Yardi® Matrix

National Office Report

November 2019

U.S. Office Property: Investor Appetite for CBD Assets Increases

- The average U.S. office asking rate increased 2.0% year-over-year in October to $37.73. The average national vacancy rate increased 40 basis points from the previous month, to 13.7%.

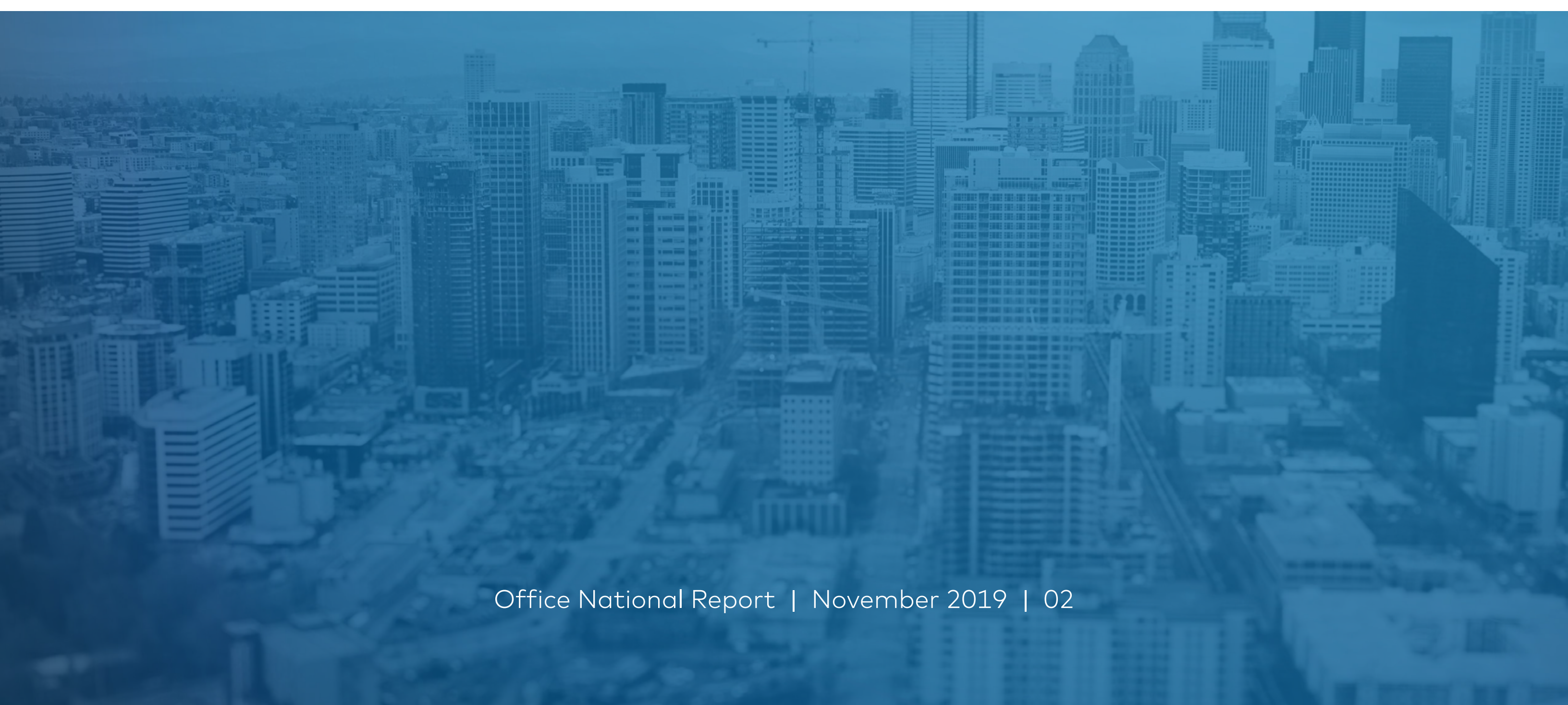
- Markets where year-over-year listing rate growth was the highest were San Francisco (27.6%), Tampa (24.5%), the Bay Area (10.7%) and Manhattan (10.5%). These were also the top four metros for same-store listing rate growth, with San Francisco leading the way at 13.5%, followed by Manhattan (8.3%), the Bay Area (8.1%) and Tampa (5.7%).

- After a slow start to the year, lower interest rates have helped accelerate transaction activity since the summer. Investment volume totaled $74 billion through the end of October.

- The most notable aspect of this year's sales activity is the spike in price per square foot in prime assets. CBD buildings have traded at an average of $428.70 per square foot this year, a 24.6% increase from 2018. Per-square-foot prices in CBDs only increased 24.4% between 2012 and 2018. Similarly, buildings rated as A+ and A have increased 12.1% this year to $370.71 per square foot. This rate of increase in CBD prices hasn't been seen since the years before the Great Recession. Between 2006 and 2008, the price per square foot for CBD office buildings increased 53.8%, from $258.88 to $398.25. While 2019 is not the same as 2008, most notably due to lower-leverage transactions, the rapid increase in pricing is a trend we will closely monitor.

- 59.2 million square feet of office space was delivered nationally through the end of October, with another 170.1 million square feet currently under construction.

- Demand for office space remains strong, with office-using sectors adding 545,000 jobs over the past 12 months, a 1.7% increase. One in three jobs added in the 12 months ending in September were in office-using sectors.



Lease Rate and Occupancy Trends: Large Lease Signings Decrease Seattle's Average Rates

- National listing rates averaged $37.73 in October, an increase of 2.0% from the same period a year prior. The national vacancy rate was 13.7%, an increase of 40 basis points from a month prior.

- Same-store rate growth nationally increased by 3.1% and was highest in San Francisco (13.5%) and Manhattan (8.3%). Same-store growth was negative in a handful of markets, with Chicago (-4.7%), Boston (-2.6%) and Denver (-1.6%) experiencing the largest decreases.

- Seattle, which had an overall average listing rate decrease of 2.7%, saw its same-store rate increase by 1.8%. The most significant reason for this disparity is leasing in the soon-to-be-completed Qualtrics Tower in the CBD. Large leases signed by Indeed, Dropbox and Qualtrics have removed expensive listings from the market, decreasing the market's overall average full-service-equivalent asking rate. Formerly known as the 2 + U building, Qualtrics Tower is now fully leased, ahead of the anticipated June 2020 completion date.

Listings by Metro

Market	Oct-19 Listing Rate	12-Month Change	Total Vacancy	Top Listing	Price Per Square Foot
National	$37.73	2.0%	13.7%		
San Francisco	$74.35	27.6%	8.2%	2180 Sand Hill Road	$152.44
Tampa	$31.46	24.5%	12.0%	1001 Water St.	$55.70
Bay Area	$47.87	10.7%	14.6%	444 Castro	$120.67
Manhattan	$83.48	10.5%	7.5%	30 Hudson Yards	$225.00
Brooklyn	$56.92	8.1%	12.0%	Brooklyn Navy Yard–Dock 72	$73.00
Austin	$41.23	7.5%	8.4%	Indeed Tower	$70.67
Miami	$40.03	6.3%	13.6%	1450 Brickell	$67.00
Nashville	$31.66	5.6%	10.7%	Three Thirty Three	$44.38
San Diego	$38.93	5.4%	12.6%	Molecular and Experimental Medicine Building	$72.74
Twin Cities	$27.12	4.3%	12.9%	MoZaic East	$37.93
Atlanta	$27.18	3.7%	16.6%	Three Alliance Center	$53.98
Charlotte	$28.27	3.3%	10.9%	Duke Energy Center	$42.00
Phoenix	$27.50	3.2%	17.8%	The Watermark–Phase I	$45.00
Los Angeles	$38.81	3.0%	13.0%	100 Wilshire	$96.00
Dallas	$28.79	2.8%	18.7%	Saint Ann Court	$56.71
Philadelphia	$28.99	2.7%	13.5%	Three Logan Square	$51.57
Houston	$29.45	2.3%	21.7%	Campanile South	$54.29
Denver	$27.85	0.1%	14.0%	The William Building	$59.67
Portland	$29.66	0.1%	12.4%	Broadway Tower	$43.66
Washington DC	$38.85	0.0%	14.5%	1000 F St., N.W.	$83.08
New Jersey	$31.75	-0.6%	20.6%	10 Exchange Place	$57.30
Orlando	$21.37	-1.1%	12.7%	Lake Nona Town Center–Phase II	$36.41
Seattle	$37.35	-2.7%	8.3%	The Atrium	$79.77
Chicago	$28.38	-6.7%	15.2%	300 North LaSalle Drive	$61.46
Boston	$35.13	-8.0%	10.2%	One Federal Street	$76.00

Source: Yardi Matrix. Data as of October 2019. Listing rates are full service or "full service equivalent" rates for spaces available as of report period.

Supply:
Miami Playing Catch-Up With New Supply

- Nationally, 59.2 million square feet were delivered in the first 10 months of the year, with 90% of the new construction classified as an A+ or A property.

- A total of 170.1 million square feet are currently under construction, of which 90% is concentrated in the A+ or A asset classes.

- With 2.9 million square feet under construction, representing 4.3% of stock, Miami appears to be adding space at a moderate rate. Yet if planned space (5.8 million square feet) is included as part of the pipeline, the percent of stock swells to 13.2%. While this may seem excessive, Miami has underdelivered for much of this decade. Between 2000 and 2011, it added an average of 1.2 million square feet of office space per year. From 2012 through 2019, the yearly average has fallen to 695,000 square feet a year, with half of the new stock over that time period delivered in 2018. Despite modest employment growth in office-using sectors and vacancy rates in the vicinity of the national average, the recent supply shortage should support the market's ability to absorb the new stock when it is delivered.

Supply Pipeline (by asset class and location)

National Market	Under Construction	Under Construction % Stock	Plus Planned % Stock
A+/A	153,062,437	5.2%	5.7%
B	14,678,714	0.5%	0.5%
C	607,195	0.2%	0.2%
CBD	40,610,991	3.1%	5.8%
Urban	76,896,221	5.8%	12.0%
Suburban	52,619,093	1.4%	4.3%

Source: Yardi Matrix. Data as of Oct. 31, 2019

Supply Pipeline (by metro)

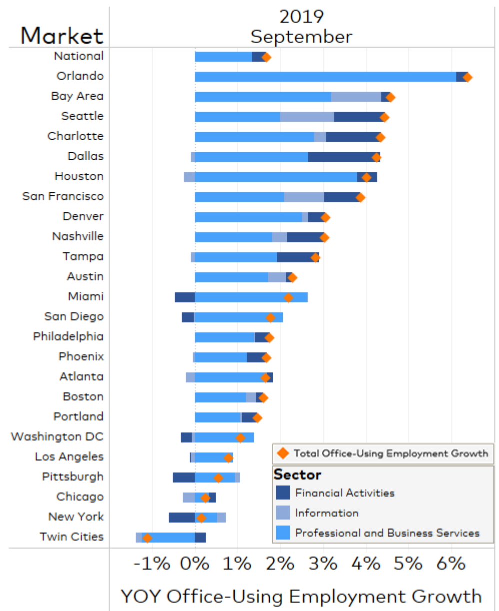
Market	Under Construction	Under Construction % Stock	Plus Planned % Stock
National	170,126,305	2.7%	6.2%
Brooklyn	4,123,817	11.6%	22.0%
Austin	7,257,629	10.4%	29.9%
Nashville	5,043,431	9.8%	17.4%
San Francisco	9,607,689	6.4%	13.8%
Seattle	6,992,670	5.2%	12.1%
Charlotte	3,195,956	4.7%	9.4%
Boston	10,768,933	4.6%	8.4%
Manhattan	20,571,378	4.3%	4.6%
Miami	2,857,277	4.3%	13.2%
Portland	2,149,513	3.8%	7.1%
Los Angeles	8,543,810	3.1%	5.6%
Chicago	9,207,953	3.1%	8.0%
Washington DC	10,812,849	2.9%	4.9%
Bay Area	5,193,134	2.6%	11.6%
Denver	4,002,146	2.6%	4.8%
Atlanta	4,754,324	2.5%	7.1%
Dallas	5,721,510	2.2%	9.4%
Tampa	1,356,444	2.2%	5.1%
Phoenix	2,414,948	1.9%	8.4%
Twin Cities	2,083,549	1.8%	4.4%
Orlando	885,301	1.7%	7.0%
Houston	3,990,840	1.7%	3.2%
San Diego	1,340,762	1.5%	6.9%
Philadelphia	2,209,947	1.3%	3.1%
New Jersey	331,262	0.2%	2.0%

Source: Yardi Matrix. Data as of Oct. 31, 2019

Office-Using Employment: Bay Area Adds Office Jobs Across the Region

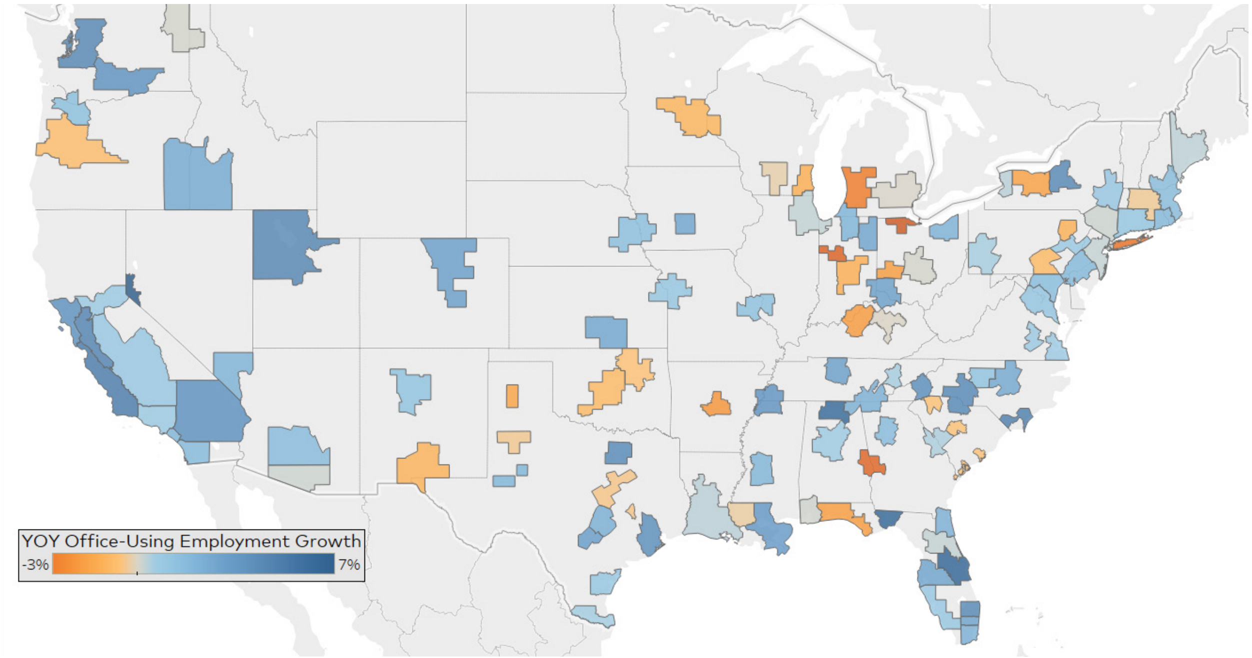
- Nationally, office-using employment sectors grew by 1.7% year-over-year, adding 545,000 jobs in the 12-month period ending in September.
- The majority of office-using jobs added over the past year (435,000) were in the professional and business services (PBS) sector.
- The Bay Area, which Yardi Matrix defines as both the South Bay (Silicon Valley and San Jose) and the East Bay, saw office-using employment grow by 4.6% year-over-year. Although office-using employment growth is strong across both areas, there is no indication of a spillover effect of tech jobs from the South Bay and San Francisco into Oakland. While PBS jobs grew equally in both metros, all the information jobs growth in the market was in the South Bay, which added 7,900 workers in the sector.

Growth by Sector



Sources: Bureau of Labor Statistics and Moody's Analytics

Office-Using Employment Growth



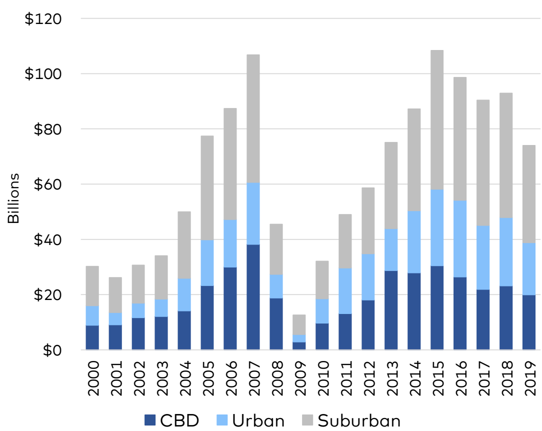
Sources: Bureau of Labor Statistics and Moody's Analytics

Transactions:
CBD Transactions Fuel Price-Per-Square-Foot Surge in 2019

- Office transactions through October totaled just under $74 billion. Nearly two-thirds of all transaction volume ($46.7 billion) has been in A and A+ properties.

- The average price per square foot of an office building has grown from $248.53 last year to $277.30 in 2019, an increase of 11.6%. This is being driven by the escalation in the average sales price per square foot in CBD locations, which has increased 24.6% this year to an average of $428.70.

Sales by Location



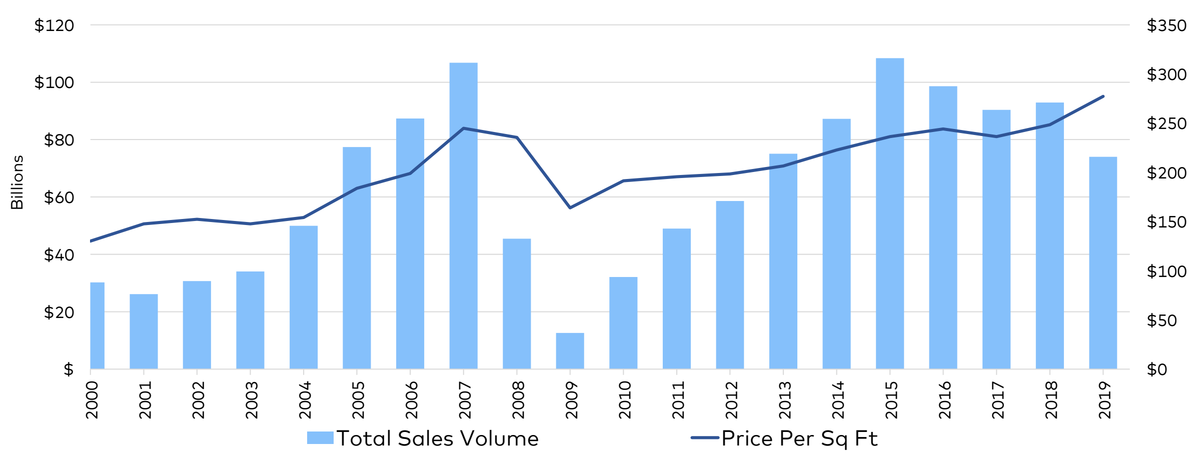
Source: Yardi Matrix; Data as of Oct. 31, 2019

Sales Activity

Market	YTD Sales Price PSF	YTD Sales (Mil, as of 10/31)
National	$277	$73,973
Manhattan	$893	$8,978
Bay Area	$490	$5,921
Seattle	$505	$5,860
Washington DC	$279	$5,132
San Francisco	$792	$4,826
Boston	$325	$3,963
Los Angeles	$444	$3,867
Denver	$203	$2,375
Atlanta	$194	$2,302
Houston	$228	$1,878
Phoenix	$178	$1,673
San Diego	$399	$1,647
New Jersey	$161	$1,590
Chicago	$162	$1,566
Philadelphia	$192	$1,541
Dallas	$238	$1,268
Austin	$378	$1,213
Charlotte	$230	$1,209
Twin Cities	$152	$1,137
Portland	$291	$914
Nashville	$222	$893
Tampa	$194	$715
Miami	$302	$710
Orlando	$163	$503
Brooklyn	$379	$80

Source: Yardi Matrix. Data as of Oct. 31, 2019

Total Sales



Source: Yardi Matrix. Data as of Oct. 31, 2019

Definitions

This report covers office buildings 50,000 square feet and above. Yardi® Matrix subscribers have access to 25,000-square-foot and larger buildings for a continually growing list of markets.

Yardi® Matrix collects listing rate and occupancy data using proprietary methods.

- *Listing Rates*—Listing Rates are full-service rates or "full-service equivalent" for spaces that were available as of the report period. Yardi® Matrix uses aggregated and anonymized expense data to create full-service equivalent rates from triple-net and modified gross listings. Expense data is available to Yardi® Matrix subscribers.
- *Vacancy*—The total square feet vacant in a market, including subleases, divided by the total square feet of office space in that market. Owner-occupied buildings are not included in vacancy calculations.

A and A+/Trophy buildings have been combined for reporting purposes.

Stage of the supply pipeline:

- *Planned*—Buildings that are currently in the process of acquiring zoning approval and permits but have not yet begun construction.
- *Under Construction*—Buildings for which construction and excavation has begun.

Office-Using Employment is defined by the Bureau of Labor Statistics as including the sectors Information, Financial Activities, and Professional and Business Services. Employment numbers are representative of the Metropolitan Statistical Area and do not necessarily align exactly with Yardi® Matrix market boundaries.

Sales volume and price-per-square-foot calculations do not always include portfolio transactions or those with unpublished dollar values.

To learn more about Yardi® Matrix and subscribing, please visit www.yardimatrix.com or call Ron Brock, Jr., at 480-663-1149 x2404.

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