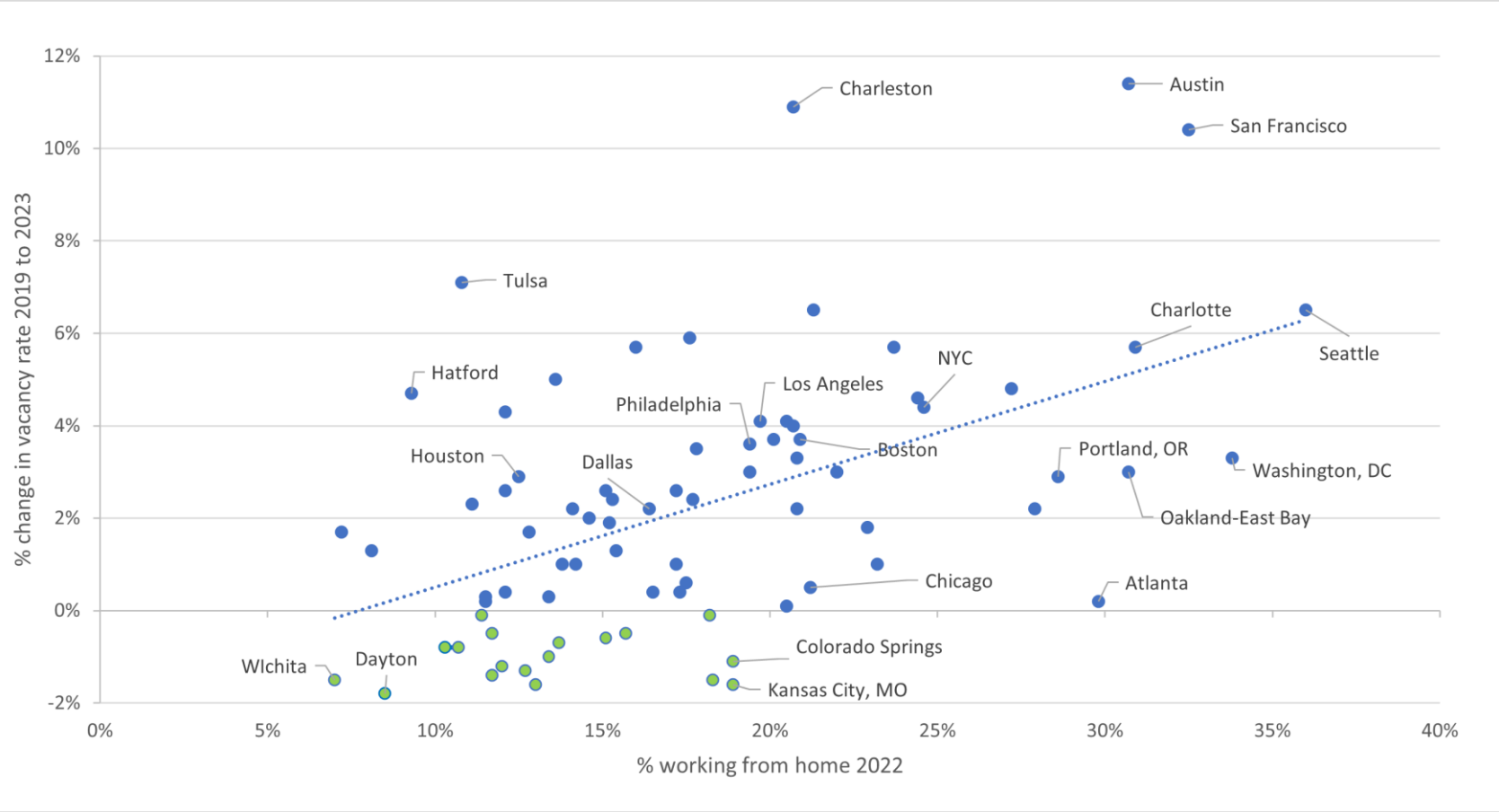
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Vacancy change vs. work from home

City metros vacancy rate increased by 2.3% for each 10% of workers that work from home

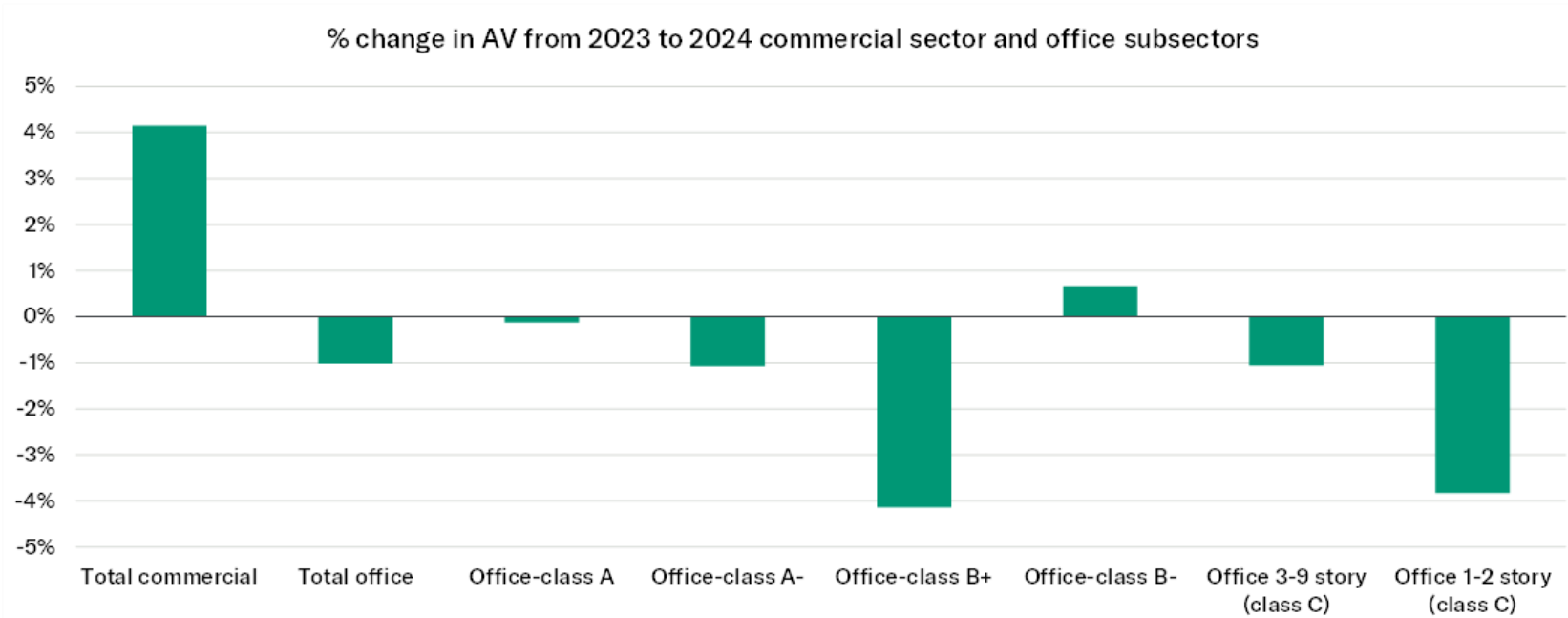


Note: City metro areas

Sources: Moody's CRE, US Census Bureau

Commercial assessed value declines expected in 2025

For example, Boston's 2024 total commercial assessed value increased, but stress in the office market is evident to varied degrees

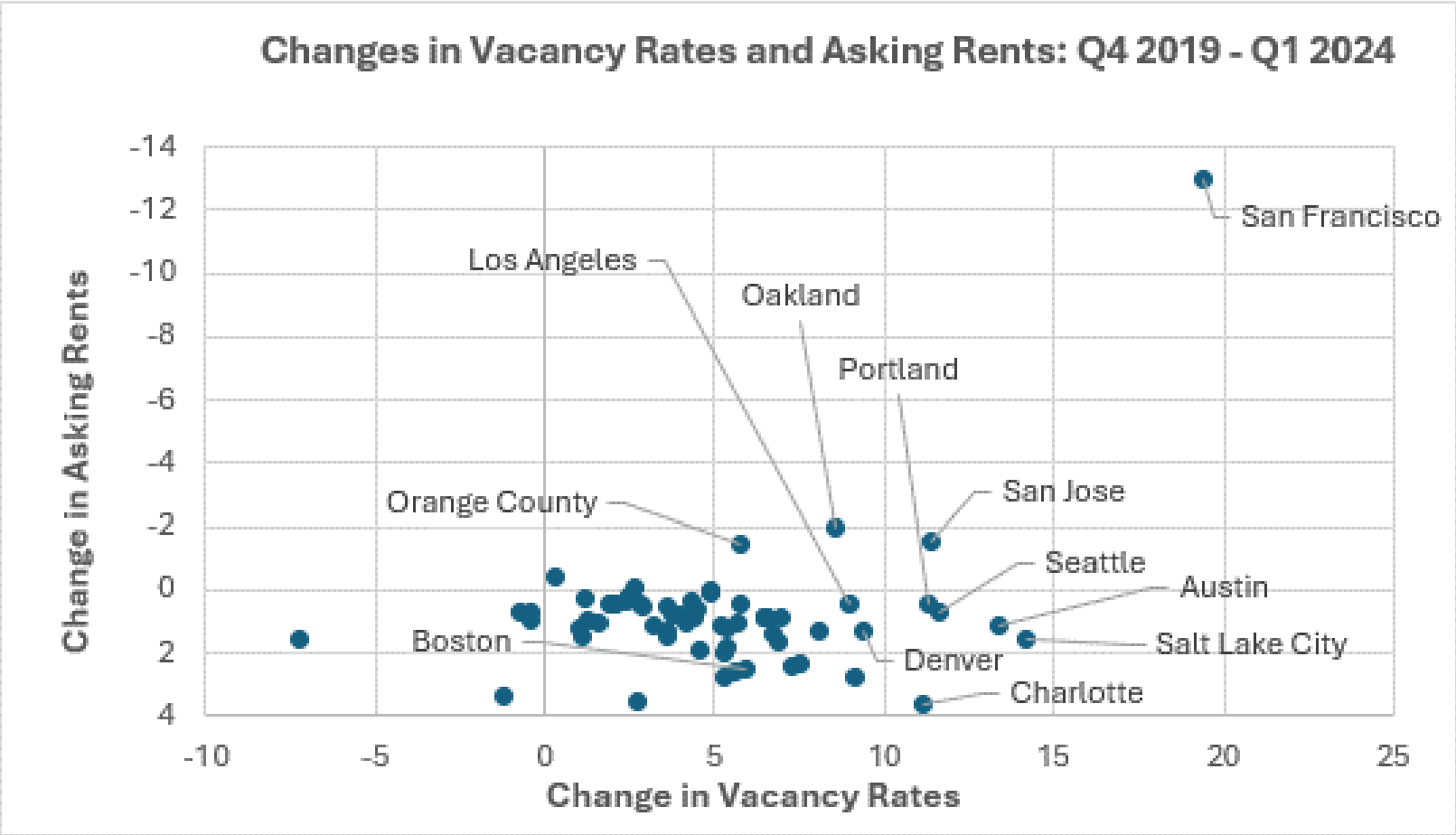


Boston's commercial / office type sectors	% of 2024 total assessed value
Total commercial	33.33%
Total office	16.30%
Office-class A	8.42%
Office-class A-	3.30%
Office-class B+	2.38%
Office-class B-	0.42%
Office 3-9 story (class C)	0.99%
Office 1-2 story (class C)	0.17%

Source: City of Boston

Changes in vacancy rates and asking rents

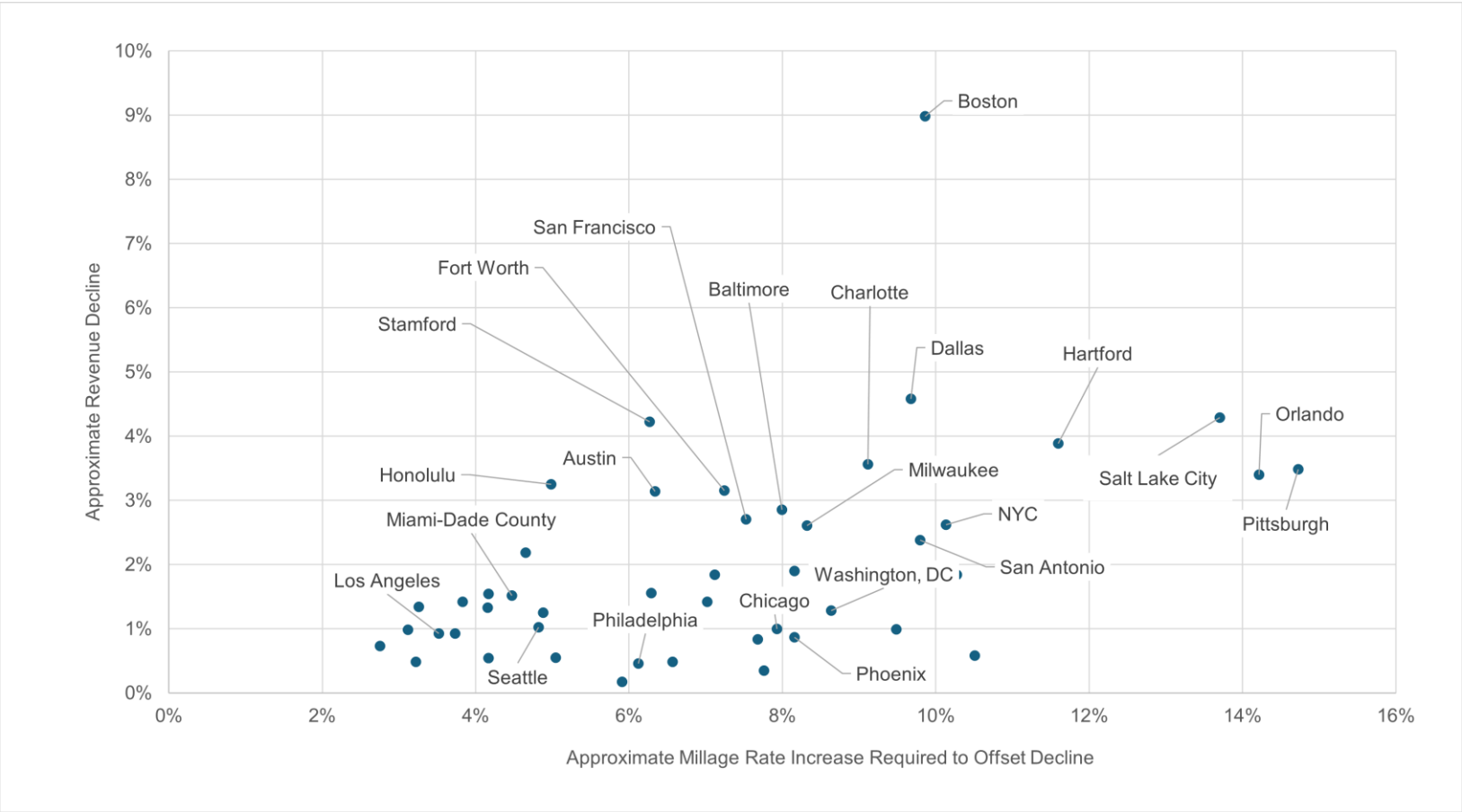
Vacancy rates across all markets have increased by around 7% since 2019



Sources: CBRE EA and Moody's Ratings

CRE stress test of US cities with large office markets

Stress test indicates low to moderate revenue vulnerability among major US cities



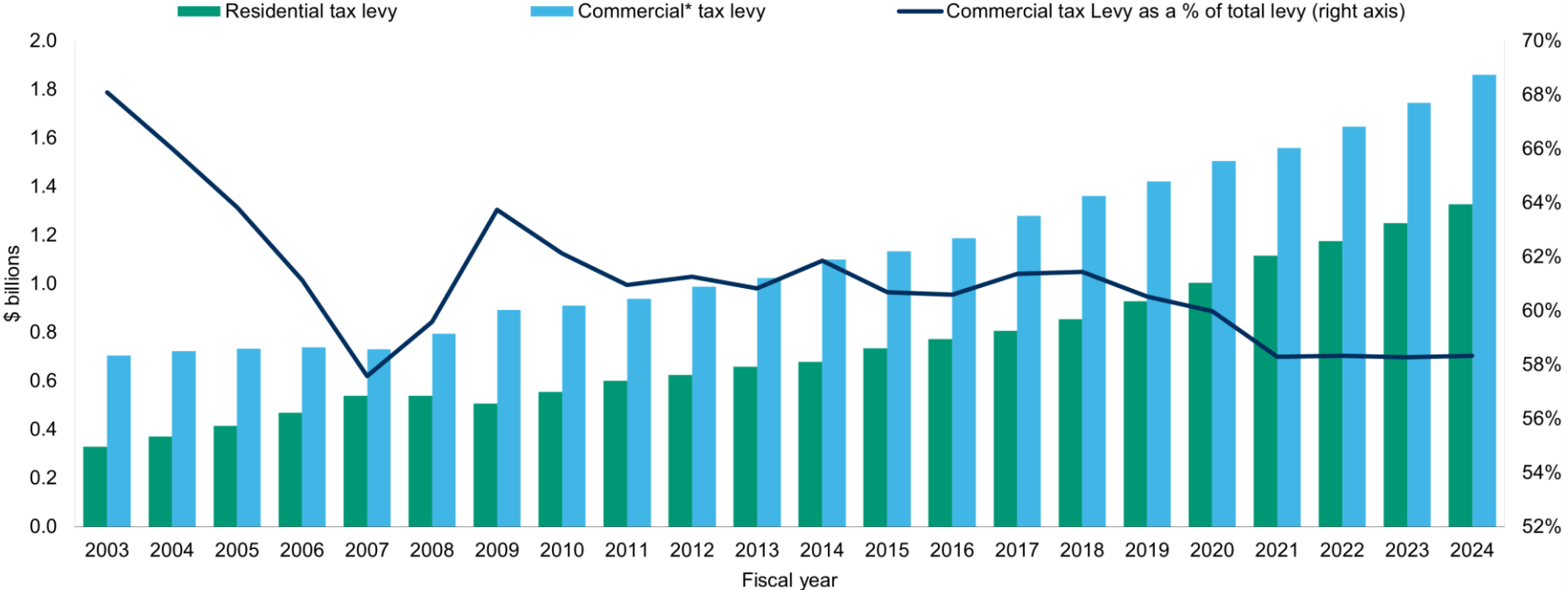
Note: Assumes a 20% decline in total assessed value or 40% decline in office property value (if available)

Sources: Moody's Ratings and cities' audited financial reports

Boston

Vulnerable from weak office market and high reliance on property taxes from commercial property

Boston's commercial sector represents around 60% of total property tax revenue



Commercial tax levy includes industrial and personal property sectors
Source: Massachusetts Division of Local Services

San Francisco

Vulnerable from significant stress in vacancy rates and rents compared to others across the US

San Francisco has the highest vacancy rates in the nation, as well as the largest drops in asking rents
New office construction contributed to vacancies at the start of the pandemic

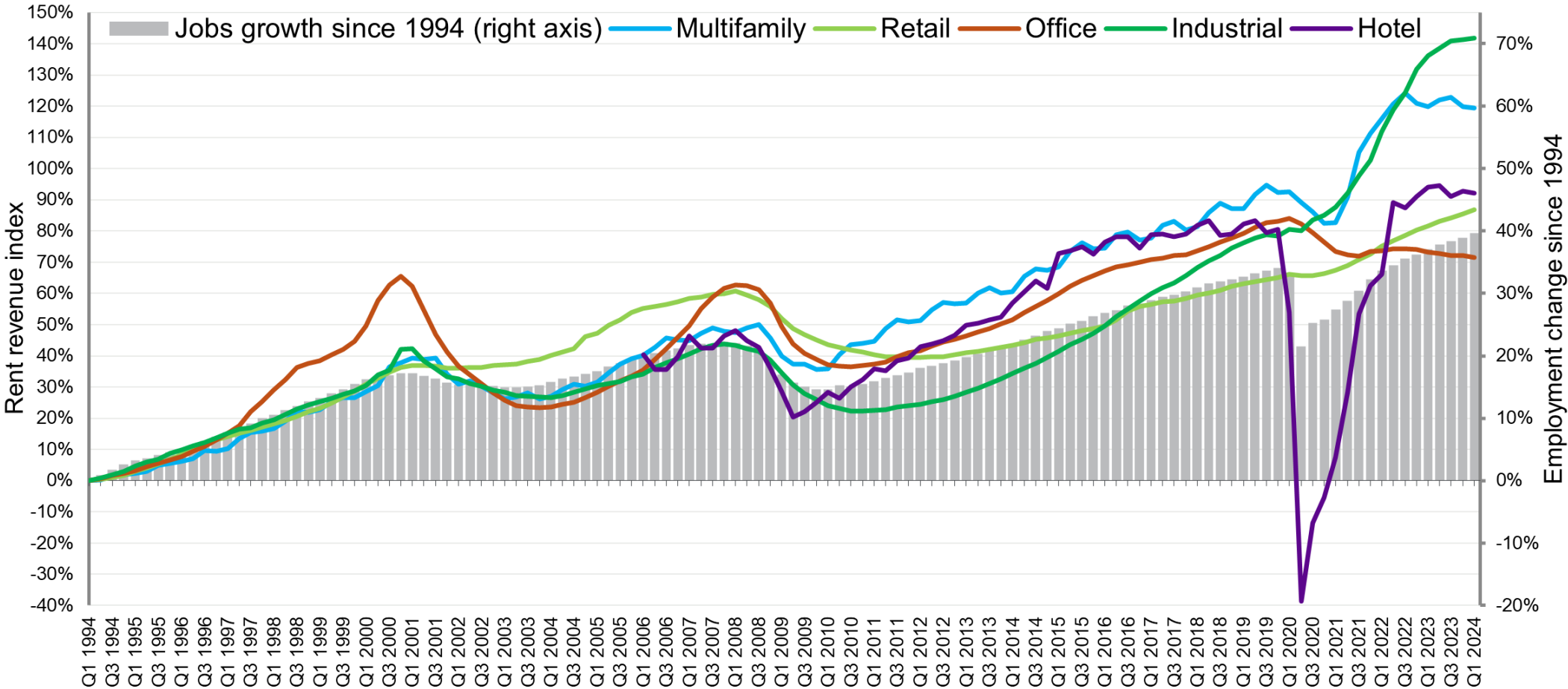
Submarket	Office Inventory (million SF)	Net New Inventory since 2017	Vacancy Rate (Q4 2023)	Change in Vacancy Rate since Q4 2019	Asking Rents (Q4 2023)	Change in Asking Rents since Q4 2019
North Waterfront/ Jackson Square	3.5	-	29.2%	23.5%	52.19	-10.89
Civic Center/ Van Ness	1.3	-	36.3%	16.1%	49.93	-6.31
Union Square*	2.1	0.2	24.4%	14.9%	37.84	-13.77
Financial District*	28.3	0.4	29.2%	24.9%	48.44	-13.96
South Financial District*	25.2	2.9	24.6%	22.0%	50.14	-12.31
South of Market West/ Yerba Buena	4.7	0.7	44.5%	43.4%	43.14	-10.75
South of Market*	5.6	0.9	27.2%	24.3%	41.82	-19.29
Mission Bay/ China Basin/ Potrero Hill	5.7	2.9	22.9%	21.4%	46.28	-16.40
Total	76.4	7.9	28.0%	24.2%	47.78	-13.19
* Central Business District	61.2	4.3	27.0%	23.3%	48.15	-13.29

The city defines its downtown as including the Financial District, South of Market and Union Square.

Source: CBRE Econometric Advisors

Assessing weak CRE markets and potential mitigants

Employment growth has historically correlated with improvement in CRE metrics



Sources: CBRE EA, BLS, Moody's Ratings

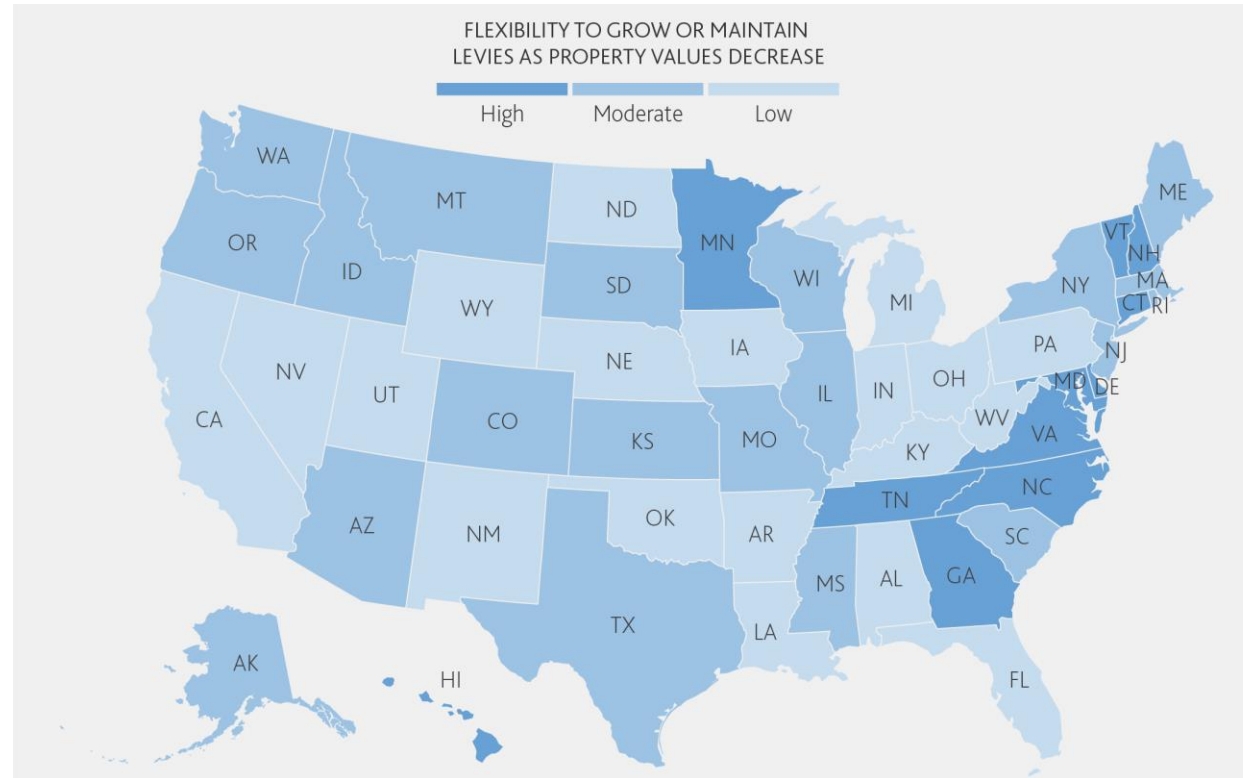
Mitigants to high office vacancies

Large office markets: size, employment and magnitude matter

Market	Inventory square feet (millions)			Office-using services jobs (thousands)			Total vacancy			Asking rents (P SF)			Taking rents (P SF)		
	Q4 2019	Q2 2024	Change	Q4 2019	Q2 2024	Change	Q4 2019	Q2 2024	Change pts	Q4 2019	Q2 2024	Change	Q4 2019	Q2 2024	Change
Atlanta	147.9	157.5	6.5%	835	905	8.4%	14.3%	21.8%	7.5	\$27.37	\$29.39	7.4%	\$25.60	\$25.97	1.4%
Austin	50.4	62.5	23.9%	321	433	34.9%	7.2%	21.9%	14.7	\$35.95	\$38.04	5.8%	\$34.13	\$33.54	-1.7%
Boston	199.0	211.8	6.4%	934	982	5.1%	8.7%	17.1%	8.4	\$43.48	\$46.17	6.2%	\$39.11	\$40.44	3.4%
Charlotte	49.3	55.7	12.9%	346	385	11.2%	9.6%	20.7%	11.1	\$30.42	\$34.39	13.1%	\$29.07	\$31.86	9.6%
Chicago	248.7	258.6	4.0%	1,253	1,246	-0.6%	13.8%	21.4%	7.6	\$27.70	\$28.64	3.4%	\$24.56	\$23.14	-5.8%
Dallas	180.3	191.5	6.2%	854	1,020	19.5%	18.1%	24.3%	6.2	\$23.12	\$24.73	7.0%	\$21.18	\$22.52	6.3%
Denver	107.2	112.1	4.5%	524	576	10.0%	12.1%	22.7%	10.6	\$25.59	\$26.71	4.4%	\$24.38	\$24.00	-1.6%
Houston	179.1	184.7	3.1%	717	799	11.4%	2.1%	24.2%	2.8	\$24.39	\$24.98	2.4%	\$21.62	\$21.74	0.6%
Los Angeles	190.9	197.4	3.4%	1,092	1,055	-3.5%	11.6%	21.6%	10.0	\$39.46	\$39.69	0.6%	\$37.21	\$36.20	-2.7%
Manhattan	402.2	417.5	3.8%	1,240	1,262	1.7%	7.5%	15.3%	7.8	\$79.66	\$77.72	-2.4%	\$68.90	\$65.46	-5.0%
Northern New Jersey	89.1	90.2	1.2%	486	522	7.5%	15.4%	19.0%	3.6	\$28.18	\$29.20	3.6%	\$25.71	\$26.23	2.0%
Orange County	76.3	77.8	2.0%	474	453	-4.5%	12.5%	17.4%	4.9	\$31.68	\$29.42	-7.1%	\$29.45	\$26.44	-10.2%
Philadelphia	116.8	120.6	3.3%	647	691	6.9%	10.2%	15.8%	5.6	\$25.51	\$25.94	1.7%	\$23.62	\$23.58	-0.2%
Phoenix	89.5	95.3	6.5%	622	662	6.3%	13.3%	21.3%	8.0	\$26.55	\$29.06	9.5%	\$25.18	\$26.01	3.3%
Pittsburgh	84.5	86.7	2.6%	280	288	2.8%	10.9%	14.5%	3.6	\$21.51	\$22.32	3.8%	\$19.32	\$19.85	2.7%
San Francisco	107.8	115.9	7.5%	515	520	0.9%	5.2%	25.2%	20.0	\$63.30	\$50.89	-19.6%	\$58.84	\$40.18	-31.7%
Seattle	104.3	115.0	10.2%	589	642	9.0%	7.1%	20.2%	13.1	\$36.34	\$37.24	2.5%	\$33.17	\$32.18	-3.0%
Washington, DC	325.4	337.4	3.7%	1,027	1,058	3.0%	13.9%	19.0%	5.1	\$38.97	\$39.51	1.4%	\$36.26	\$35.62	-1.8%
All US Markets				21,763	22,971	5.6%	12.1%	19.1%	7.0	\$35.50	\$36.13	1.8%	\$32.44	\$31.96	-1.5%

Source: CBRE EA and Moody's Ratings

Legal and practical flexibility to adjust tax rates is a strong mitigant



High – Local governments have the authority to maintain or increase property tax revenue without limit despite tax base contraction given the absence of any mill rate or levy cap.

Moderate – Local governments’ authority to maintain or increase property tax revenue as property values decline is limited by a cap on increases in the levy amount.

Low – Local governments’ authority to maintain or increase property tax revenue as property values decline is limited by a mill rate cap. Flexibility to maintain or increase property tax revenue varies depending on headroom relative to the cap.

Source: Moody’s Ratings

San Francisco

Other than property taxes, the city's major general fund revenues are 20% below pre-pandemic levels and are forecasted to remain stagnant

San Francisco general fund revenues excluding federal grants compared to pre-pandemic levels

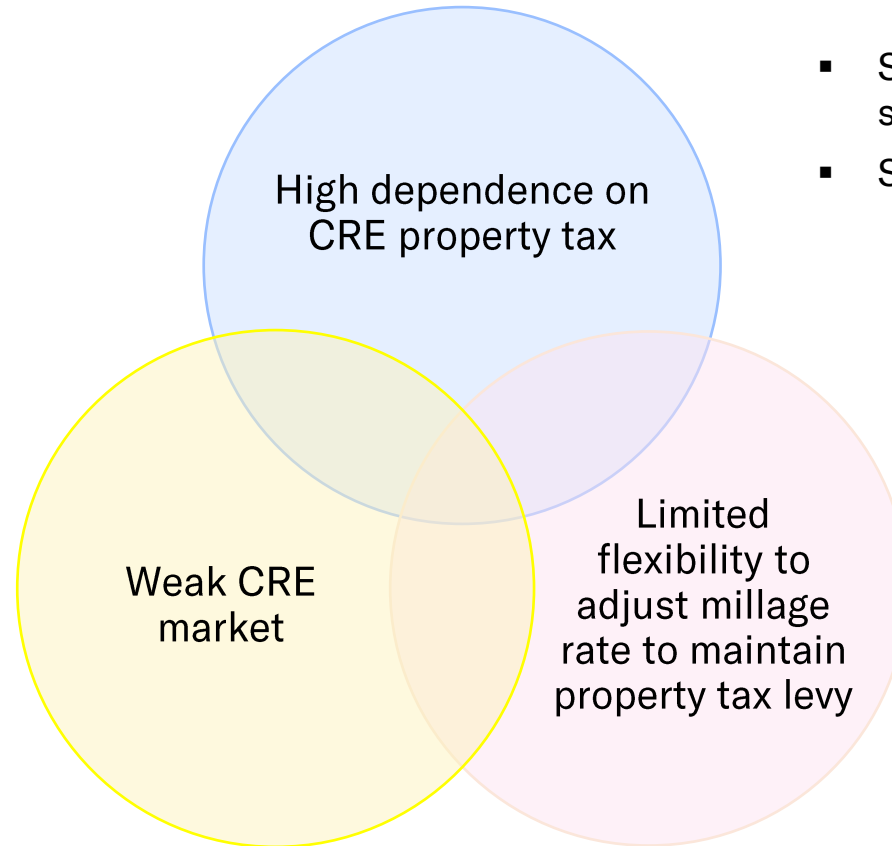
Fiscal Year	2019	2023	% Change	2025 Budget
Business Tax	\$918	\$851	-7.3%	\$883
Sales Tax	\$214	\$198	-7.4%	\$194
Hotel Tax	\$392	\$253	-35.5%	\$285
Parking Tax	\$86	\$83	-3.8%	\$87
Real Property Transfer Tax	\$364	\$186	-48.8%	\$219
Subtotal CRE-Sensitive Revenue	\$1,974	\$1,570	-20.4%	\$1,668
Property Tax	\$1,698	\$2,122	25.0%	\$2,158
All Other Revenues (Excluding Federal Grants)	\$2,216	\$2,167	-2.2%	\$2,088
Transfers In	\$239	\$192	-19.7%	\$207
Total Revenue	\$6,127	\$6,052	-1.2%	\$6,120

Sources: City and County of San Francisco revenue letters and five-year financial plans

Appendix



Assessment of local government CRE exposure based on three considerations



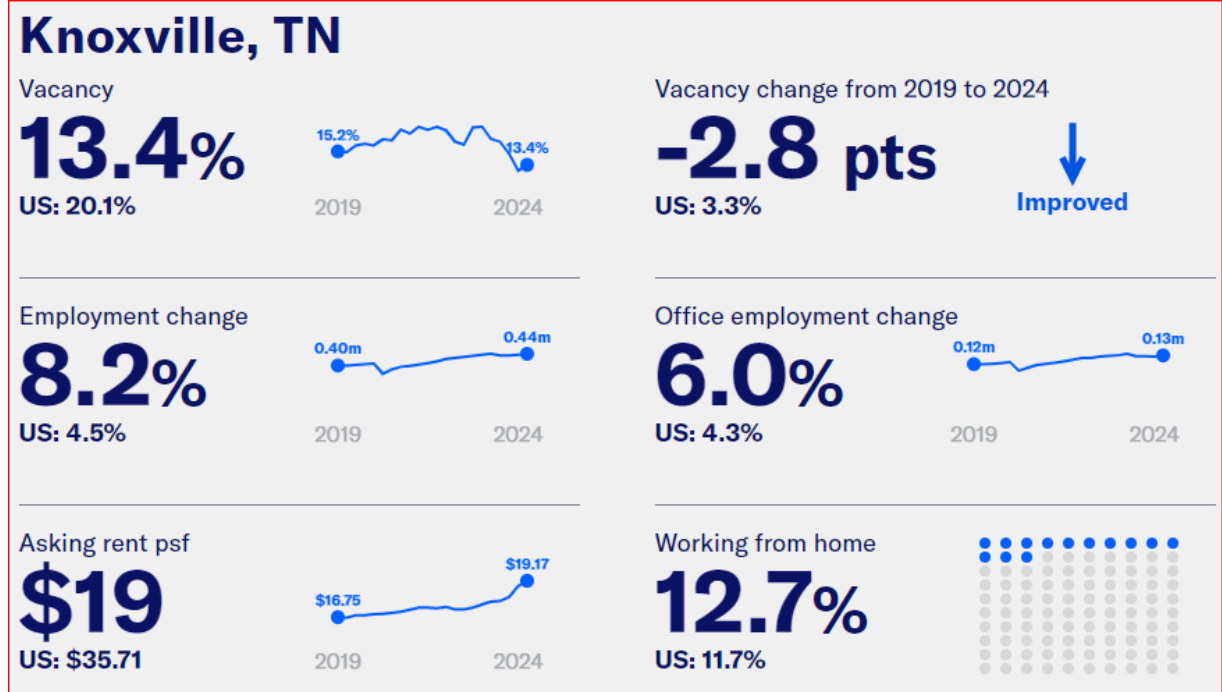
- Office vacancy rate and trend
- Office rent trend
- Office related employment growth
- Vulnerability to remote/hybrid work

- Share of property tax from commercial or specifically office properties
- Share of revenue from property tax

- Legal flexibility to increase millage rate to maintain levy as values decline
- Underlying economy's ability to absorb millage rate increases
- Millage rate relative to alternative locations

Examples of top performing metros in office space

Strong employment growth, asking rents below US average, WFH around national level

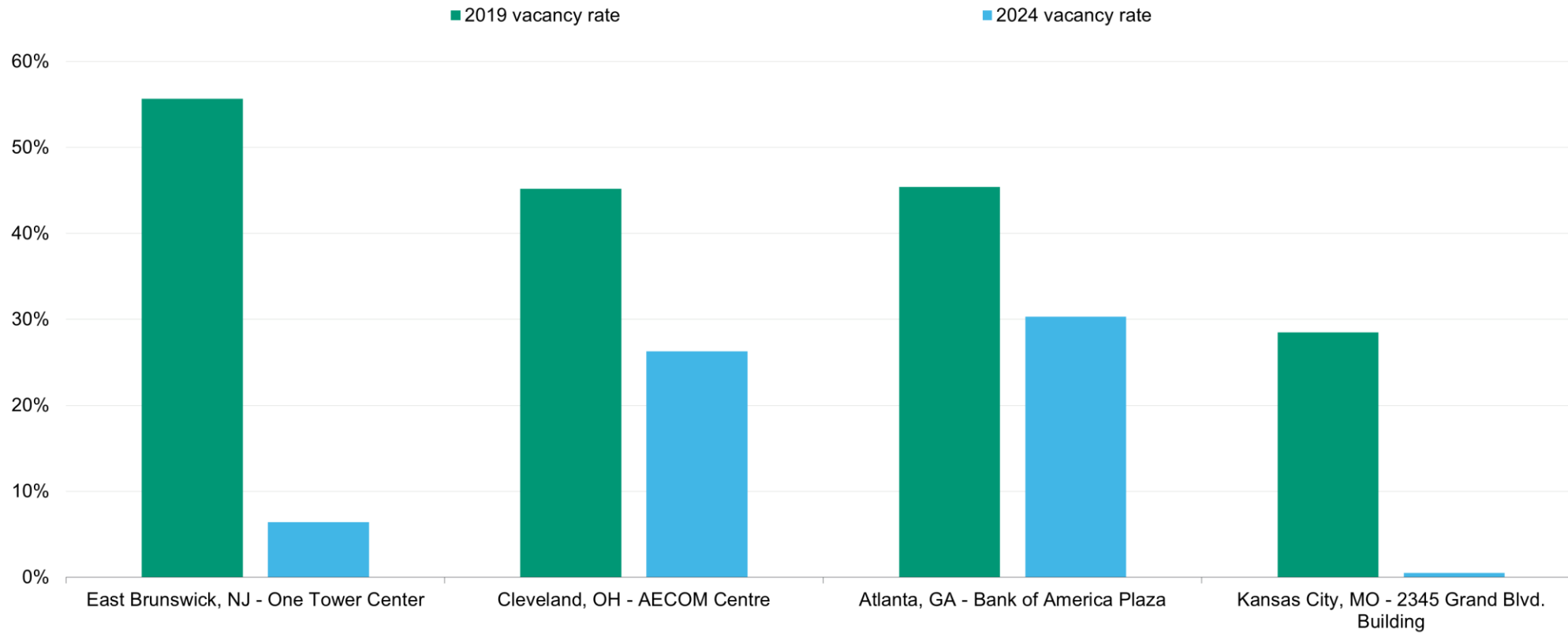


*includes Riverside, CA. Data from 2019 Q1 to 2024 Q2. Vacancy change represents percentage point change.

Source: Moody's CRE; US Census Bureau (work from home)

Post-pandemic trend not all bad for office towers

Some properties benefit from migration and population of skilled workforce



Source: Moody's CRE

Positive considerations

While there will always be obsolete office space, the office is not obsolete

- Assessed value will lag the market allowing city tax bases to gradually account for the decline in office property value
- Economy is generally stable with interest rates trending lower and favorable employment metrics
- Hybrid work models and emphasis on return to work is still in flux
 - Most financial services companies have returned to the office three to five days
 - Amazon recently announced corporate employees will return to work full-time in 2025

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Thank you

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