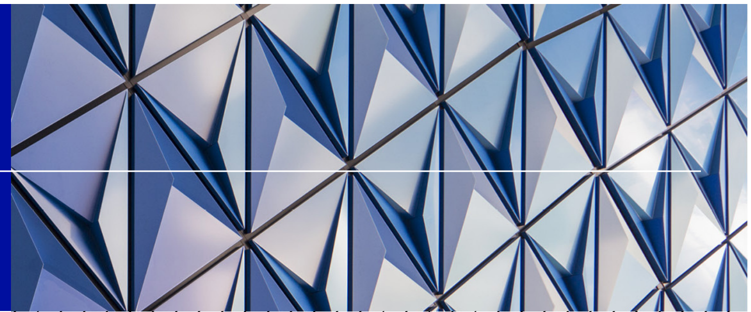


August 5, 2021

WESTERN REGION RESEARCH INSIGHTS

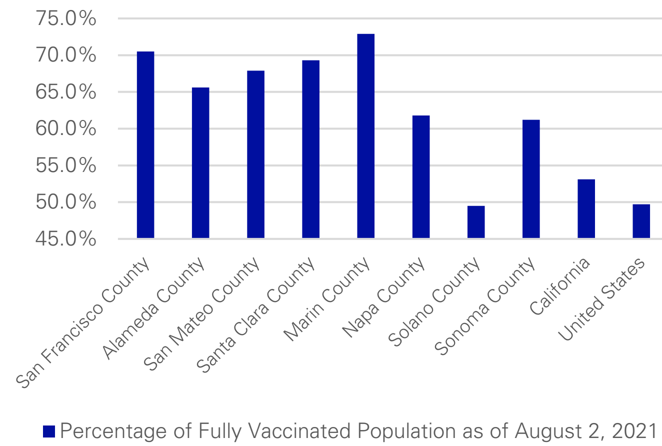
Bay Area Green Shoots Emerging

Pandemics always have a profound impact on cities. As collective crossroads of commerce and culture, the qualities that make them vibrant places under normal circumstances become liabilities in the face of a highly communicable, deadly disease. It should come as no surprise that over the course of the CoVid-19 crisis, the two densest cities in the United States, New York and San Francisco, would face some of the greatest challenges. Some early narratives even suggested that major cities would never recover. These narratives were based on very real challenges: the immediate out-migration of thousands, impacts on businesses, economic growth and the long-term viability of the commercial spaces where we congregate, create and consume. Sometimes these narratives were thoughtful and nuanced; other times they simply weren't. The lessons of history tell us that that global gateway cities do recover from pandemics. During the Great Plague of London (1665 to 1666) an estimated one in four of the city's 460,000 residents died and tens of thousands fled for the countryside. But over the next 30 years the city nearly doubled in size. The CoVid-19 crisis, while certainly disruptive, has been nowhere near as traumatic an event. Though plenty of challenges remain as we emerge from the pandemic (and new ones will certainly arise), there are multiple metrics that demonstrate an emerging recovery in the City by the Bay.

High Vaccination Areas May Develop Recovery Advantage

While there remain plenty of unknowns that will shape local recoveries throughout the United States, the emergence of a fourth wave of the pandemic presents a new set of challenges. Fueled by the more contagious Delta variant of CoVid-19, infections are up in every state. However, the hardest-hit areas have clearly been in those locales where vaccination rates have lagged. The issue of whether to take the vaccine or not is obviously a deeply personal one, influenced by multiple factors. A clear gap has emerged between urban/suburban and rural rates of vaccination. As of August 2, 2021, the percentage of fully vaccinated population stood at 49.7% for the United States. California was slightly ahead of the curve at 53.1%. However,

Percentage of Fully Vaccinated Population



Source: Newmark Research; Centers for Disease Control

States with Lowest Levels of Vaccine Hesitancy

Rank	State	Polled Hesitancy Rate
1.	Massachusetts	7%
2.	New Hampshire	7%
3.	Connecticut	8%
4.	D.C.	8%
5.	Rhode Island	8%
6.	California	9%
7.	Delaware	9%
8.	Illinois	9%
9.	Maryland	9%
10.	Minnesota	9%
11.	Colorado	10%
12.	Maine	10%
13.	Michigan	10%
14.	New Jersey	10%
15.	Pennsylvania	10%

Source: Newmark Research

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all but one of the counties in the greater Bay Area region currently have vaccination rates far above national and statewide averages. San Francisco's 70.5% vaccination rate places it among the most vaccinated cities in the United States. Likewise, according to polling from Morning Consult, California is among the 10 states with the lowest vaccine hesitancy rates. Vaccination rates have climbed in the last two weeks, particularly in those areas of the country experiencing the worst outbreaks. National polling has consistently indicated since March that roughly 19.0% of Americans would refuse vaccinations while 11.0% were hesitant. It remains to be seen if the current uptick in infections will sway both of those groups, but it is likely driving greater vaccination rates among those who were merely hesitant. If this occurs nationally, states with already higher rates will likely see further increases.

Among the challenges posed by the Delta variant have been reports of breakthrough infections in vaccinated people. However, the latest data from the CDC indicates that 99.99% of those cases have not been life threating. The return of mask mandates has begun, though we believe a return to lockdowns extremely improbable. Organizations will continue to revise return-to-work strategies. Meanwhile, more private companies are issuing vaccine mandates, including two of the largest Bay Area employers, Facebook and Google. This means that, barring the unlikely event of a return to lockdowns, organizations in areas with already high vaccination rates, like San Francisco, will face fewer disruptions in reopening timelines.

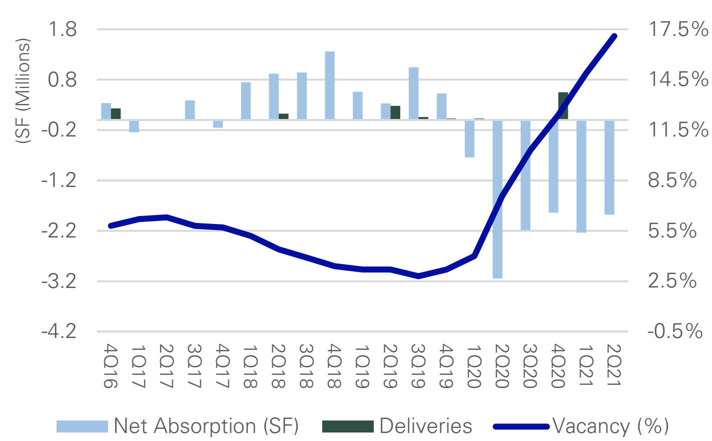
Return of Deals Indicate Early Stages of Office Recovery

Certainly, the last 18 months have been among the most challenging in the history of San Francisco's office market. Vacancy had fallen to an all-time low of 2.8% by the third quarter of 2019. The challenge facing space users at that time was the lack of available quality space, hence slowing occupancy growth and driving a modest uptick in vacancy as that year closed.

Then the pandemic hit. Though lockdowns were only enacted late first quarter of 2020, the impacts were immediate. Since that time, over 12.0 million square feet of space has been returned to market. The vacancy rate soared from an all-time low to the current all-time high of 17.1%. At its peak in first quarter 2021, there was more than 9.0 million square feet of sublease space available in San Francisco. Average quarterly sublease availability in the ten years prior to the pandemic (2010 to 2019) had been just under 1.9 million square feet.

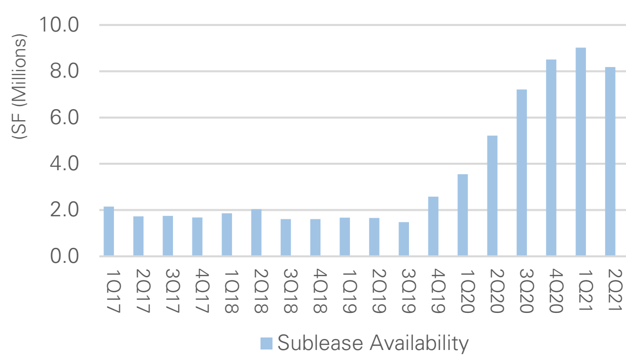
While second quarter 2021 data reflected a modest decline in sublease availability (from 9.0 million to 8.2 million square feet), overall metrics had yet to turn the corner at the mid-year mark. Vacancy climbed for the seventh consecutive quarter to its current rate of 17.1% and an additional 1.9 million square feet of space was returned to market.

Net Absorption vs Deliveries & Vacancy Rate



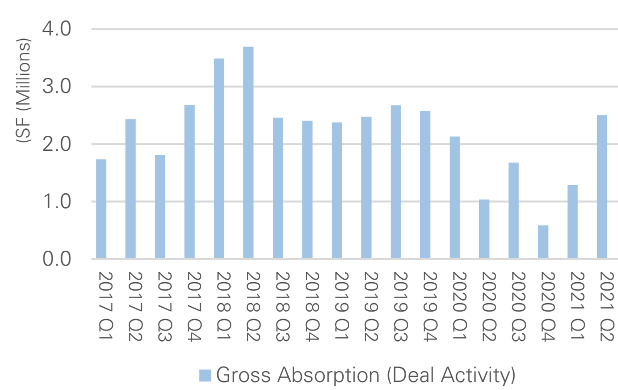
Source: Newmark Research

San Francisco Sublease Availability



Source: Newmark Research

San Francisco Deal Activity



Source: Newmark Research

There are real reasons for optimism ahead. Commercial real estate vacancy and net absorption statistics are a lagging economic indicator. If an economy heats up and businesses grow, there is virtually always a lag time between when they may sign a deal for new space and when they occupy that space. Vacancy and net absorption statistics inherently look backwards. But not all commercial real estate statistics look backwards. Deal activity, which often takes months to translate into occupancy growth and vacancy declines, and active tenants in the market are where real green shoots emerging.

In the 10 years prior to the pandemic, the market averaged 2.4 million square feet of deal activity (gross absorption) per quarter. Note that these deals could be expansions, downsizing or relocations. While robust gross absorption numbers typically translate into occupancy growth (net absorption), it is not a given.

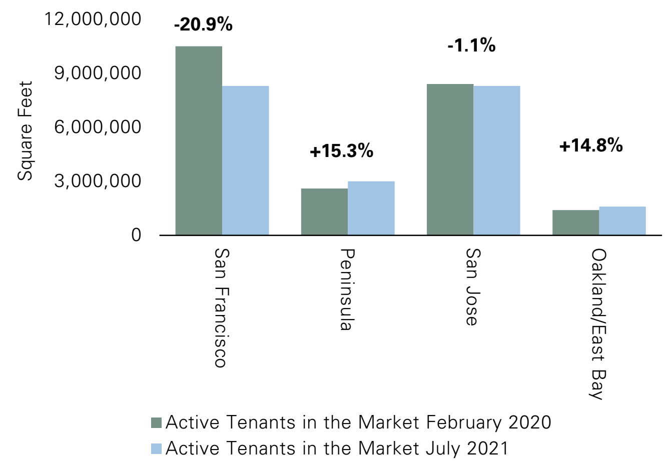
San Francisco hit a pandemic low-water mark of just 587,000 square feet of deal activity in fourth quarter 2020. But a sea change in deal activity began to occur as vaccinations became widely available in the area. The market recorded over 2.5 million square feet of gross absorption in the second quarter of this year, reflecting the highest level of deal velocity since 2019 and surpassing the previous 10-year average. These deals reflected a wide range of transactions; relocations and downsizing played a role, as did a considerable number of new growth requirements. In fact, the number of active tenants in the marketplace continues to accelerate.

Tracking of active tenants in the marketplace also indicate a surge in activity in the Bay Area. Compared to levels in February 2020, pre-pandemic, the Peninsula (San Mateo County) and Oakland/East Bay office markets have seen respective increases of 15.3% and 14.8%. The Silicon Valley/San Jose market now has 8.3 million square feet of requirements, compared to 8.4 million before the CoVid-19 crisis. In San Francisco, 8.3 square feet million of requirements are currently being tracked, compared to 10.5 million square feet in February 2020. While this still reflects a decline of 20.9% from pre-pandemic levels, it is more than twice what was being tracked at the close of last year.

Surge in VC Investment Points to Future Organic Growth

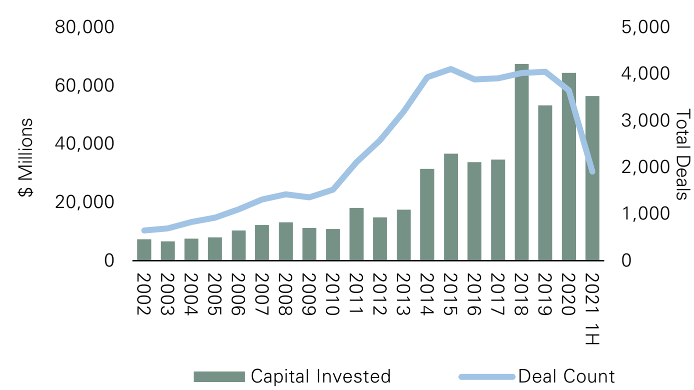
Many of these new requirements are coming from a new crop of technology-focused companies that have benefited from the recent surge in venture capital funding (for our full report on the trend, click here). U.S. firms raised $155.8 billion in new VC investment through the first six months of the year, approaching last year's record total of $169.4 billion in just six months. The Bay Area accounted for $56.4 billion of this total, or 36.2% of all funding. In the 10-year period prior to the pandemic, the region averaged $31.8 billion in VC funding annually.

Active Tenants in the Market



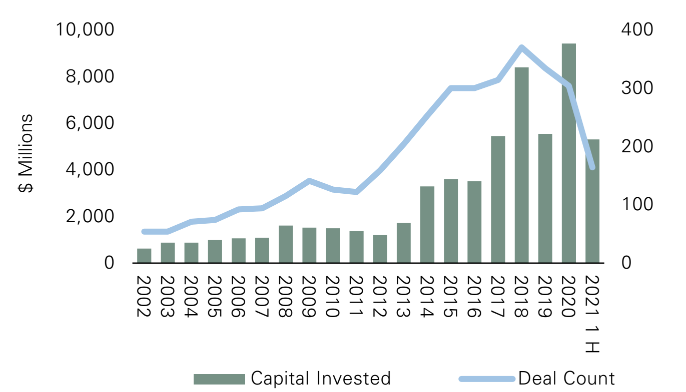
Source: Newmark Research

Bay Area Venture Capital Funding



Source: Newmark Research; Pitchbook

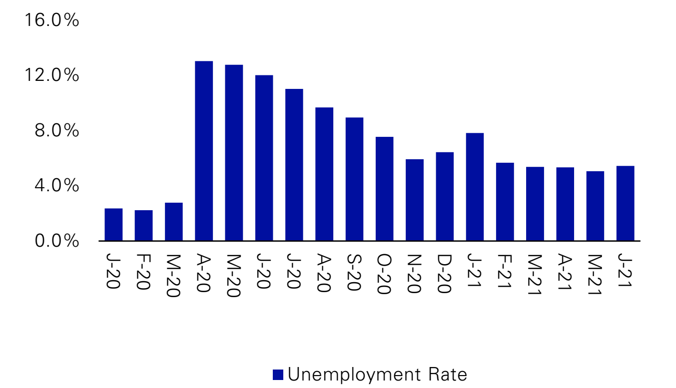
Bay Area Life Sciences Venture Capital Funding



Source: Newmark Research, Pitchbook

VC funds are used by recipient firms in a myriad of ways, often across multiple geographies. Growth and the expansion of the workforce is typically among them, especially among smaller companies and earlier-stage VC deals. Smaller to mid-size firms (up to 150 employees) accounted for 46.3% of all local VC funding during the first half of 2021. Another factor that bodes well as a forward-looking indicator of space demand is that 54.4% of this investment was angel, seed or earlier stage funding.

San Francisco County Unemployment Rate



Source: Newmark Research; California Employment Development Department

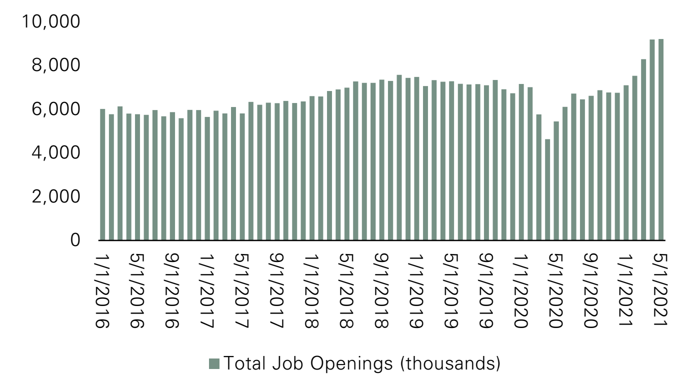
Employment Numbers Demonstrate Rebounding Economy

According to the State of California's Economic Development Department (EDD), the preliminary unemployment rate for the San Francisco-Redwood City-South San Francisco division (includes San Francisco and San Mateo Counties) stood at 5.2% in June 2021. The EDD also reported that of the 17,200 jobs added in June, 5,100 of those were from the categories that make up most office-using employment (Information, Financial Activities and Professional and Business Services). The largest sector for job growth was the hard-hit Leisure and Hospitality sector, which recorded 7,300 new jobs during this period.

This data aligns with what national labor data from the Bureau of Labor Statistics (BLS) tells us. Employment growth has not only accelerated considerably heading deeper into 2021, but a return to full employment is likely looming.

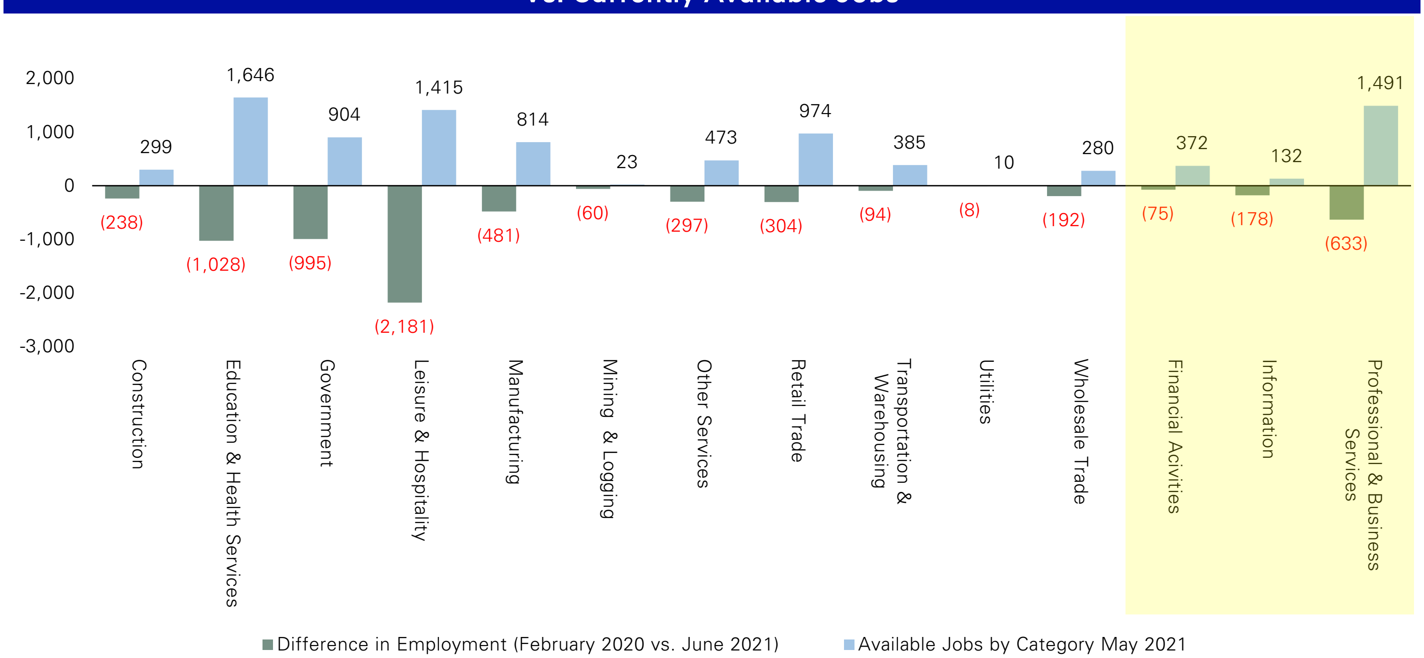
As of June 2021, there were still 6.7 million fewer employed

US Job Openings at All-Time High



Source: Newmark Research; Bureau of Labor Statistics

Difference in Pandemic-Era Employment (February 2020 vs. June 2021) Vs. Currently Available Jobs

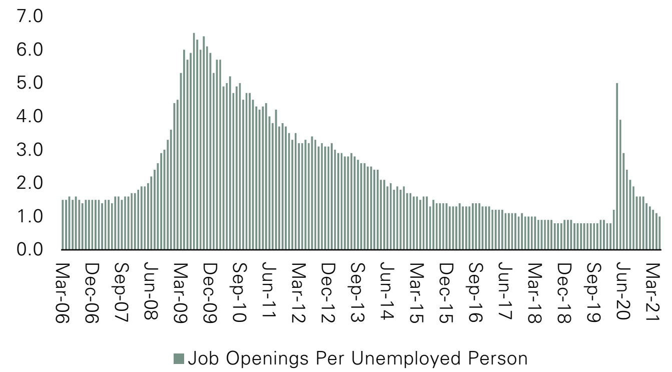


Americans than there were before the pandemic. However, BLS data also shows that there were 9.2 million available jobs in May (this reporting lags monthly unemployment metrics by a month). This is the highest number recorded by the BLS since it began keeping this data in 2000.

While there were 886,000 fewer office-using jobs in June, available positions for these categories stood at 2.0 million according to the May Job Openings and Labor Turnover Survey (JOLTs). Government, leisure and hospitality, mining and logging and information were the only categories where the number of available positions did not surpass the number of jobs lost during the pandemic. JOLTs data also reported a 1:1 ratio of job openings per unemployed person. This means, barring labor mismatches (which will be a challenge for many industries), a return to full employment is possible within an abbreviated timeframe.

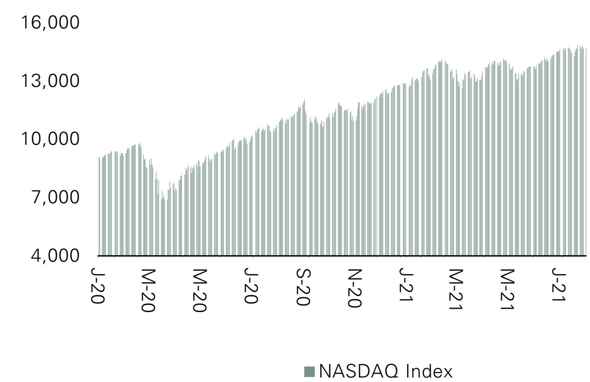
These trends will be against the backdrop of the resolution of the pandemic, unprecedented turnover levels, upward pressure on wages and the trend of remote work (for more information on this topic, click here to access our recent report, "Work-From-Home and the Big Quit.") Telecommuting will clearly not be a one-size-fits-all solution; it comes with its own sets of challenges and, for large organizations dependent upon collaboration, it may prove difficult to scale. Expect models to continue to evolve over the next 24 months; strategies will continue to shift. This remains the billion-dollar question for commercial real estate. But all other economic indicators are pointing towards robust economic growth and signs of new, organic demand that, particularly in strong tech hub markets, will speed commercial real estate recovery.

Job Openings Per Unemployed Person: 1:1



Source: Newmark Research; Bureau of Labor Statistics

NASDAQ Performance



Source: Newmark Research; NASDAQ; Federal Reserve

Technology Sector is Stronger Than Ever

One other thing worth noting is that while the pandemic created massively disparate economic outcomes at every level, the bread-and-butter of San Francisco's commercial real estate economy remains technology players. This doesn't just hold true for the upstarts fueled by the most recent wave of VC funding; it also applies to the giants. The NASDAQ is the most heavily technology-laden of all stock indices. As of the beginning of August it was up roughly 53.3% from pre-pandemic levels. This compares to the S&P 500 at 27.9% and the Dow Jones at 18.4%. While stock market valuations are no guarantee of future growth, the reality is that most Bay Area technology companies thrived during the pandemic and virtually all of them are in stronger financial condition than they were 18 months ago. At the very least this points to local economic stability and continued dominance of many of the firms that call the Bay Area home. More likely, it indicates further robust growth ahead.

Top Economies of the World

Rank	State	Total GDP or Market Cap
1.	United States	$21,433 B
2.	China	$14,343 B
3.	Japan	$5,082 B
4.	Germany	$3,861 B
If they were countries…		
(5th)	California	$3,091 B
(8th)	Apple	$2,125 B
(14th)	Alphabet	$1,730 B
(20th)	Facebook	$975 B

This still doesn't answer the question as to whether this growth will occur locally. Technology firms clustered in the Bay Area because they follow the resources; human ones. The region built its dominance based upon the depth of local science, technology, engineering and mathematics talent. The shift from primarily being a financial services hub to tech hub in the 1990s is what fueled San Francisco's early tech boom-and-bust (2000/2001) and its resurgence since then. This, over time, led to more concentration of both skilled labor and the companies that needed them. Seven of the top 10 cities in the United States ranked by the percent of population with degrees in computers, mathematics or statistics are in the Bay Area. For the percentage of population with degrees in science or engineering, that number increases to eight. Of course, that drive for talent and the in-migration of technology professionals to pursue careers has been a driving force behind rising costs for every sector of Bay Area real estate for decades.

Which brings us back to the pandemic narrative of widespread out-migration from the densest cities and the question of whether that balance was permanently altered.

They're Coming Back

In May, we published a report that explored migration issues during the pandemic (to access that report, please click here). We tracked US Postal Service address change data to attempt to determine levels of out-migration from San Francisco during the pandemic. The results were eye-opening. Though the common narrative often veered into a story of mass out-migration from the densest cities to rural locales or tax-advantaged states, the reality was quite different. Tracking of US Postal Service data indicates that San Francisco recorded 55,899 more outgoing residential address change of address (COA) requests than incoming in 2020. Alameda, San Mateo and Santa Clara also recorded modestly negative totals. But other counties in the region gained. People did leave San Francisco, but this was overwhelmingly for the suburbs. New home sales spiked

USPS Address Change Requests/Census

County	2020 Net COA Requests	US Census Population (thousands)	Net COA as % of Population
Alameda	-17,797	1.7M	-1.06%
Contra Costa	3,061	1.2M	0.27%
Marin	1,098	259K	0.42%
Napa	-159	138K	-0.12%
San Francisco	-55.899	882K	-6.34%
San Mateo	-13,502	767K	-1.76%
Santa Clara	-29,355	1.9M	-1.52%
Solano	-1,424	448K	-0.32%
Sonoma	788	494K	0.16%

Top U.S. Cities Ranked by % of Population with Degrees in Computers, Mathematics or Statistics

Rank	City	% Total Population w/Degree
1.	Redmond, WA	21.5%
2.	Fremont, CA	19.4%
3.	Sunnyvale, CA	18.2%
4.	Cupertino, CA	17.9%
5.	Santa Clara, CA	17.4%
6.	Union City, CA	16.9%
7.	Mountain View, CA	16.1%
8.	Milpitas, CA	16.0%
9.	Bellevue, WA	15.2%
10.	Morrisville, NC	15.2%

Top U.S. Cities Ranked by % of Population with Degrees in Science or Engineering

Rank	City	% Total Population w/Degree
1.	Cupertino, CA	68.1%
2.	Sunnyvale, CA	67.2%
3.	Mountain View, CA	65.5%
4.	Isla Vista, CA	63.9%
5.	Palo Alto, CA	63.9%
6.	Saratoga, CA	63.1%
7.	Los Altos, CA	62.3%
8.	Fremont, CA	62.0%
9.	Santa Clara, CA	61.4%
10.	Davis, CA	61.3%

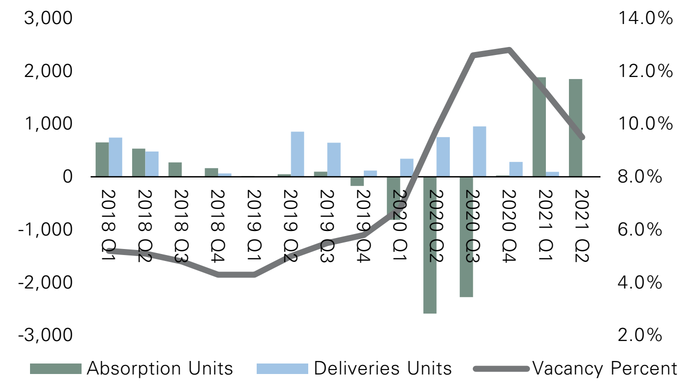
Source: Newmark Research, US Census Bureau across the region. The primary shift was renters; many of whom were millennials that made the jump to first-time home ownership. The multifamily market registered significant upticks in vacancy in 2020. But what does it tell us today?

San Francisco apartment occupancy declined by 5,673 units through the first three quarters of 2020, as local multifamily vacancy climbed from 5.8% to 12.8%. The market edged back into the black in fourth quarter 2020, absorbing a modest 27 units. But occupancy growth has been profound in 2021. The market recorded its highest level of unit absorption of the past 20 years in the first quarter as 1,884 vacant units leased. This was followed by a second quarter in which an additional 1,851 units were backfilled (second highest total in two decades). Anecdotal data suggests that third quarter tallies will match, if not surpass, these levels.

This also holds true for the Peninsula. San Mateo County occupancy declined by 2,105 units in 2020. Through the first six months of 2021, it has backfilled 1,458 of those units. Santa Clara County occupancy fell by 2,687 units in 2020. It has grown by 4,193 so far in 2021. Alameda County recorded declines of just 841 units last year; occupancy gains through the first half of the year stand at 2,827 units. This trend has played out across virtually every county within the Bay Area. Last year the Greater Bay Area market recorded an occupancy decline of 9,616 units. Year-to-date growth stands at 13,492. In other words, people are coming back. And they are doing so quickly.

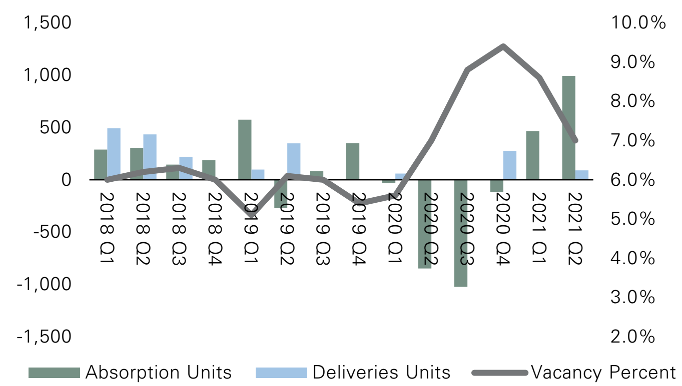
The months ahead won't be without challenges, from the ongoing fourth wave of the CoVid-19 crisis to the still-evolving flexible and remote-work landscape. But given the generation-defining and historic challenges of 2020, there are real causes for optimism in San Francisco and the Greater Bay Area. Real green shoots are emerging.

San Francisco Multifamily
Net Absorption Vs Deliveries, & Vacancy Rate



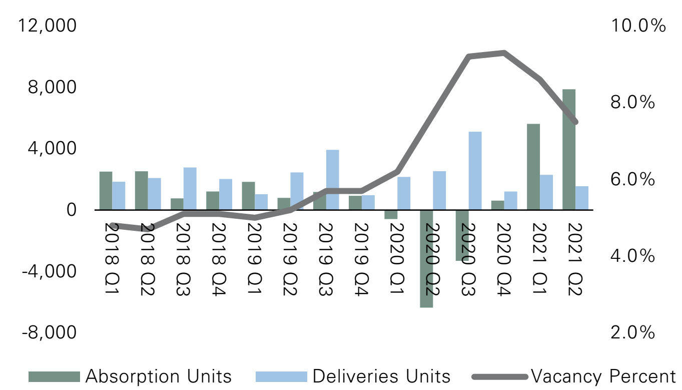
Source: Newmark Research; Costar Group

San Mateo Multifamily
Net Absorption Vs Deliveries, & Vacancy Rate

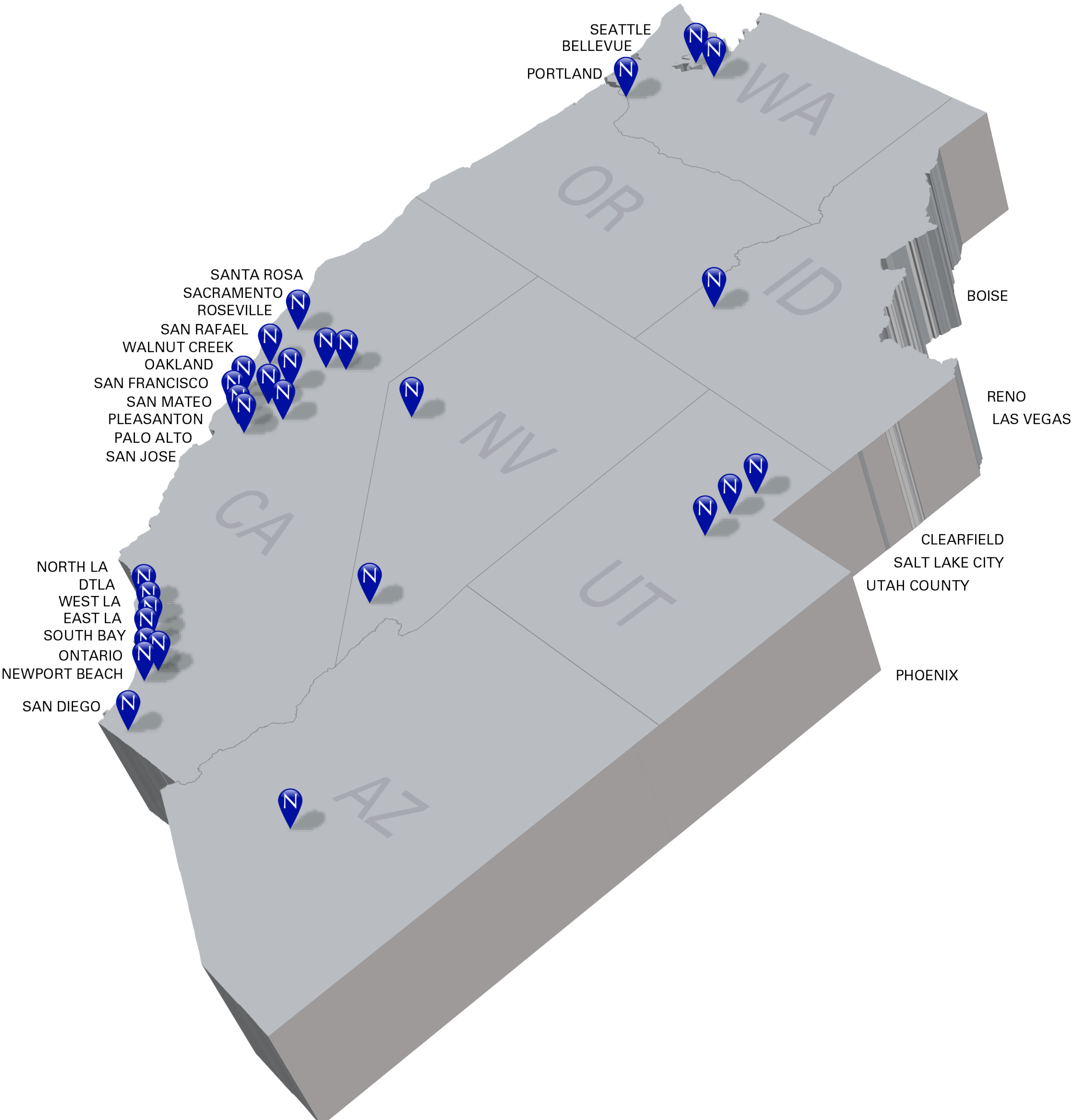


Source: Newmark Research; Costar Group

Bay Area (Greater Nine County) Multifamily
Net Absorption Vs Deliveries, & Vacancy Rate



Source: Newmark Research, Costar Group



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