OAKLAND
CHAMBER of COMMERCE

ECONOMIC ANALYSIS AND RECOVERY REPORT
CITY OF OAKLAND

KAISER PERMANENTE®

Prepared By: Beacon Economics

EXECUTIVE SUMMARY

With the fall of new COVID-19 cases in the region and the accelerated rollout of vaccinations, the worst effects of the economic fallout surrounding the pandemic are in the past. The 2020 recession was unlike any other recession in recent history, since it was not caused by economic fundamentals. Prior to the outbreak of the pandemic, unemployment rates were at generational lows, wages were rising and consumers and businesses were healthy. The economic fallout from the pandemic happened quickly and it hit the economy hard. While the recovery of the labor market still lags other economic indicators, many aspects of the economy have already recovered to their pre-pandemic trends. The economic fallout disproportionally impacted the lowest wage earners, but an unprecedented policy response by the federal government went some way towards dulling the pain felt by such workers. Given the strong economic fundamentals, and the precedented fiscal support for the economy, 2021 will should see the strongest economic growth experienced in decades. The following report tracks how the economic fallout has affected the City of Oakland. The key findings of the report are as follows:

- The number of jobs in the City of Oakland fell by 11.4% in the second quarter (Q2) of 2020, compared to the second quarter of 2019. Job losses bottomed in Q2 2020, since this time, a labor market recovery has been underway.

- Leisure and Hospitality (-48.2%), Other Services (-22.9%) – which includes hair and nail salons – Retail Trade (-17.6%), and Administrative Support (-19.6%) were the hardest hit sectors of the economy over this time. At the same time, these industries will see the strongest growth in 2021, as the economy opens up. As these figures suggest, the damage sustained to the labor market disproportionately affected low-income workers. Over this period, only one sector of the economy, Professional and Business Services, saw employment growth.

- The unemployment rate in the City of Oakland stood at 8.4% in February 2021, 4.8 percentage points higher than in February 2020, when it stood at 3.6%. However, the unemployment rate is far from the pandemic lows of 17%, as the labor market has recovered from the recession lows.

- From second-quarter 2019 to second-quarter 2020, average annual wages in the city increased 13.9%, to $83,600, although this figure was boosted by the loss of jobs among low income workers.

- As COVID-19 cases fall and the vaccine rollout gathers momentum, a rapid recovery in the city's labor market is expected in 2021 and 2022. This will begin with a hiring surge this spring and summer.

- Existing single-family home prices in the City of Oakland have surged compared to last year, growing 22.1% from fourth-quarter 2019 to fourth-quarter 2020.

- House price appreciation has been driven by low mortgage rates and chronic housing shortages in the region. In Alameda County, there were just 1.7 months of housing supply in February 2021. A balanced market typically equates to 6 - 7 months of supply.

- Effective apartment rents, which is the cost of "asking rent", minus any rent promotions, declined -7.0% from fourth-quarter 2019 to fourth-quarter 2020 in North Alameda (the submarket that contains Oakland) to reach $2564 per month. This is the first decline the submarket has experienced in effective rents since 2010.

- Inventory shortages are not being helped by the pace of permitting. After posting a sizeable decline from 2018 to 2019, residential permitting activity continued to decline in the City of Oakland in 2020. There was a -60% decline in single-family unit permits and a -47% decline in multi-family permitting from 2019 to 2020. These declines will affect the rate of population growth in the city.

- In the commercial real estate sector, office space has been the most affected by the economic fallout, as a result of work from home measures. Vacancy rates increased in the North Alameda submarket (the submarket that contains Oakland), reaching 15% in the fourth quarter of 2020, a 4.3 percentage-point increase over the same period in 2019.

- While many businesses have put in place plans for their employees to return to work, in the short-term, many employers will adopt flexible work arrangements, allowing workers more scope to work from home. This suggests that wholesale vacancies of offices in Oakland are unlikely.

- Vacancy rates for retail space in the East Bay increased to 8.5% in the fourth quarter of 2020, a 0.5 percentage-point increase relative to the fourth quarter of 2019, and effective rent has declined -1.6% for retail space in the North Alameda submarket (the submarket that contains Oakland).

- By contrast, in the warehouse/distribution space in the North Alameda submarket (the submarket that contains Oakland), effective rents for warehouse/distribution space has continued to grow, increasing 3.8%. This reflects secular trends towards online retail as well as online spending induced by business closure mandates.

- Despite the economic headwinds from COVID-19, VC investment has remained elevated in Oakland (after posting a landmark year in 2019). The $897 million in VC investment in 2020 was the second highest level of VC investment for a given year on record.

- This continues the City's long-term strength in attracting VC investment. From 2010 to 2020, the number of VC investment deals has grown by over 470%, with the city averaging 130 deals annually over the last five years.

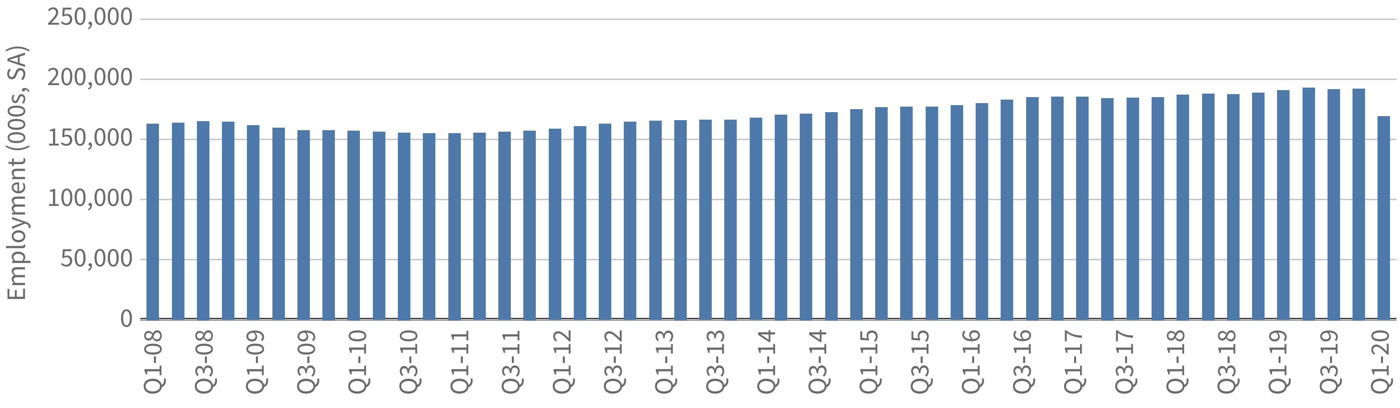
SECTION 1: THE OAKLAND ECONOMY PEOPLE AND INDUSTRIES

OAKLAND'S LABOR MARKET

Recently released data provide the first glimpse of the damage sustained to Oakland's labor market following the economic fallout in response to the emergence of the coronavirus. From second-quarter 2019 to second-quarter 2020, employment in the City of Oakland declined -11.4%, a less significant decrease relative to the -13.1% drop in Alameda County over the same period.

TOTAL EMPLOYMENT

City of Oakland, Q1-08 to Q2-20



Source: California Employment Development Department; Analysis by Beacon Economics

However, the worst of the economic fallout caused by the virus is very likely behind us and 2021 and 2022 will see a strong performance in Oakland's labor market. After a surge in COVID-19 cases at the end of 2020 and the beginning of 2021, the number of new cases have steadily declined. Furthermore, the rollout of the vaccine is helping provide a light at the end of the tunnel and a hope that 2021's economic activity will start to resemble normality. Also, California is slated to lift most COVID-19 restrictions on June 15th if cases remain low. The lifting of these restrictions should help boost payrolls of the industries that were most impacted by these restrictions, such as Leisure and Hospitality, Other Services (which includes hair and nail salons), and Retail Trade. Most of the economic fallout related to COVID-19 has been concentrated in low-wage industries, while higher-wage industries have largely been able to weather the storm and adapt to COVID-19 restrictions, due the greater capacity of workers in these industries to work from home.

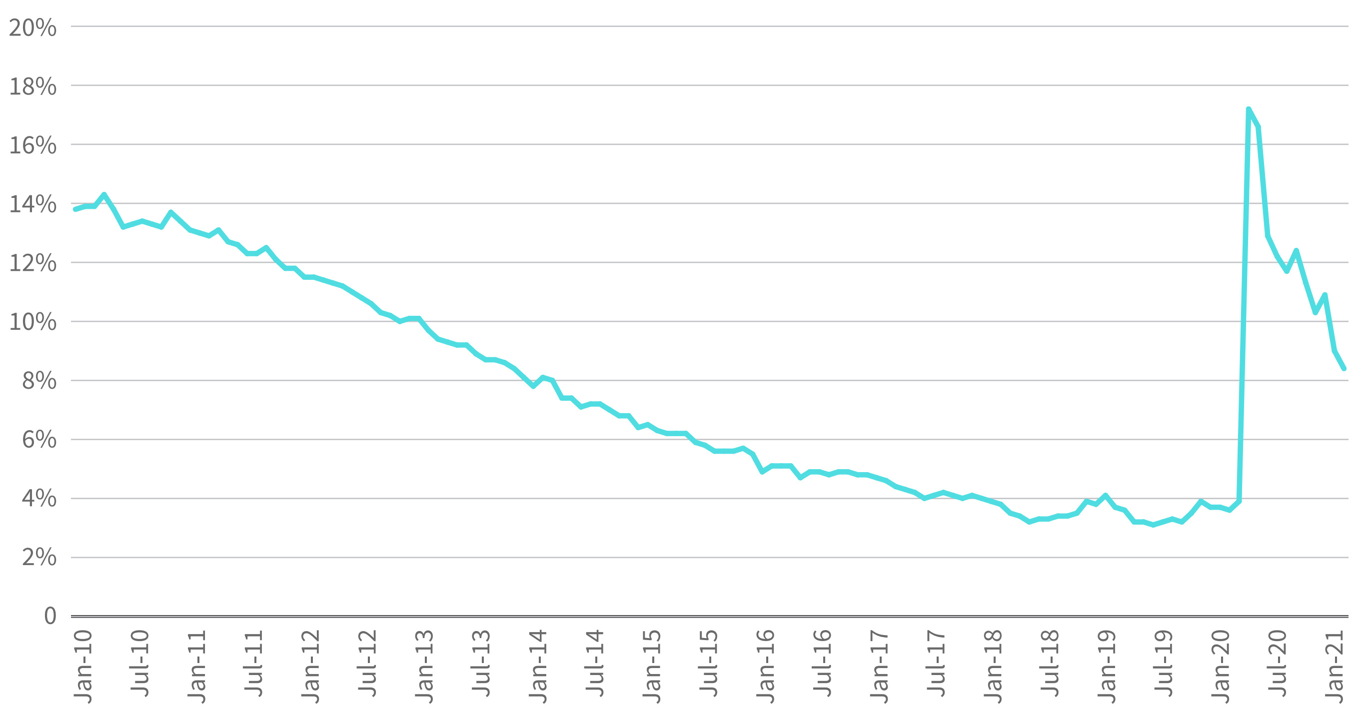
Perhaps most importantly going forward (with cases remaining low and vaccinations becoming available to a wider audience), a more rapid recovery than has been experienced in recent months is looking likely in 2021 and 2022 for the City of Oakland and the national economy.

The City of Oakland's unemployment rate has also risen over the last year as a result of the pandemic. It was 8.4% in February 2021, 4.8 percentage points higher than February 2020, when it stood at 3.6%. This unemployment rate is higher compared to the East Bay (7.1%), San Francisco (MD) (5.8%), and San Jose (5.5%), but slightly lower than California's 8.5% rate.

The economic downturn has also impacted the local labor force (the pool of individuals willing and able to work at any given time). From February 2020 to February 2021, 6,427 workers left the City of Oakland's labor force, a -3.0% decline. This is a less significant decrease relative to the -3.7% in the East Bay, -7.4% in San Francisco (MD), and -3.6% in San Jose, and a more significant decline compared to the -2.5% in California overall.

UNEMPLOYMENT RATE

City of Oakland, Jan-10 to Feb-21



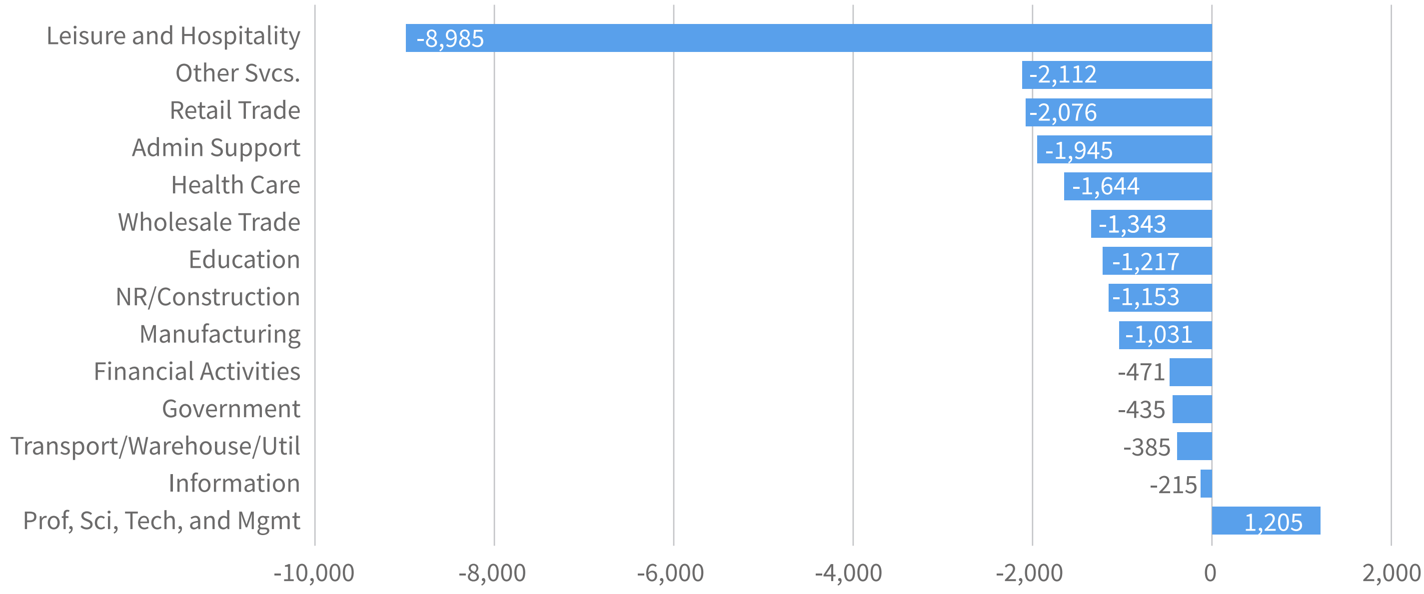
Source: California Employment Development Department; Analysis by Beacon Economics

HARD-HIT INDUSTRIES VS. RESILIENT INDUSTRIES

Unsurprisingly, the industries most impacted by the public health mandates have seen the largest employment declines. From second-quarter 2019 to second-quarter 2020, Leisure and Hospitality led payroll declines in the City of Oakland, with payrolls falling 8,985 (-48.2%). Other sectors posting sizeable declines over the same period were Other Services – which includes hair and nail salons – (-2,112 jobs or -22.9%), Retail Trade (-2,076 jobs or -17.6%), Administrative Support (-1,945 jobs or -19.6%), Health Care (-1,644 jobs or -4.1%), and Wholesale Trade (-1,343 jobs or -23.3%). It's important to note that many of the initial declines in employment experienced during the second quarter of 2020 were temporary in nature. Moreover, going forward, with cases remaining low and vaccinations becoming widely available, a more rapid recovery than has been seen in recent months looks promising in 2021 and 2022 for the city and national economies.

EMPLOYMENT GROWTH BY INDUSTRY

City of Oakland, Q2-19 to Q2-20



Source: California Employment Development Department; Analysis by Beacon Economics

INDUSTRY EMPLOYMENT:
City of Oakland

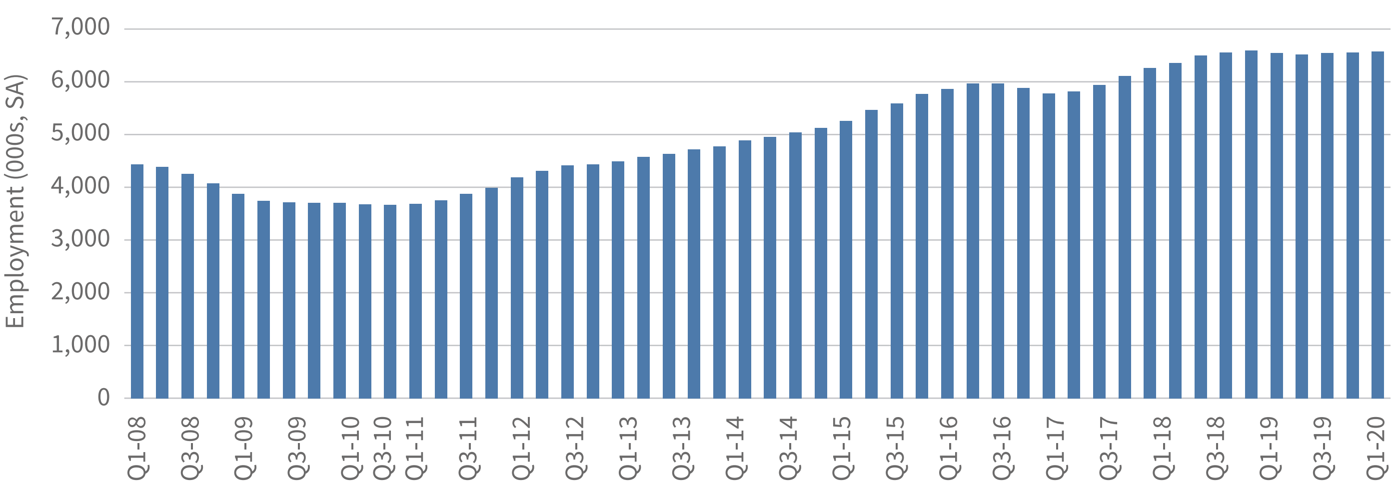
Industry	Employment (000s)	Year-Over-Year Growth City (%)	Year-Over-Year Growth County (%)	Location Quotient*
Health Care	38.4	-4.1	-6.3	3.1
Prof, Sci, Tech, and Mgmt	20.2	+6.4	-4.4	1.9
Transport/Warehouse/Util	12.3	-3.0	+2.0	3.2
Retail Trade	9.7	-17.6	-20.9	1.4
Leisure and Hospitality	9.7	-48.2	-46.7	1.9
Fin. Svcs. and Real Estate	9.6	-4.7	-5.8	3.0
Admin Support	8.0	-19.6	-16.0	1.8
Other Svcs.	7.1	-22.9	-30.1	3.1
NR/Construction	6.7	-14.6	-16.1	1.3
Manufacturing	6.1	-14.5	-4.9	0.6
Education	5.1	-19.3	-22.3	3.3
Wholesale Trade	4.4	-23.3	-11.9	1.1
Information	3.1	-3.8	-5.9	1.3
Total Private	140.4	-13.2	-14.5	-
Government	27.9	-1.5	-12.1	-
Total	168.3	-11.4	-13.1	-

Source: California Employment Development Department

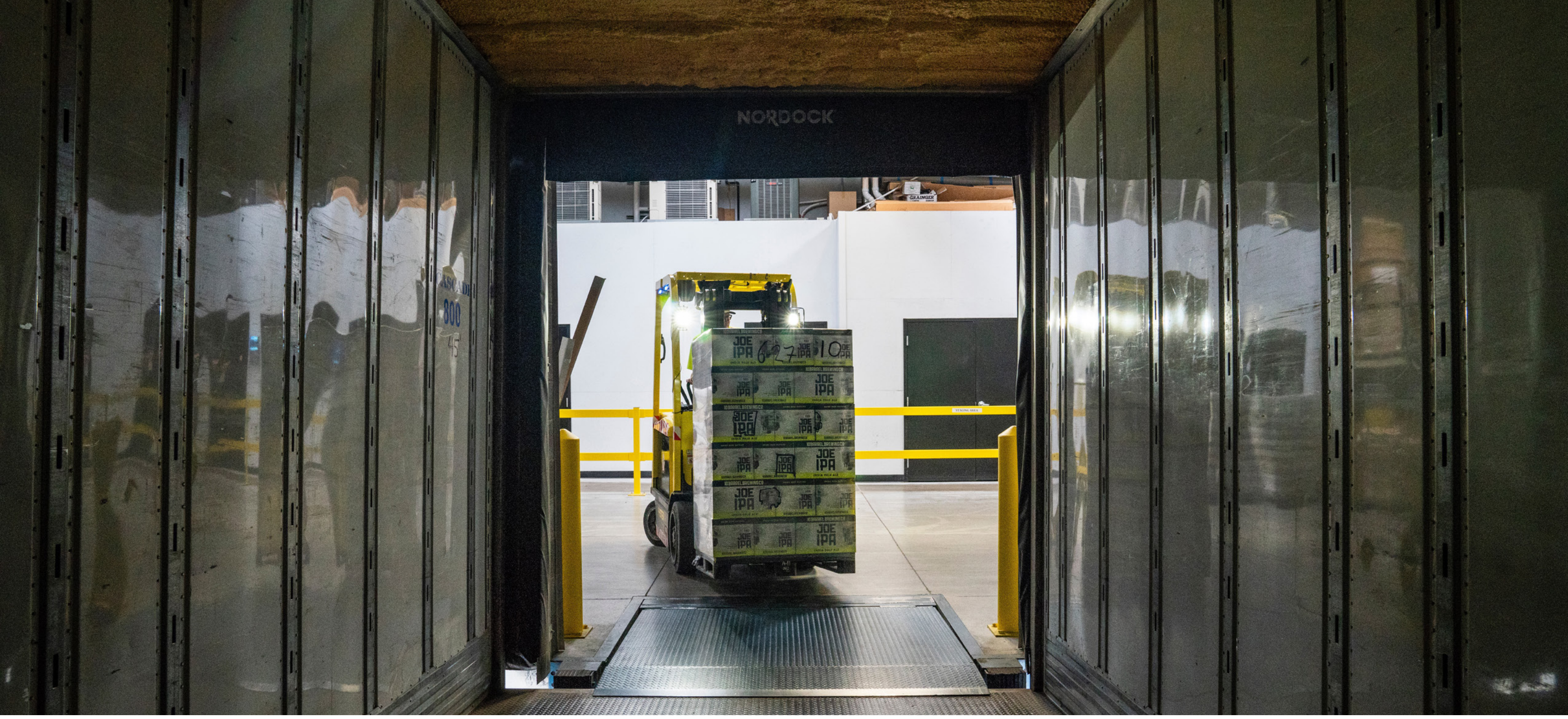
*Measures the concentration of an industry in the City of Oakland relative to the concentration of the industry in Alameda County.

While there have been declines in overall payrolls in the City of Oakland, its high-wage and tech industries have been remarkably resilient during the pandemic. From second-quarter 2019 to second-quarter 2020, Professional, Scientific, and Technical Services and Management increased payrolls by 1,205, a 6.4% rise. The city's strength in this sector stands in stark contrast to the trends experienced in Alameda County overall, with payrolls in the sector falling -4.4% in the county during the same period.

TECH EMPLOYMENT
City of Oakland, Q1-08 to Q2-20



Source: California Employment Development Department; Analysis by Beacon Economics



The City of Oakland's tech industry has also helped steady the labor market during the pandemic.[1] From second-quarter 2019 to second-quarter 2020, tech employment in the city expanded to 6,566, an 0.4% increase. This sector has largely been able to adapt to stay-at-home orders without having to make significant changes to core payrolls.

EMPLOYMENT GAINS/LOSSES BY SUBSECTOR:

City of Oakland

Subsector	Employment		Wage	
	Total (000s)	Year-over-Year Change (%)	Average ($000s)	Year-over-Year Change (%)
Subsectors with the Most Jobs Gained				
Mgmt of Companies and Enterprises	4.8	+1,253	147.6	+10.6
Couriers and Messengers	4.7	+446	50.8	+0.9
Nonstore Retailers	0.8	+66	78.0	+43.9
Warehousing and Storage	0.9	+55	61.2	+5.1
Publishing Industries, Except Internet	0.9	+54	130.8	+7.3
Subsectors with the Most Jobs Lost				
Merchant Wholesalers, Nondurable Goods	2.0	-1,040	96.0	+20.7
Ambulatory Health Care Svcs.	11.3	-1,112	118.4	+10.0
Educational Svcs.	5.1	-1,217	63.2	+24.1
Personal and Laundry Svcs.	1.1	-1,352	40.8	+29.1
Admin and Support Svcs.	6.8	-1,997	48.8	+8.7
Food Svcs. and Drinking Places	7.0	-7,061	27.2	-0.1

Source: California Employment Development Department

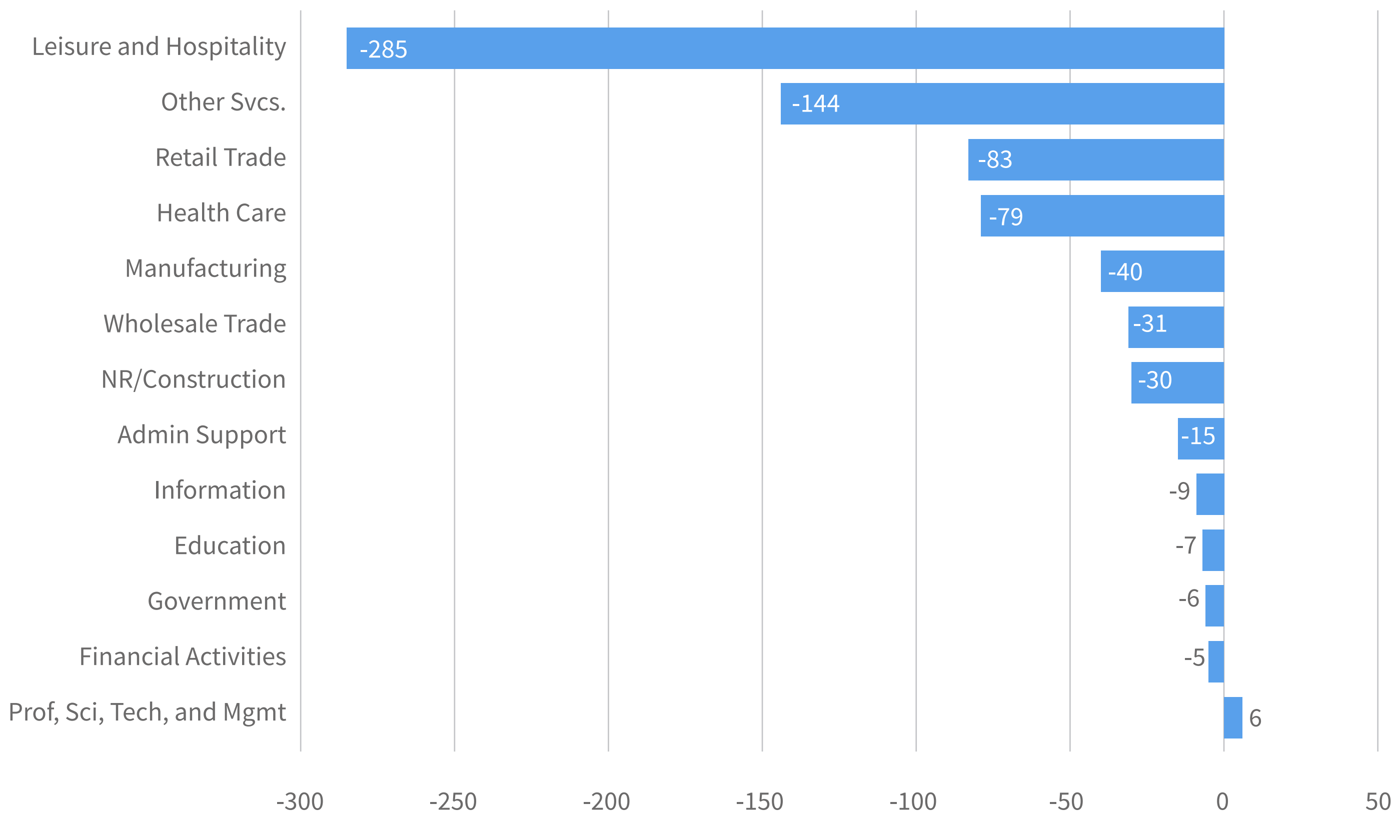
[1] The tech industry in this context includes NAICS 334, 4251, 45411, 511210, 517, 519130, 5414, 541430, 541511, 541212, 541519, 541712

At the subsector level, Food Services and Drinking Places (-7,061) shed the largest number of employees over the last year. Other subsectors shedding a significant number of jobs over the past year were Administrative and Support Services (-1,997), Personal and Laundry Services (-1,352), Educational Services (-1,217), Ambulatory Health Care Services (-1112), and Merchant Wholesalers, Nondurable Goods (-1,040).

Management of Companies and Enterprises (1,253) led employment gains at the subsector level over the last year. Other subsectors adding a significant number of jobs over the last year were Couriers and Messengers (446), Nonstore Retailers (66), Warehousing and Storage (55), and Publishing Industries, Except Internet (54).

ESTABLISHMENT GROWTH BY INDUSTRY

City of Oakland, Q2-19 to Q2-20



Source: California Employment Development Department; Analysis by Beacon Economics

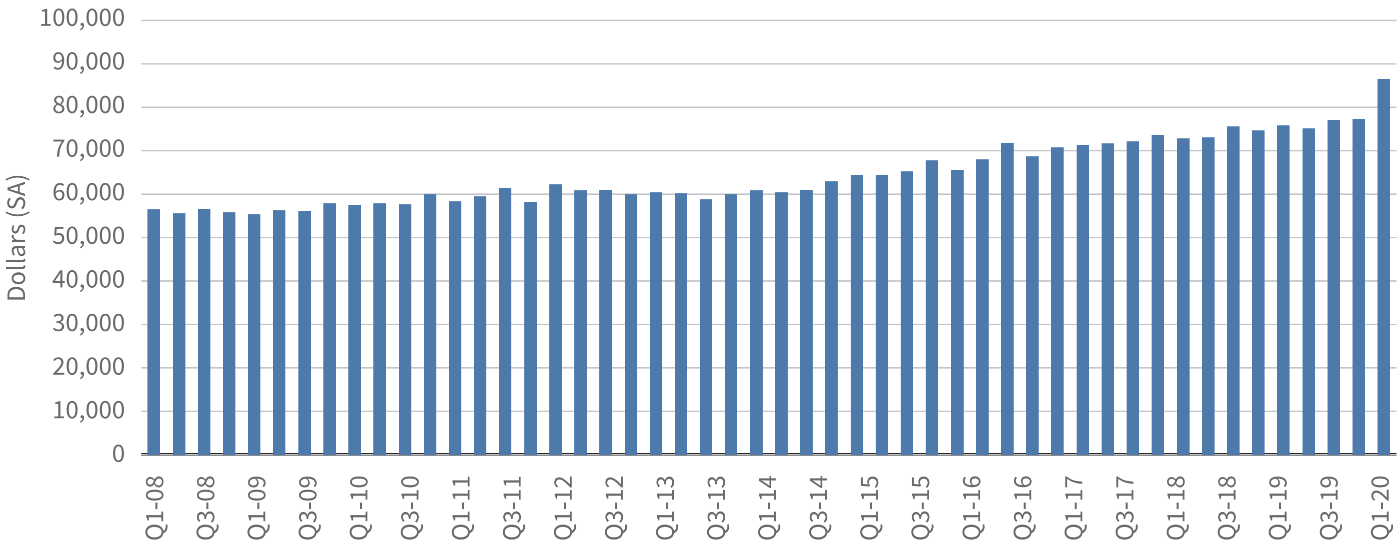
Note: Only counts business establishments with 3 or more employees.

OAKLAND BUSINESS ESTABLISHMENTS: JOBS AND WAGES

Declining employment levels were mirrored by a decrease in business establishments in the City of Oakland over the last year. The number of establishments in the city fell by 728 from second-quarter 2018 to second-quarter 2019, a decline of -12.1%. The hardest-hit sectors for establishment declines were also the industries most impacted by the public health mandates. Leisure and Hospitality was impacted the most, with the number of establishments falling by 285, a -30.6% decline. Other industries with large declines were Other Services (-144 establishments or -22.1%), Retail Trade (-83 establishments or -14.5%), Health Care (-79 establishments or -8.9%), Manufacturing (-40 establishments or -15.9%), and Wholesale Trade (-31 establishments or -11.9%). Establishments did not decrease across the board, however. The number of Professional, Scientific, and Technical Services and Management establishments increased by 6 over the last year, a 0.7% increase.

AVERAGE ANNUAL WAGE

City of Oakland, Q1-08 to Q2-20



Source: California Employment Development Department; Analysis by Beacon Economics

AVERAGE WAGES BY INDUSTRY:
City of Oakland

Industry	Avg, Wage ($000s)	Annual Growth: City (%)	Annual Growth: County (%)	City Vs. County (%)*
Fin. Svcs. and Real Estate	147.6	+32.5	+20.5	+10.6
Prof, Sci, Tech, and Mgmt	133.6	+13.6	+7.7	-0.8
Information	126.8	-8.0	-9.6	-10.8
Manufacturing	87.2	+28.4	+7.4	-3.1
NR/Construction	86.8	+2.2	+0.7	+0.5
Wholesale Trade	85.6	+9.1	+8.0	+0.8
Transport/Warehouse/Util	74.0	-1.0	-2.0	+2.5
Health Care	70.0	+5.2	+3.9	+1.4
Other Svcs.	63.2	+19.2	+21.9	+3.2
Education	63.2	+24.1	+21.4	+6.8
Admin Support	53.2	+7.6	+6.9	-1.6
Retail Trade	48.8	+13.3	+13.7	+0.8
Leisure and Hospitality	34.0	-16.1	-15.2	+4.5
Total Private	82.4	+15.3	+10.1	-0.8
Government	87.6	+6.2	+9.9	+0.5
Total	83.6	+13.9	+10.0	-0.9

Source: California Employment Development Department, QCEW

*Industry Wage relative to the Avg. Annual Wage for the Industry in Alameda County

The decline in employment levels in lower-wage industries such as Leisure and Hospitality, Other Services, and Retail Trade have given way to a substantial rise in the average annual wage for the City of Oakland. From second-quarter 2019 to second-quarter 2020, average annual wages in the city increased 13.9%, ahead of the 10% pace in Alameda County over the same period. As a result of these increases, average annual wages in the City of Oakland reached $83,600, just 0.9% below Alameda County. However, this significant increase in average annual wages in the City of Oakland and Alameda County are largely a function of a temporary change in the composition of jobs. The wage increases were largely driven by the loss of jobs among lower-wage workers.

Employment levels are down across business establishment sizes in the City of Oakland. Employment levels at establishments with less than 15 employees (-12.2%), 15 to 24 employees (-16.6%), 25 to 49 employees (-16.8%), 50 to 149 employees (-16.7%), and more than 150 employees (-8.9%) all saw employments levels decline over the last year.

PRIVATE EMPLOYMENT BY ESTABLISHMENT TYPE

City of Oakland

Establishment Type	Total Employment (000s)	Annual Growth (%)	Share of Employment (%)
Establishment Size			
Less than 15 Employees	38.4	-12.2	27.4
15 to 24 Employees	12.8	-16.6	9.1
25 to 49 Employees	17.2	-16.8	12.2
50 to 150 Employees	28.3	-16.7	20.2
More than 150 Employees	43.6	-8.9	31.1
Establishment Average Wage			
Less than $25,000	23.5	-27.0	16.7
$25,000 to $50,000	39.5	-19.7	28.1
More than $50,000	77.5	-3.6	55.2

Source: California Employment Development Department

Employment levels have declined the most for lower-paying business establishments in the City of Oakland. From second-quarter 2019 to second-quarter 2020, employment levels for establishments that pay an average annual wage of less than $25,000 annually fell -27.0%. Employment levels for establishments with an average annual wage between $25,000 and $50,000 also fell sharply over the last year, declining -19.7%. Establishments paying an average annual wage of $50,000 or more have weathered the storm significantly better, with employment levels falling -3.6% over the last year. More importantly, establishments paying an average annual wage of $50,000 or more account for 55.2% of payrolls in the city, meaning the most impacted businesses make up a small percentage of the overall workforce in Oakland.

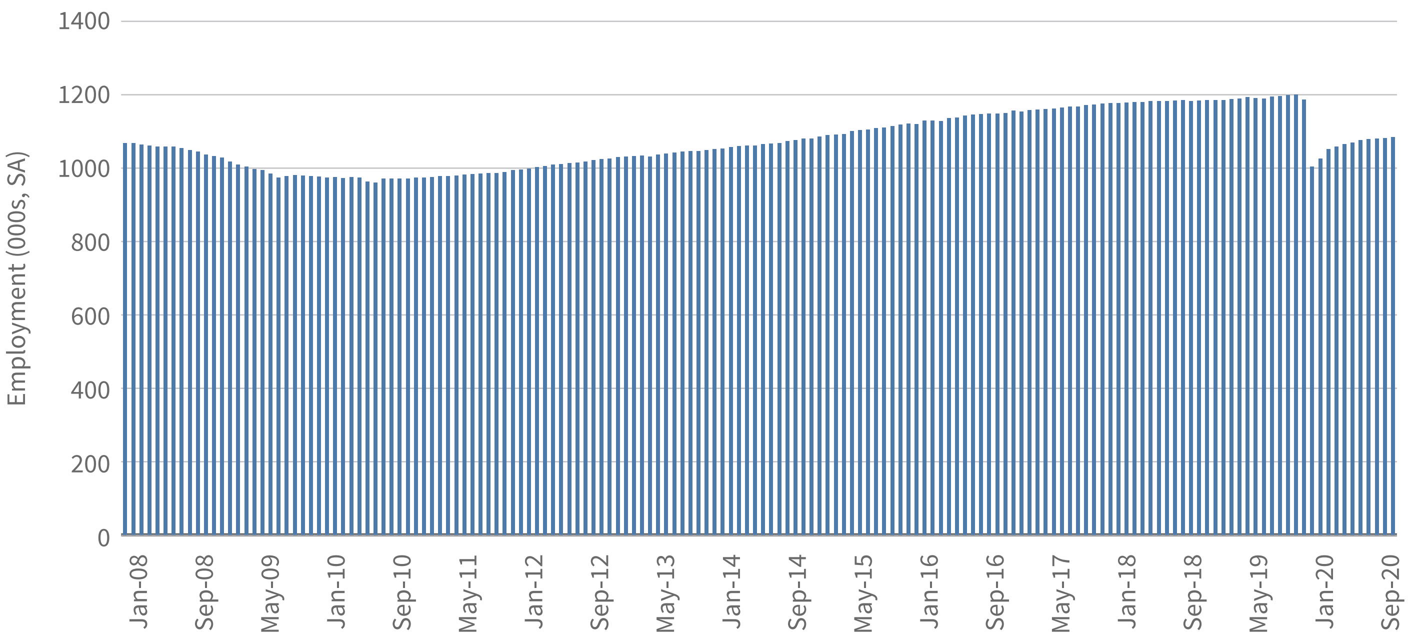
THE EAST BAY'S RECOVERY

The East Bay has already recovered a significant number of jobs lost since hitting recession lows in April 2020, recuperating 40% of its employment decline as of February 2021. This compares favorably to 16% in San Francisco (MD), 35% in San Jose, and 39% in California.

While the East Bay region still has a long ways to go in recovering all jobs lost during the downturn, the vaccine is providing growing optimism and hope that 2021's economic activity will start to resemble normalcy. More importantly, if COVID-19 cases remain low, California is slated to lift most pandemic restrictions on June 15th. This should aid in jumpstarting the economic recovery.

TOTAL NONFARM EMPLOYMENT

East Bay, Jan-08 to Feb-21



Source: California Employment Development Department; Analysis by Beacon Economics

The recovery in the East Bay slowed down toward the end of 2020, as was the case in many places throughout the nation, following the resurgence of Covid-19 cases. From February 2020 to February 2021, total nonfarm employment declined -9.7%, or 116,900 positions. Declines have been pronounced in Leisure and Hospitality, with payrolls falling -39.5% over the same period (or roughly 47,100 positions). Other sectors posting significant declines over this period were Government (-14,300 or -8.1%), Other Services (-10,700 or -25.9%), Administrative Support (-9,400 or -13.4 %), Retail Trade (-9,300 or -8.4%), and Health Care (-7,000 or -3.9%).

A handful of sectors in the East Bay have improved significantly in recent months. The surge in e-commerce has created demand for the transportation and warehousing industry, with payrolls expanding 7.8% over the last year. In addition, after initial business closures, Manufacturing has seen a resurgence in East Bay, with payrolls declining -0.8% over the last year. These trends bode well for growth in these industries in the City of Oakland as more data is released.

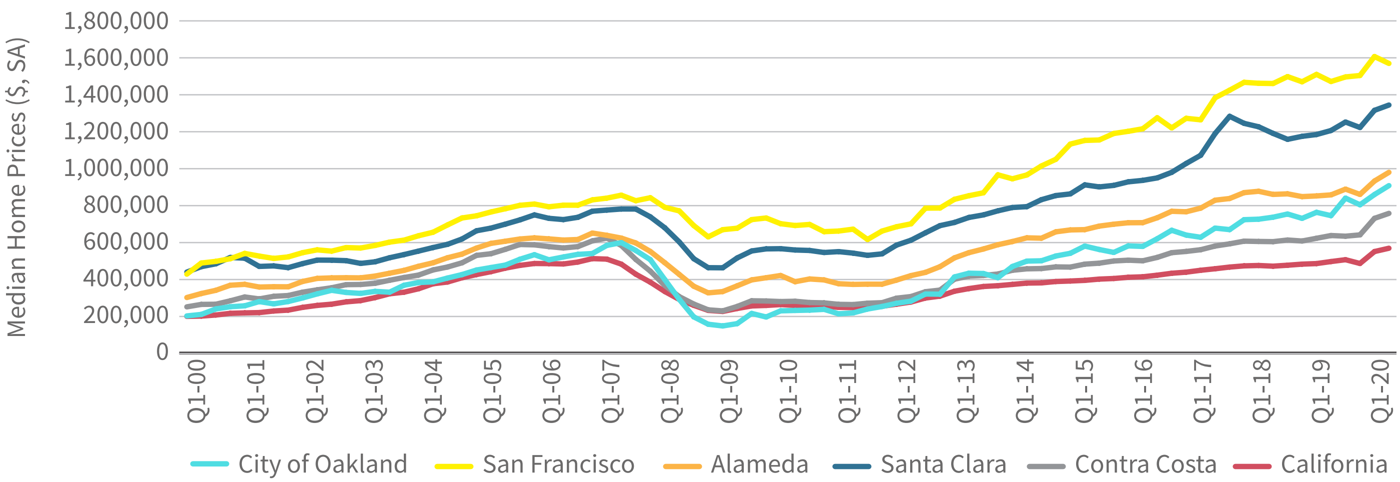
SECTION 2: THE OAKLAND ECONOMY HOUSING AND REAL ESTATE

THE HOUSING MARKET

The housing market is by far the brightest spot of the 2020 economy in the City of Oakland. The strong performance of the city's housing market is likely driven by three factors. First, typical homebuyers (higher-income earners) have been less affected by the labor market's fallout. Second, mortgage rates are at historically low levels, spurring purchasing activity. Third, housing inventory is near historic lows.

The narrative of the city's residential market is similar to that of other regions in California: housing shortages continued to drive up home prices through 2020. However, in contrast to other areas of the state, apartment rents have declined in the Bay Area over the last year.

EXISTING SINGLE-FAMILY HOME PRICES



Source: CoreLogic; Analysis by Beacon Economics

OAKLAND: EXISTING VS. NEW HOME PRICES (SFH AND CONDOS)

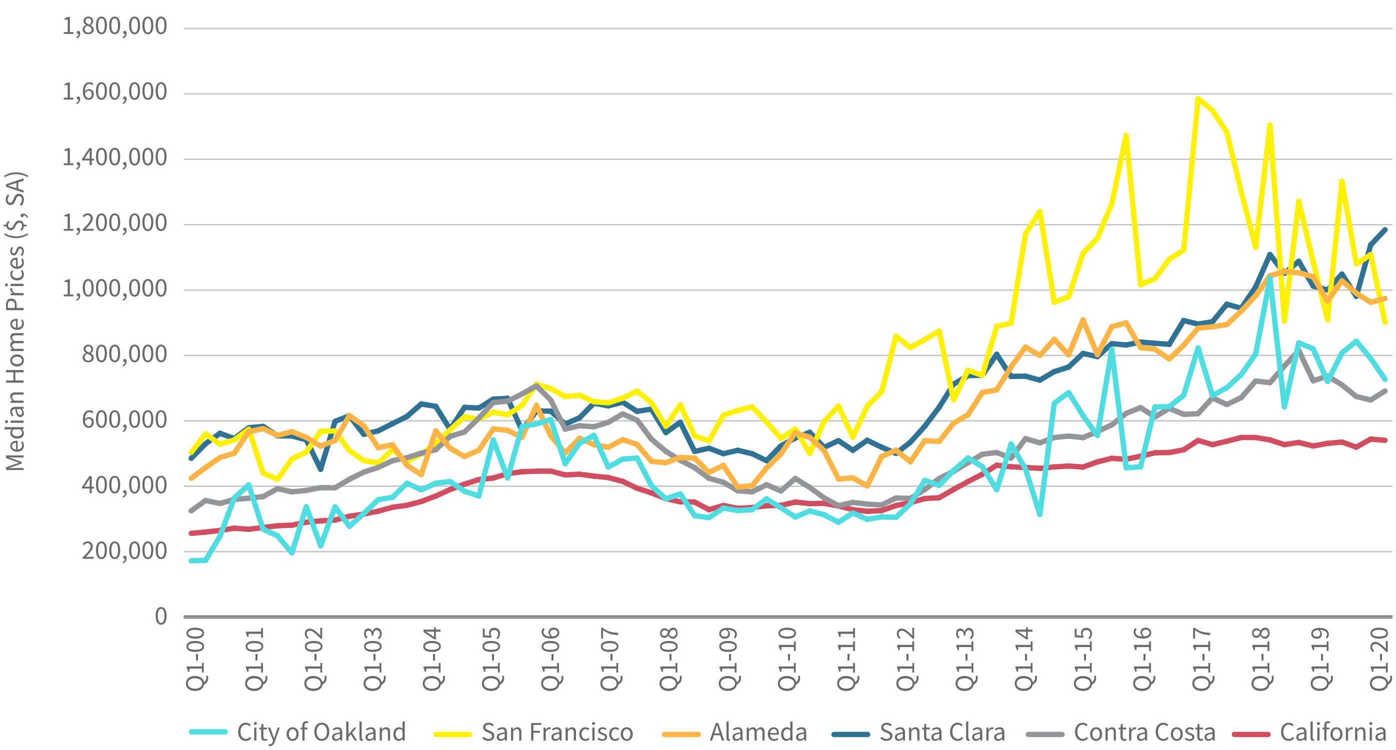
Existing single-family home prices in the City of Oakland have surged compared to last year, growing 22.1% from fourth-quarter 2019 to fourth-quarter 2020. This outpaces existing single-family home price appreciation in Alameda County (14.5%), Contra Costa County (19.2%), San Francisco County (6.7%), Santa Clara County (11.6%), and California (14.9%).

In 2020, sales of existing single-family homes were around 64 units lower compared to 2019 in the City of Oakland, despite sales surging in the third and fourth quarters. This amounts to a -2.4% decrease in existing single-family home sales from 2019 to 2020. This is a less significant decline relative to Alameda County (-2.4%), but is trails the growth in existing single-family home sales in Contra Costa County (2.3%), Santa Clara County (4.4%), and California (3.5%).

Economic stimulus and low interest rates have increased demand for housing throughout California; however, supply has not increased to meet these demands. Indeed, inventories throughout the state are near historic lows.

In Alameda County, there were just 1.7 months of housing supply in February 2021. This compares to 1.7 months of supply in Contra Costa County, 2.1 in San Francisco County, 2.2 in Santa Clara County, and 2 in California overall. For context, a balanced market typically equates to 6 - 7 months of supply. While a buyer's market equates to seven months of supply and above, a seller's market is six months of supply and under. [2] These historic low levels of inventory have pushed home prices up by considerable margins over the last year despite weakness in the labor market and low levels of inflation. That said, the growth in home prices this year is unsustainable, and we should expect interest rates to tick up at some point in 2021.

NEW HOME PRICES



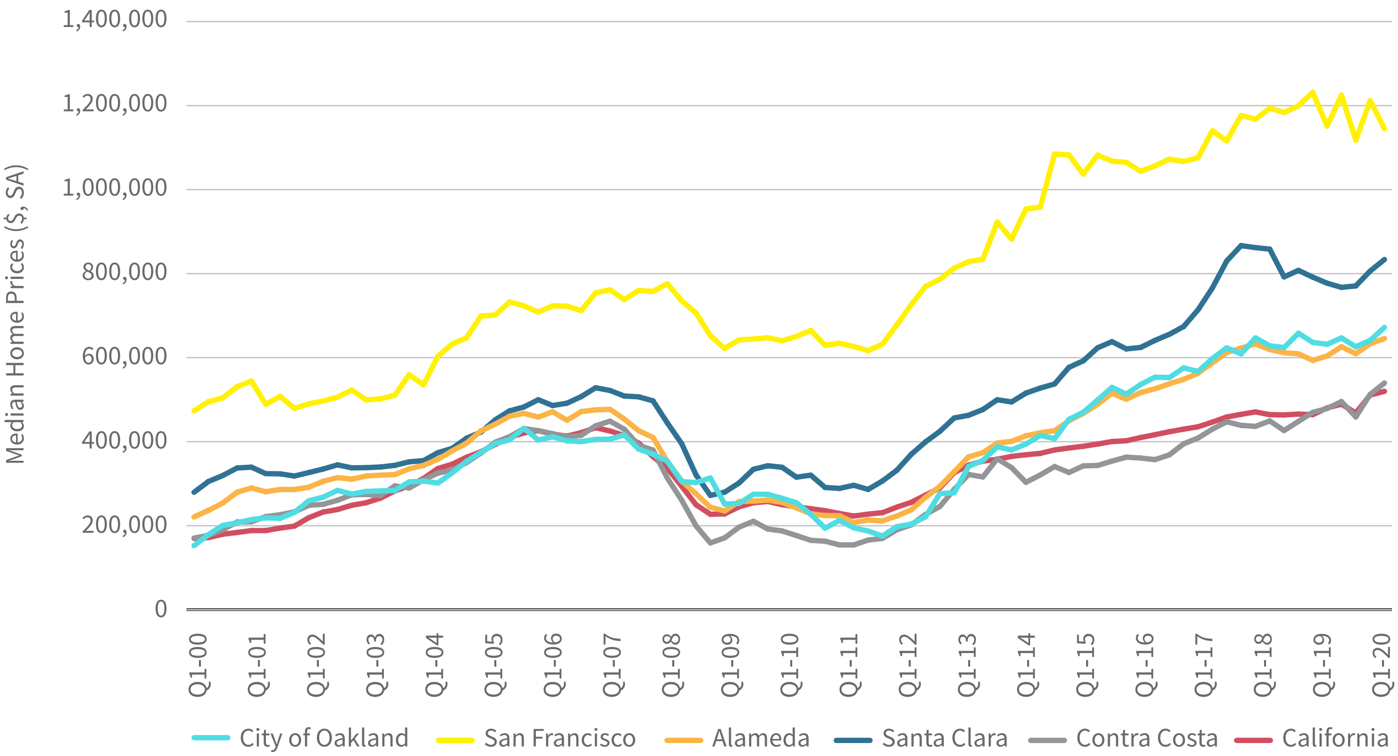
Source: CoreLogic; Analysis by Beacon Economics

[2] National Association of Realtors

New home prices in the City of Oakland have also increased compared to last year, although much more modestly relative to existing single-family homes, growing by just 0.9% from fourth-quarter 2019 to fourth-quarter 2020. This outpaces growth in Alameda County (0.8%), Contra Costa County (-6.2%), and San Francisco County (-0.9%), but trails the growth in Santa Clara County (18.5%) and California (1.8%).

In 2020, new home sales were around 14 units lower compared to 2019, despite sales rebounding in the third and fourth quarters. This amounts to a -10.1% decrease in new home sales from 2019 to 2020. This is more significant decline relative to Alameda County (-5.8%) and stands in stark contrast to the growth in new homes sales in Contra Costa County (10.5%), San Francisco County (41.4%), and California (5.5%).

EXISTING CONDO PRICES



Source: CoreLogic; Analysis by Beacon Economics

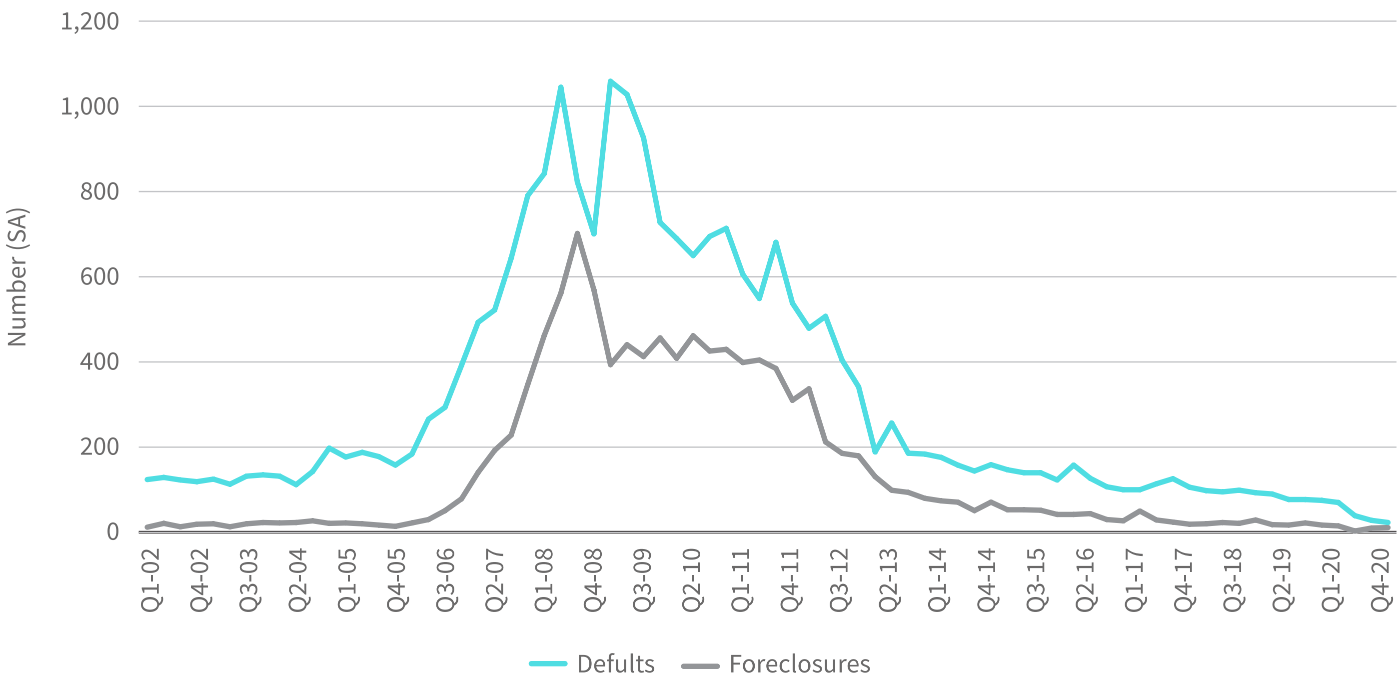
Existing condo prices in the City of Oakland have also increased compared to last year, growing 6.4% from fourth-quarter 2019 to fourth-quarter 2020. This pace of growth outpaces that of San Francisco County (-0.6%), but it trails the growth in existing condo prices in Alameda County (6.9%), Contra Costa County (12.7%), Santa Clara County (7.3%), and California (8.2%).

In 2020, condo sales were around 10 units lower compared to 2019, despite sales rebounding in the third and fourth quarters. This amounts to a 1.4% decrease in condo sales from 2019 to 2020. This is a more modest decline relative to Alameda County (-4.1%) and San Francisco County (-7.8%), but is in contrast to the growth in Contra Costa County (19.8%), Santa Clara County (6.3%), and California (4.6%).

FEDERAL MORTGAGE RELIEF AND HOUSING AFFORDABILITY

Following the outbreak of the COVID-19 pandemic, Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which puts in place two protections for homeowners with federally backed mortgages. First, a foreclosure moratorium. Second, a right to forbearance for homeowners who are experiencing a financial hardship due to the COVID-19 emergency. These measures are expected to help homeowners affected by COVID-19 in the short-term.

CITY OF OAKLAND DEFAULTS AND FORECLOSURES



Source: CoreLogic; Analysis by Beacon Economics

With the economic fallout from COVID-19 being relatively minimal for high-income earners and significant state and federal efforts to keep people in their homes, there have been very few defaults and foreclosures in the City of Oakland. In 2020, there were 160 defaults in the city, well below the 440 annual average from 2015 to 2019. Similarly, there were just 36 foreclosures in Oakland in 2020, well below the 126 annual average from 2015 to 2019.

Housing affordability and availability continues to be one of the most pressing issues for long-term economic development in the City of Oakland and the Bay Area overall. In 2019, the average household in Oakland would have had to spend $37,896, or 46% of its income each year, to afford the mortgage payment for a median-priced home costing $916,546.[3] While there is no question that households in Oakland have been mortgage-burdened (spending more than 30% of their income on mortgage payments), Oakland remained more affordable than San Francisco and Santa Clara counties. However, as people move out of more costly cities and into more affordable areas in Oakland, upward pressure is placed on the city’s housing costs. Without additional housing units, this shift of workers to Oakland could push current residents to more affordable neighboring cities or counties, or perhaps even out of the Bay Area entirely.

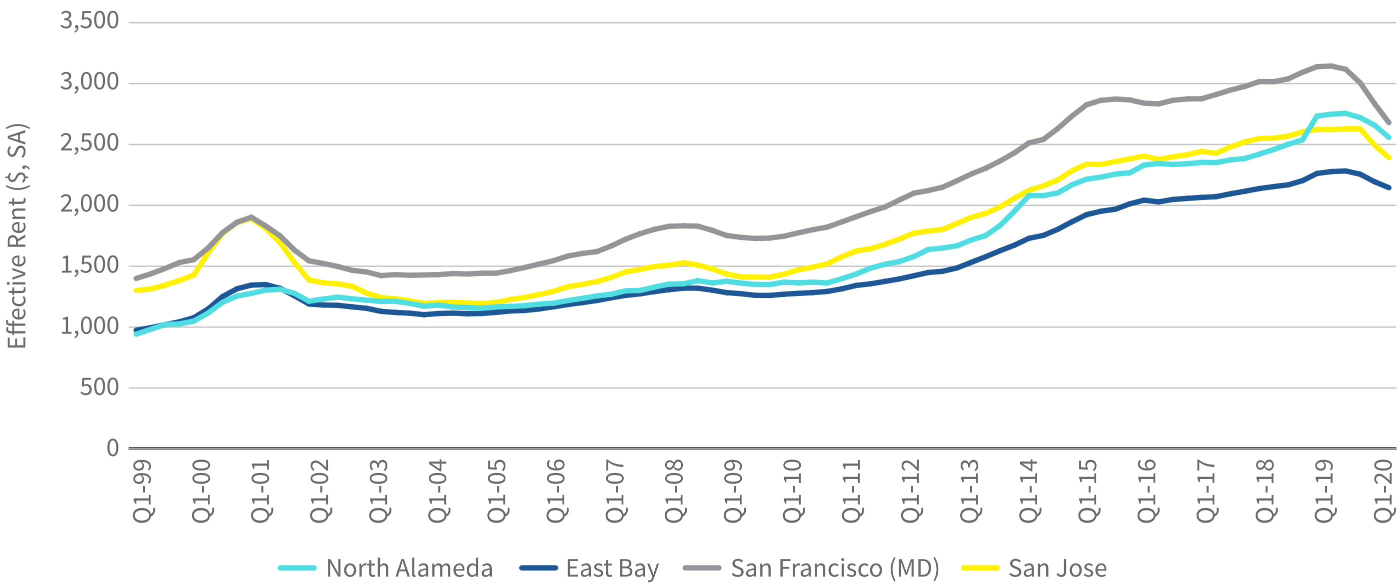
[3] Assumes a 20% down payment is made with a 30-year fixed 3.17% interest rate loan where no private mortgage insurance is needed, based on median household income data from the 2019 American Community Survey

OAKLAND VS. BAY AREA RENTAL MARKETS

The rental market in the City of Oakland and the broader Bay Area has been less resilient than the market for homebuyers. Indeed, effective rent, which is the cost of “asking rent” minus any rent promotions, declined -7.0% from fourth-quarter 2019 to fourth-quarter 2020 in North Alameda (the submarket that contains Oakland) to reach $2564 per month. This is the first decline the submarket has experienced in effective rents since 2010 for the apartment market.

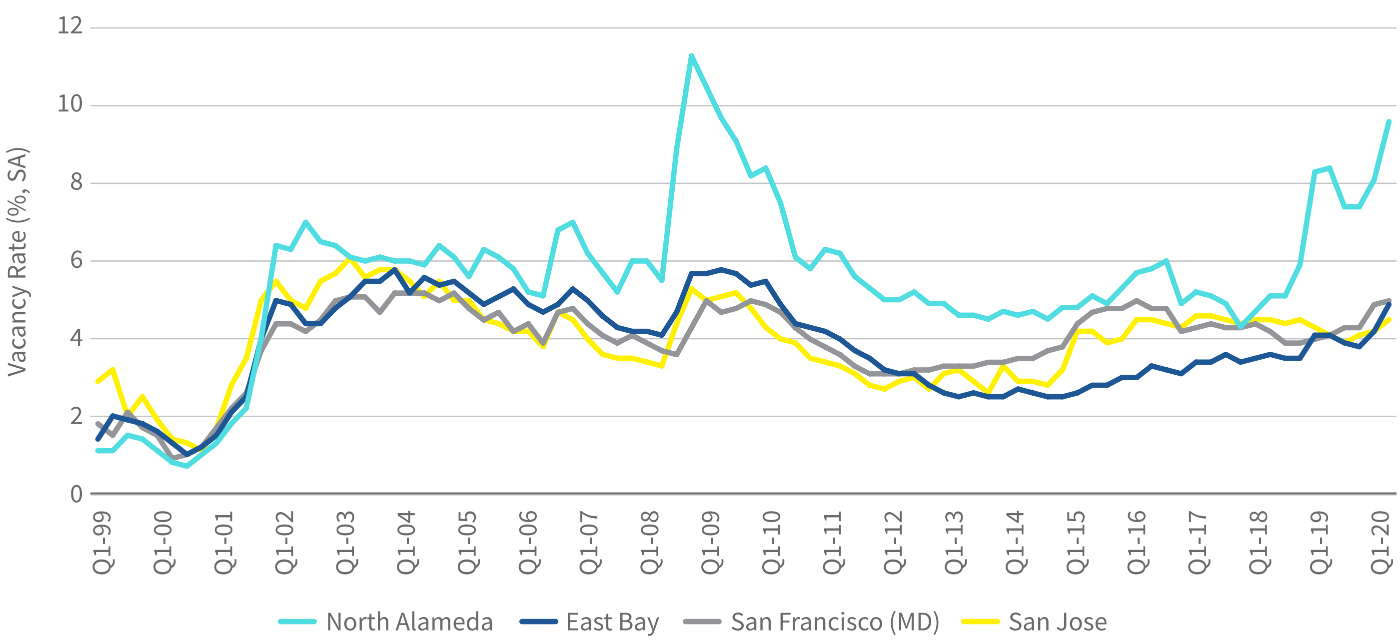
This decline was not unique to the North Alameda submarket either; effective rent has fallen -5.9% in the broader East Bay, -14.9% in San Francisco (MD), and -8.8% in San Jose. With more companies allowing tele-commuting (especially those in the tech space), households have been able to move to more affordable regions of California. The long-term implications of the shift to tele-commuting may help mitigate some price appreciation in the coming years; however, the amenities offered by the City of Oakland and the broader Bay Area will continue making it one of the most attractive locations to live in the United States.

APARTMENT MARKET EFFECTIVE RENTS



Source: REIS; Analysis by Beacon Economics

APARTMENT MARKET VACANCY RATES

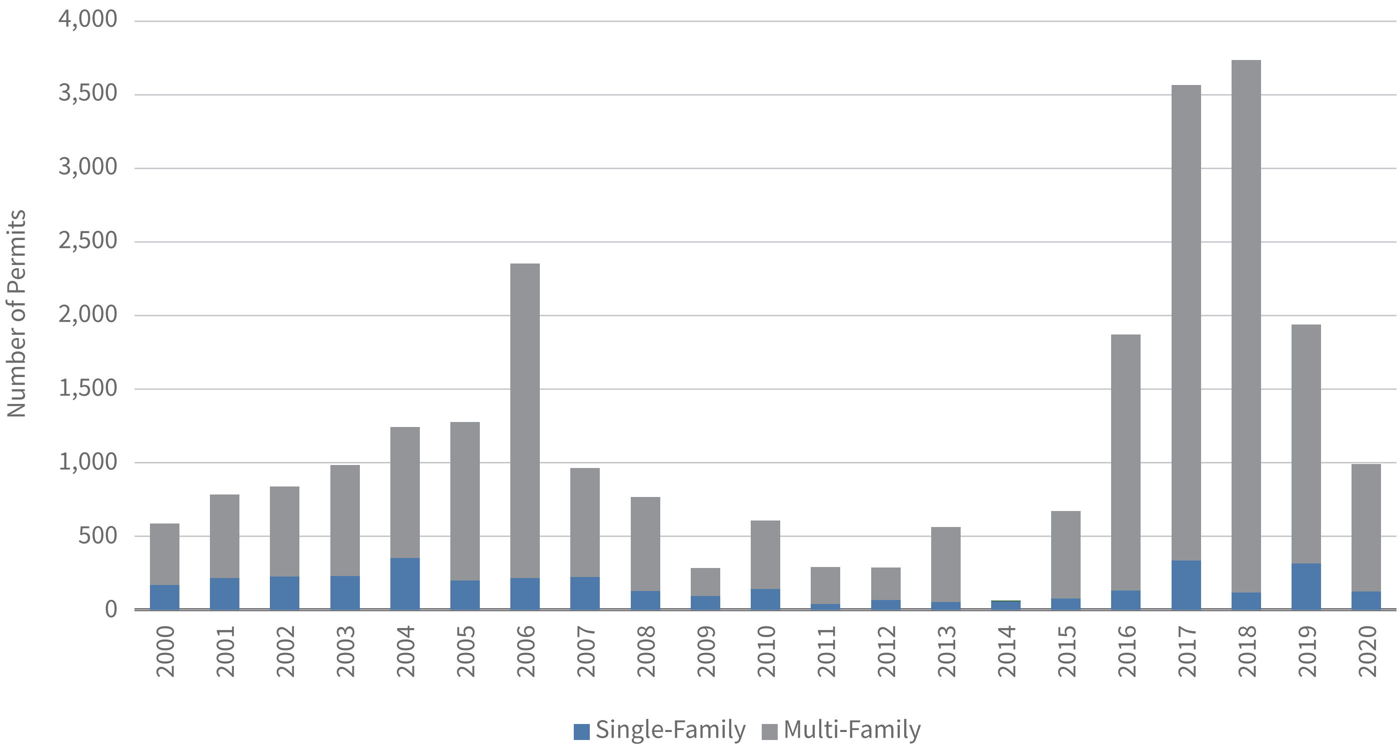


Source: REIS; Analysis by Beacon Economics

The decrease in demand in the apartment market in the Bay Area can also be seen in vacancy rates. The vacancy rate in the North Alameda submarket increased from 8.4% in the fourth quarter of 2019 to 9.6% in the fourth quarter of 2020, a 1.2 percentage-point increase. An increase in vacancy rates also occurred in the broader East Bay (0.8 percentage-points), San Francisco (MD) (0.9 percentage-points), and San Jose (0.4 percentage-points).

BUILDING PERMITS: OAKLAND AND BEYOND

CITY OF OAKLAND RESIDENTIAL BUILDING PERMITS



Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

Inventory shortages are not being helped by the pace of permitting. After posting a sizeable decline from 2018 to 2019, residential permitting activity continued to decline in the City of Oakland in 2020. According to data from the Construction Industry Research Board (CIRB), 990 residential permits were issued by Oakland in 2020, an approximate -49% decrease relative to 2019 levels and a -74% decline relative to 2018 levels. This was driven by a -60% decline in single-family units and a -47% decline in multi-family permitting from 2019 to 2020. While permitting activity was down in California in 2020, the decline in permitting activity was more substantial in Oakland. For comparison, in California, permitting activity declined by just -10% from 2019 to 2020 and was down only -12% from 2018 to 2020. Continuing to add units to the housing stock will be essential to sustain economic growth in the coming years for Oakland.

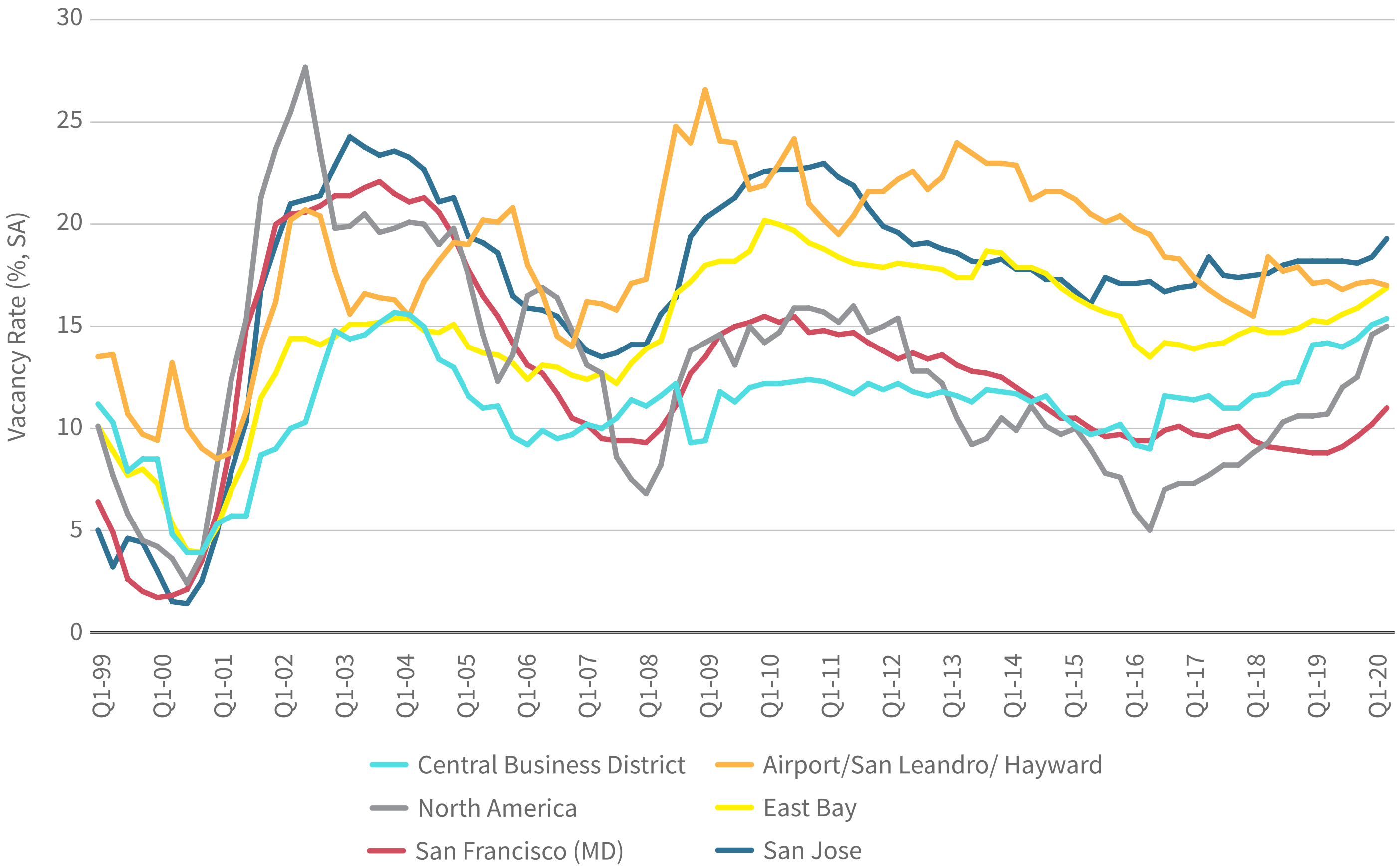
The Bay Area and California as a whole have been in a housing crisis characterized by severe shortages leading to skyrocketing housing costs. The decline in residential permitting has indicated falling profitability in housing development, which is a serious concern for the future of Oakland and the broader Bay Area's economy. Additional expenses associated with long project approval timelines, high construction costs, burdensome regulations, and neighborhood pushback have been the main factors that contributed to the diminishing incentive to build. In the coming months and years, as Oakland and the broader Bay Area (along with the rest of the country) emerge from the economic toll of the pandemic, additional issues are sure to arise, and the need for affordable housing may become even more urgent.

OAKLAND VS. BAY AREA: COMMERCIAL REAL ESTATE AND VACANCIES

While there has certainly been some economic fallout in the commercial real estate market in the City of Oakland and the Bay Area, the declines are not as severe as headlines would suggest. More importantly, the declines that have been seen are likely to be temporary in nature. The majority of the declines have been driven by the response to COVID-19, whether through public health mandates or changes in consumer behavior to help mitigate the pandemic's health impact.

The fundamentals of what will drive long-run growth remain strong, with households seeing minimal losses in income and some households even able to bolster their savings over the last year. As a result, there is a significant amount of pent-up demand for consumption activities. Once the economy begins to open up and the health concerns related to COVID-19 begin to wane, the economy, and thus the commercial real estate market, should recover at a rapid pace in 2021.

OFFICE MARKET VACANCY RATES



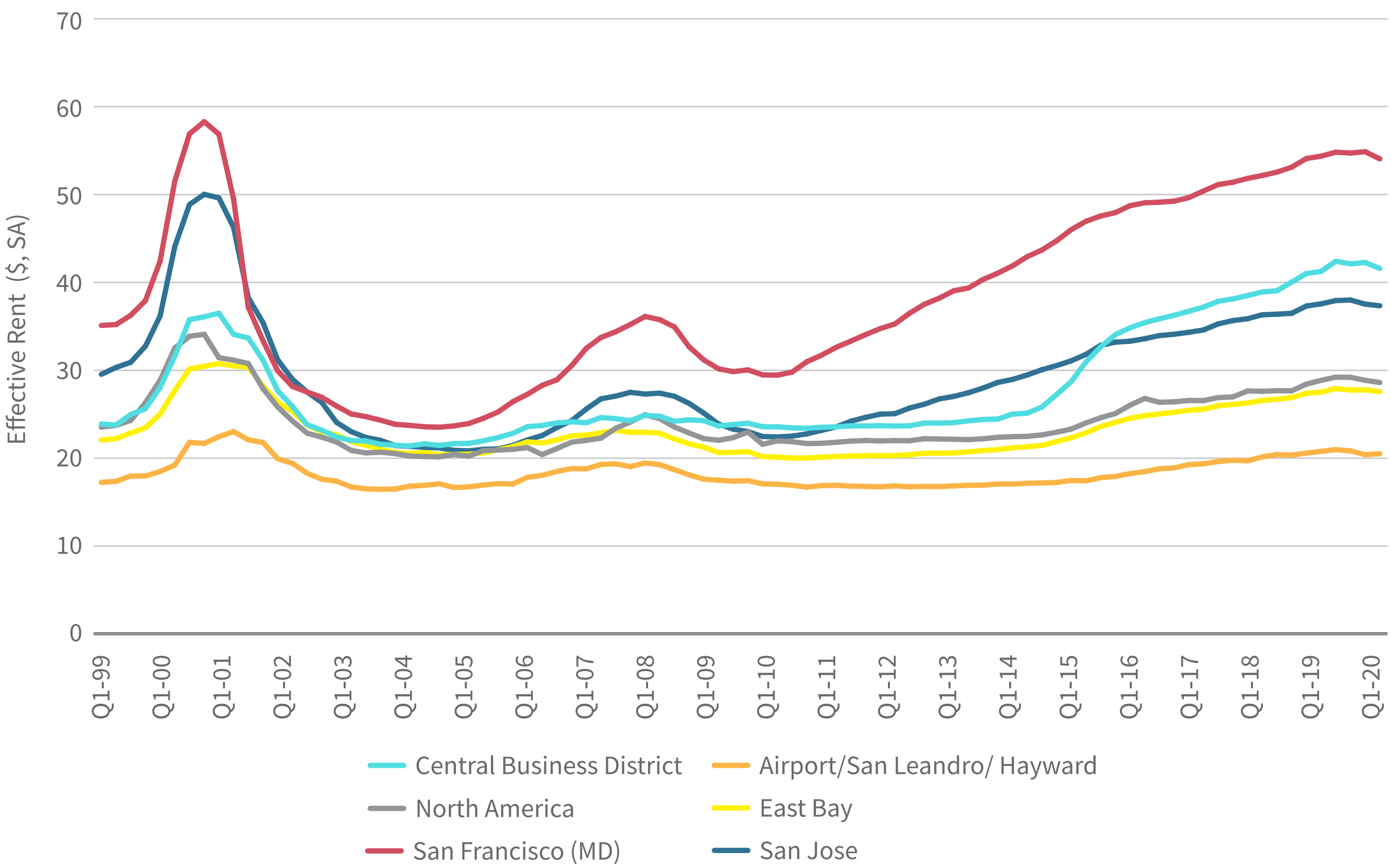
Source: REIS; Analysis by Beacon Economics

COVID-19 has reduced demand for the office market in Oakland and the Bay Area. However, with vaccinations becoming widely available, households and businesses should be able to return to normal operating practices in the coming months, which should bolster demand for the office market over the long-term.

Still, demand for office space has declined over the last year. In the City of Oakland's Central Business District, vacancy rates reached 15.4% in the fourth quarter of 2020, a 1.2 percentage-point increase from a year ago and the highest level of vacancy rates for the submarket since 2004. Vacancy rates were also up in the North Alameda submarket, reaching 15% in the fourth quarter of 2020, a 4.3 percentage-point increase over the same period in 2019. Vacancy rates declined in the Airport/San Leandro/Hayward submarket, reaching 17% in the fourth quarter of 2020, a 0.2 percentage-point decline from a year earlier. Vacancy rates were also up for office properties in the broader Bay Area, reaching 16.9% in the East Bay (a 1.7 percentage-point increase), 11% in San Francisco (MD) (a 2.2 percentage-point increase), and 19.3% in San Jose (a 1.1 percentage-point increase). While employers are likely to allow more flexibility with respect to where their employees work, many large corporations have announced plans for employees to return to their offices. As long as corporations see productivity benefits to on-site worker activity, office markets should remain resilient.

OAKLAND VS. BAY AREA: COMMERCIAL REAL ESTATE RENTS

OFFICE MARKET EFFECTIVE RATES



Source: REIS; Analysis by Beacon Economics

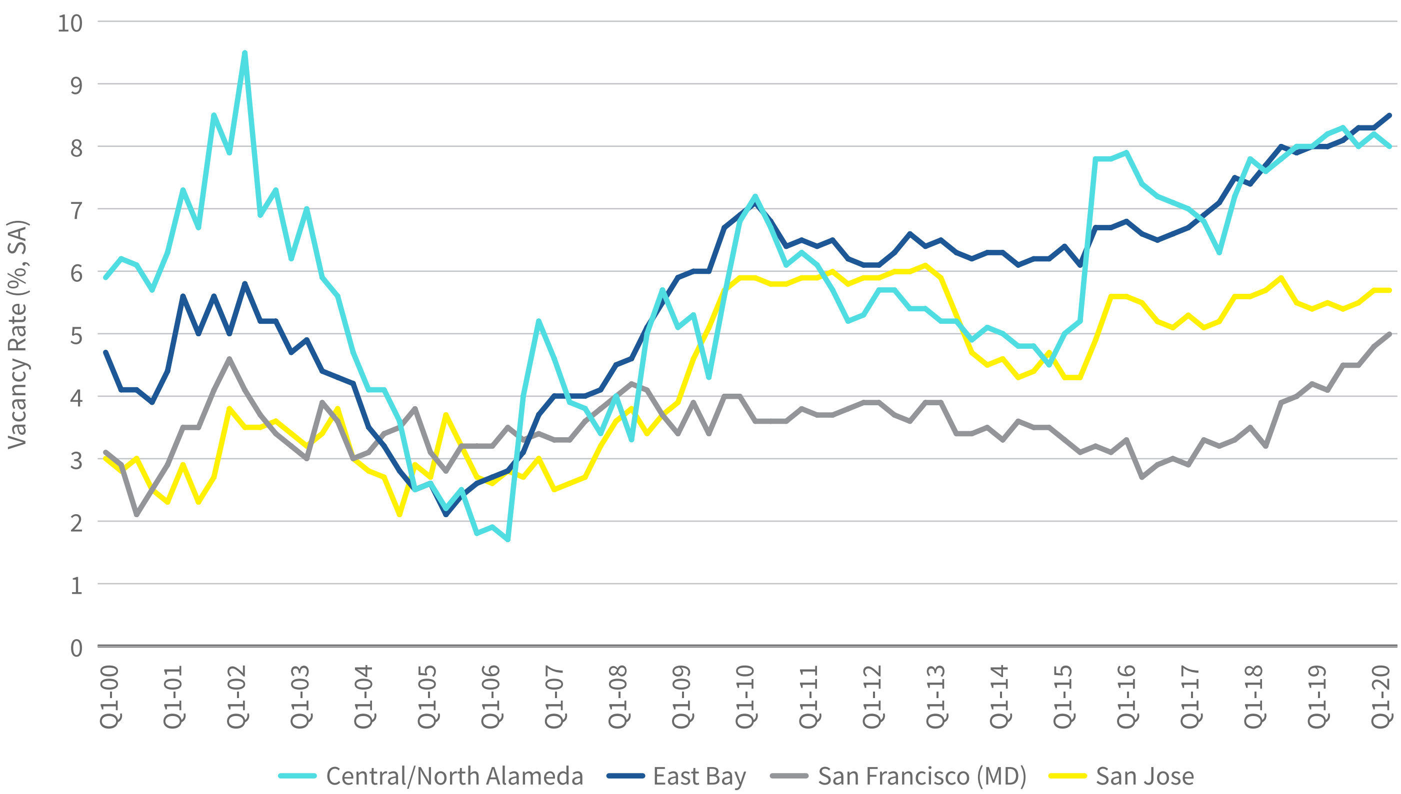
The decrease in demand for office properties has also impacted effective rents for office space in the Bay Area. In the City of Oakland's Central Business District, effective rent reached $41.63 per square foot in the fourth quarter of 2020, a 0.8% increase from a year ago. Effective rent fell -1.3% in the Airport/San Leandro/Hayward submarket and by -0.9% in the North Alameda submarket. Thanks in part to the growth in effective rent in Oakland's Central Business district, effective rent in the East Bay overall expanded by a modest 0.2% from fourth-quarter 2019 to fourth-quarter 2020. This is in contrast to the decline in effective rent in San Francisco (MD) (-0.6%) and San Jose (-0.6%).

Oakland's Central Business District continues to be one of the most attractive locations in the Bay Area for firms to locate. Effective rent for office space in the Central Business District submarket was $41.63 per square foot in the fourth quarter of 2020, well above the $20.52 per square foot rate in the Airport/San Leandro/Hayward submarket and $28.62 per square foot in the North Alameda submarket. Effective rents in the broader East Bay stood at $27.59 per square foot, well below rates in San Francisco (MD) ($54.09 per square foot) and San Jose ($37.35 per square foot).

REGIONAL VACANCY RATE AND RENTAL DYNAMICS

The fourth quarter of 2020 saw a number of key lease transactions for the City of Oakland. PG&E signed a lease for 753,00 square feet of office space at 300 Lakeside Drive. In addition, Dictionary.com signed a lease for 8,739 square feet of office space, and Select Quote signed a lease for 8,623 square feet of office space. [4]

RETAIL MARKET VACANCY RATES



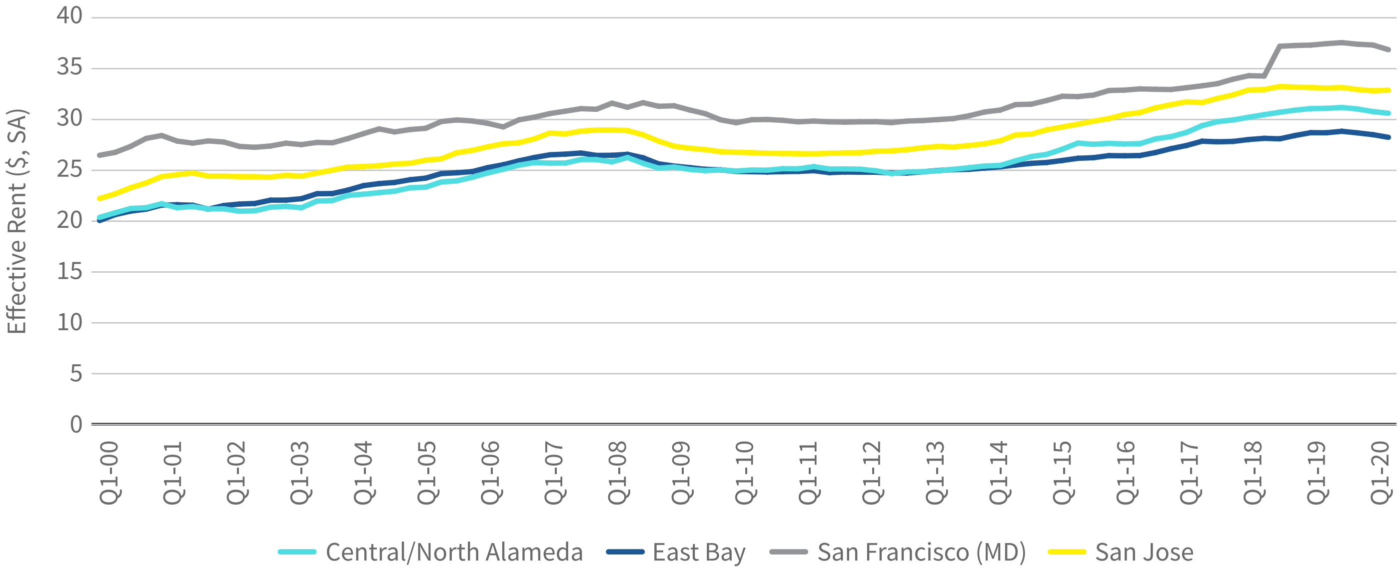
Source: REIS; Analysis by Beacon Economics

Public health mandates and changes in consumer preferences resulting from COVID-19 have also impacted demand for retail space in the City of Oakland and the Bay Area. Leasing activities have slowed across all retail categories, especially in the apparel and small business categories, such as restaurants, bars, health clubs and beauty salons.[5] The decline in these categories should not come as a surprise as these are some of the last retail businesses allowed to re-open (and once open, they often face capacity constraints).

Vacancy rates for retail space in the Central/North Alameda submarket (the submarket that contains Oakland) declined over the last year. Vacancy rates in the Central/North Alameda submarket reached 9% in the fourth quarter of 2020, a 0.2 percentage-point decline over the same period in 2019. Vacancy rates for retail space in the East Bay increased to 8.5% in the fourth quarter of 2020, a 0.5 percentage-point increase relative to the fourth quarter of 2019. The declining vacancy rate for retail space in the Central/North Alameda was also in contrast to San Francisco (MD) (0.9 percentage-point increase) and San Jose (0.2 percentage-point increase).

[4] Cushman & Wakefield, MarketBeat Q4 2020 East Bay Office Report
[5] Cushman & Wakefield, MarketBeat Q4 2020 East Bay Retail Report

RETAIL MARKET EFFECTIVE RENTS

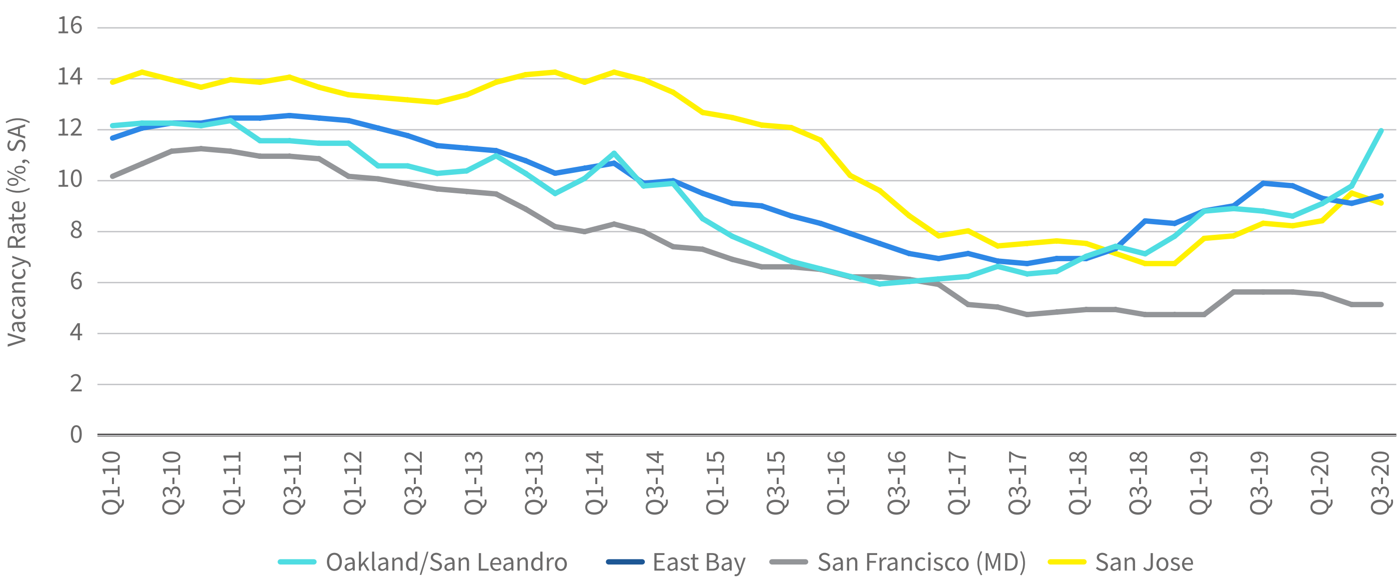


Source: REIS; Analysis by Beacon Economics

COVID-19 has still impacted demand for retail space in the Bay Area, with effective rent down across the board. From the fourth quarter of 2019 to the fourth quarter of 2020, effective rent has declined -1.6% for retail space in the Oakland/San Leandro submarket. The pace of effective rent growth for retail space in the Central/North Alameda submarket matched growth in the East Bay (-1.6%) and San Francisco (MD) (-1.6%), but it was a slightly more rapid decline relative to San Jose (-0.6%).

Effective rent for retail space in the Central/North Alameda submarket ($30.70 per square foot) is more expensive relative to the broader East Bay ($28.33 per square foot), but companies can garner significant cost savings relative to the effective rent for retail space in San Francisco (MD) ($36.94 per square foot) and San Jose ($32.97 per square foot).

WAREHOUSE/DISTRIBUTION MARKET VACANCY RATES



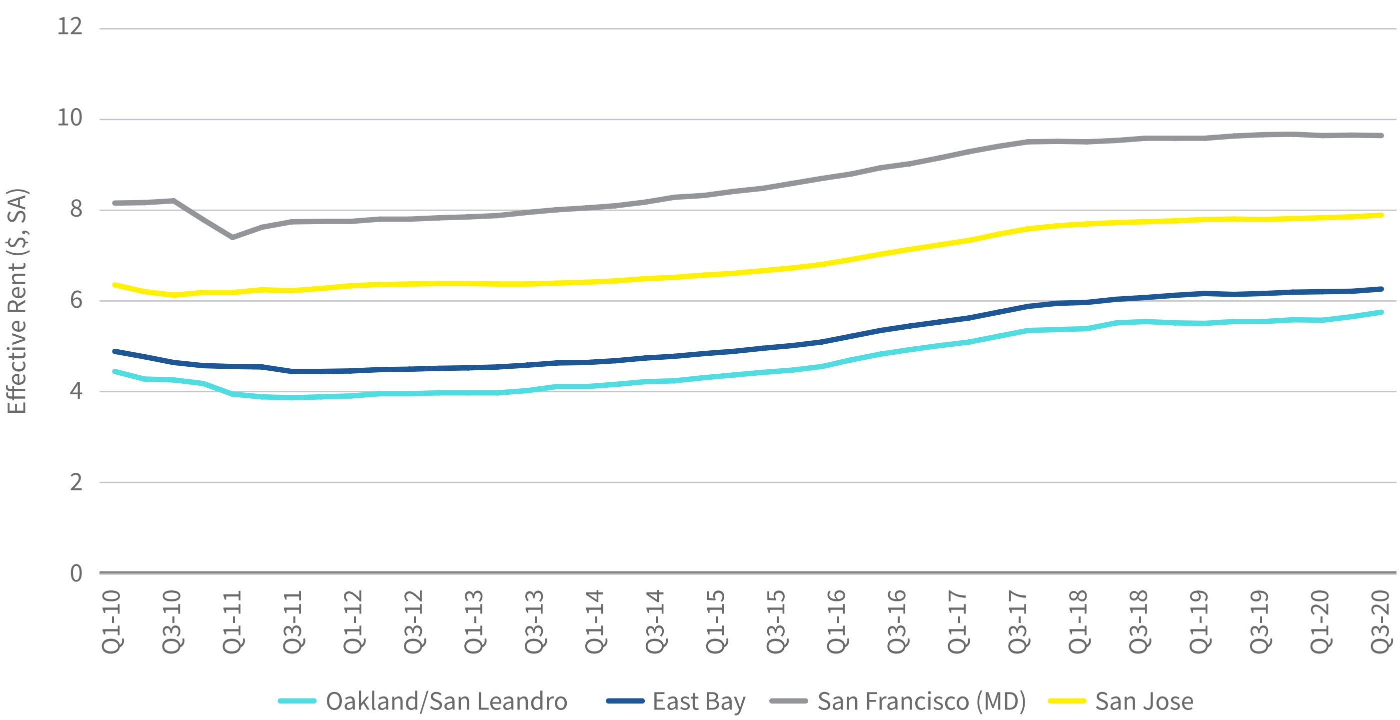
Source: REIS; Analysis by Beacon Economics

Demand for the warehouse/distribution space has also been negatively impacted by COVID-19. However, recent years have been characterized by strong demand and low vacancy rates for the City of Oakland and the Bay Area. Moreover, the COVID-19 pandemic increased demand from the e-commerce sector due to growing consumer reliance with respect to online shopping due to public health mandates and mitigation efforts from consumers. Requirements originating from this sector necessarily require large, modern distribution space, fueling rent growth particularly for that product type.[6]

Vacancy rates for warehouse/distribution space increased over the last year; however, this was only partiality driven by a decrease in demand for warehouse/distribution space. Vacancy rates in the Oakland/San Leandro submarket (the submarket containing Oakland), reached 12% in the fourth quarter of 2020, a 3.2 percentage-point increase over the same period in 2019. This substantial increase was driven primarily by 790,000 square feet of warehouse/distribution space coming online during the last two quarters.

Indeed, net absorptions in the Oakland/San Leandro submarket over the last two quarters was -235,000 during the fourth quarter, a decrease in demand (but not as substantial as the decrease indicated by the uptick within the submarket's vacancy rate). Vacancy rates for warehouse/distribution space in the East Bay decreased -9,4% in the fourth quarter of 2020, a 0.5 percentage-point decline relative to the fourth quarter of 2019. Vacancy rates in the Oakland/San Leandro submarket also increased more steeply relative to San Jose (0.8 percentage-points) and stood in contrast to the 0.5 percentage-point decrease in vacancy rates for warehouse/distribution space in San Francisco (MD).

WAREHOUSE/DISTRIBUTION MARKET EFFECTIVE RATE



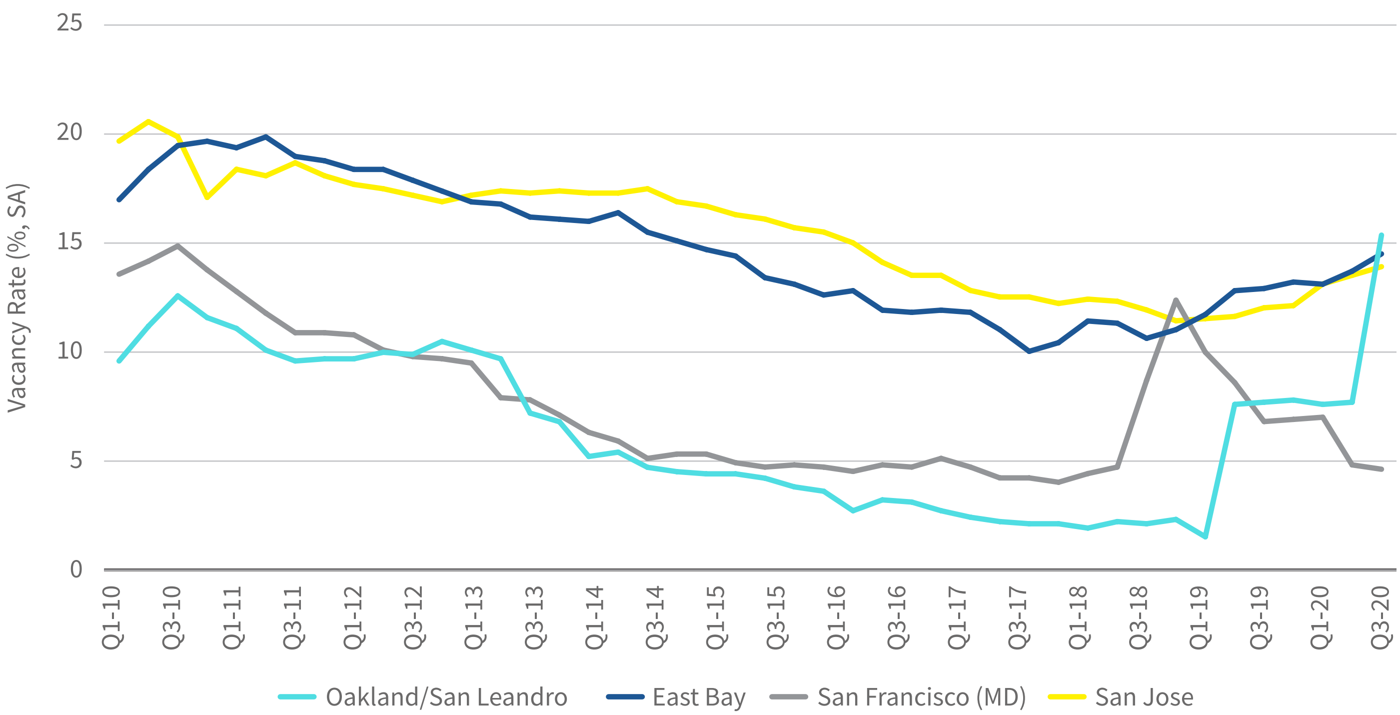
Source: REIS; Analysis by Beacon Economics

[6] Cushman & Wakefield, MarketBeat Q4 2020 East Bay Office Report

Despite rising vacancy rates for warehouse/distribution space in the Oakland/San Leandro submarket, effective rents for warehouse/distribution space has continued to grow. From fourth-quarter 2019 to fourth-quarter 2020, effective rent grew 3.8% for warehouse/distribution space in the Oakland/San Leandro submarket. The pace of effective rent growth for warehouse/distribution space in the Oakland/San Leandro submarket has been more rapid relative to growth in the East Bay (1.6%), San Francisco (MD) (-0.2%), and San Jose (1.3%).

Companies can garner significant cost savings relative to the effective rent for warehouse/distribution space in the East Bay ($6.29 per square foot), San Francisco (MD) ($16.07 per square foot), and San Jose ($15.96 per square foot). Though demand from large national e-commerce users is expected to remain strong, tempered demand from more traditional and smaller users will likely have the effect of slightly decreasing rents in the coming quarters. [7]

FLEX AND R&D VACANCY RATES

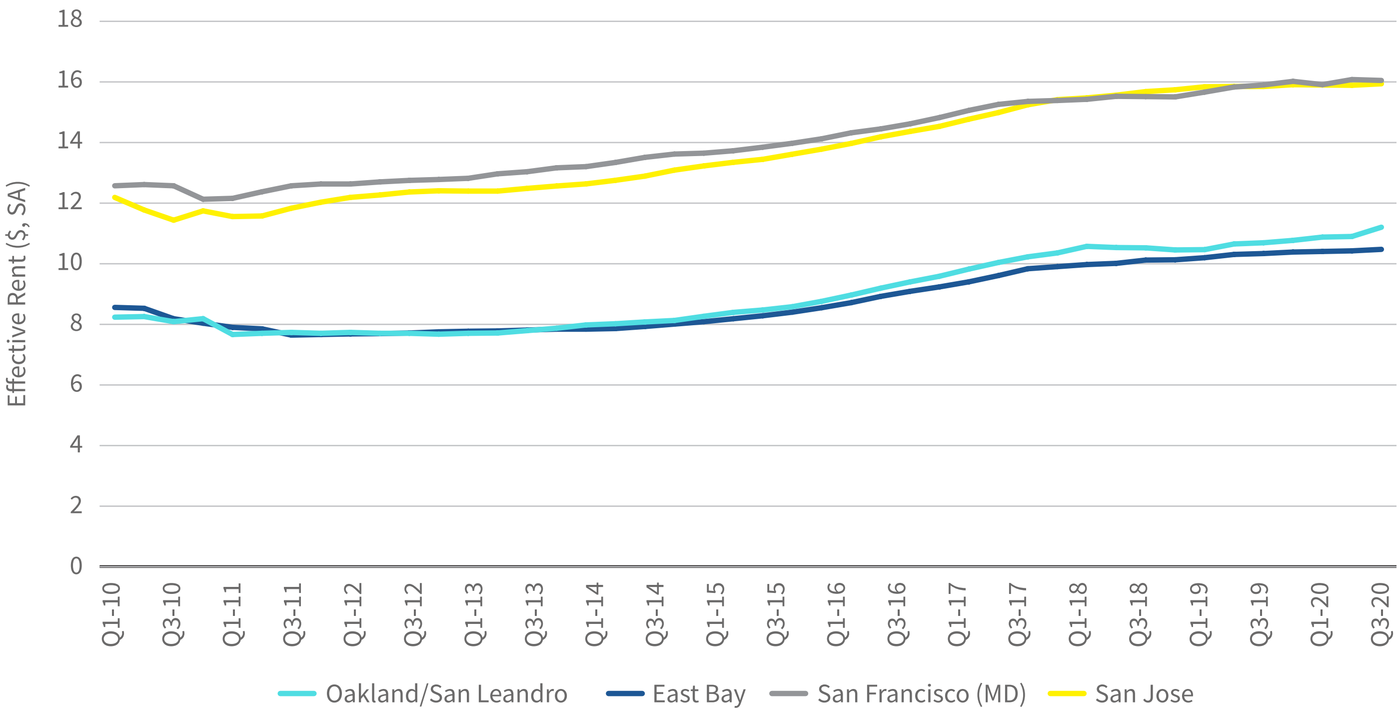


Source: REIS; Analysis by Beacon Economics

Vacancy rates for flex and R&D space in the Oakland/San Leandro submarket (the submarket containing Oakland) increased significantly over the last year; however, this was only partiality driven by a decrease in demand for flex and R&D space. Vacancy rates in the Oakland/San Leandro submarket (the submarket with Oakland), reached 15.4% in the fourth quarter of 2020, a 7.7 percentage-point increase over the same period in 2019. This substantial increase was driven primarily by 197,000 square feet of flex and R&D space coming online during the quarter.

Indeed, net absorptions in the Oakland/San Leandro submarket was -13,000 during the fourth quarter, a slight decrease in demand but a far cry from the decrease indicated by the uptick in the submarket's vacancy rate. Vacancy rates for flex and R&D space in the East Bay increased to 14.5% in the fourth quarter of 2020, a 1.6 percentage-point increase relative to the fourth quarter of 2019. Vacancy rates in the Oakland/San Leandro submarket also increased more steeply relative to San Jose (1.9 percentage-points) and was in stark contrast to the -2.2 percentage-point decrease in vacancy rates for flex and R&D space in San Francisco (MD).

FLEX AND R&D MARKET EFFECTIVE RENTS



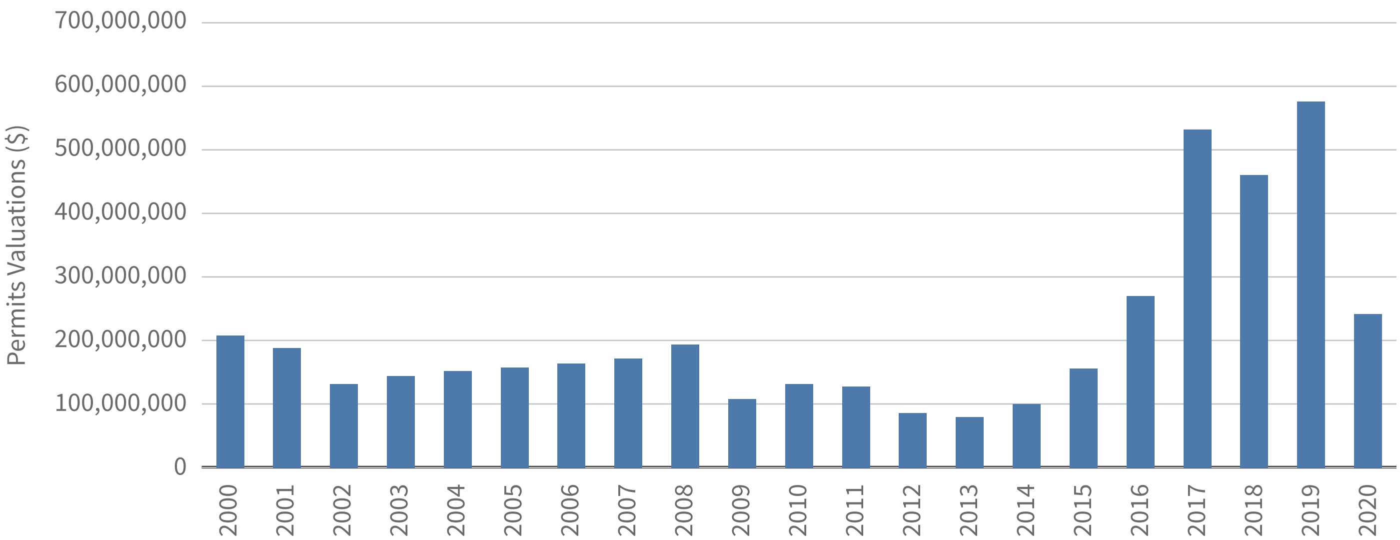
Source: REIS; Analysis by Beacon Economics

Despite rising vacancy rate for flex and R&D space in the Oakland/San Leandro submarket, the East Bay, San Francisco (MD) and San Jose effective rents for flex and R&D space has continued to grow. From fourth-quarter 2019 to fourth-quarter 2020, effective rent has expanded 4.9% for flex and R&D space in the Oakland/San Leandro submarket. The pace of effective rent growth for flex and R&D space in the Oakland/San Leandro submarket has been more rapid relative to growth in the East Bay (1.4%), San Francisco (MD) (0.9%), and San Jose (0.6%).

Effective rent for flex and R&D space in the Oakland/San Leandro submarket ($11.23 per square foot) is more expensive relative to the broader East Bay ($10.50 per square foot), but companies can garner significant cost savings relative to the effective rent for flex and R&D space in San Francisco (MD) ($16.07 per square foot) and San Jose ($15.96 per square foot).

COMMERCIAL BUILDING PERMITS AND VALUATIONS

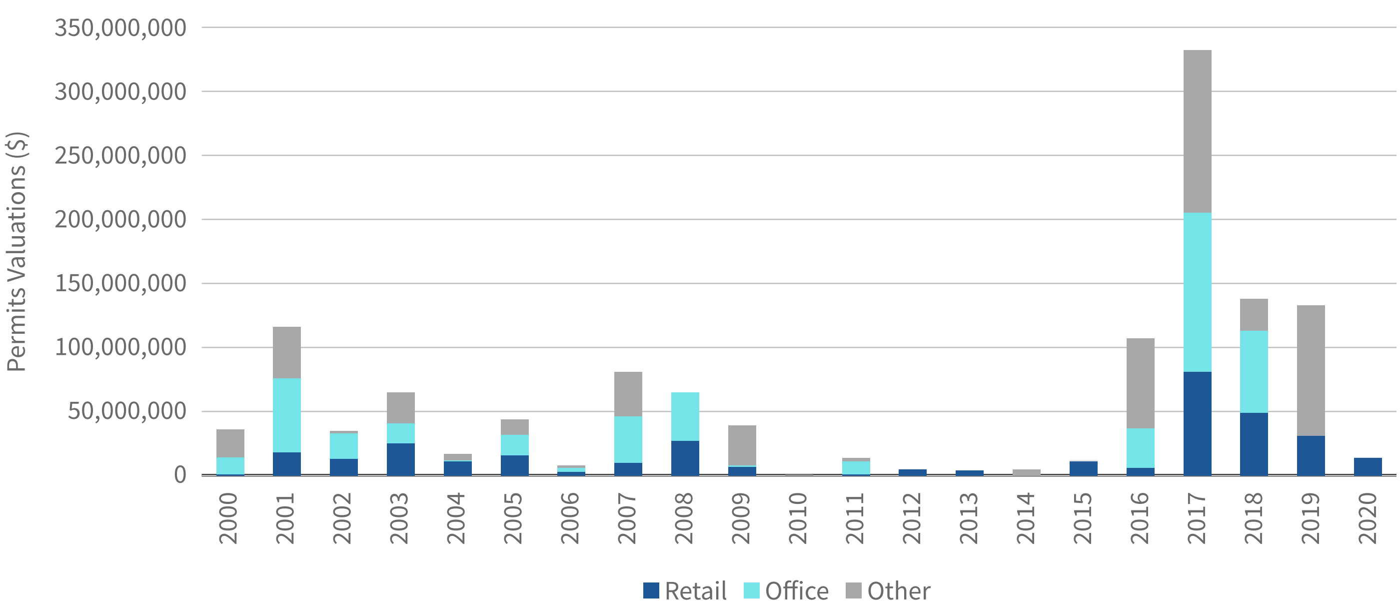
CITY OF OAKLAND NON-RESIDENTAL BUILDING PERMITS



Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

Non-residential permitting activity declined substantially from 2019 to 2020. Non-residential permit valuations totaled just $143.6 million in 2020 in the City of Oakland, a -72% decline over 2019 levels. This decline in permitting activity was more substantial than the -31 decrease in the state overall during the same period.

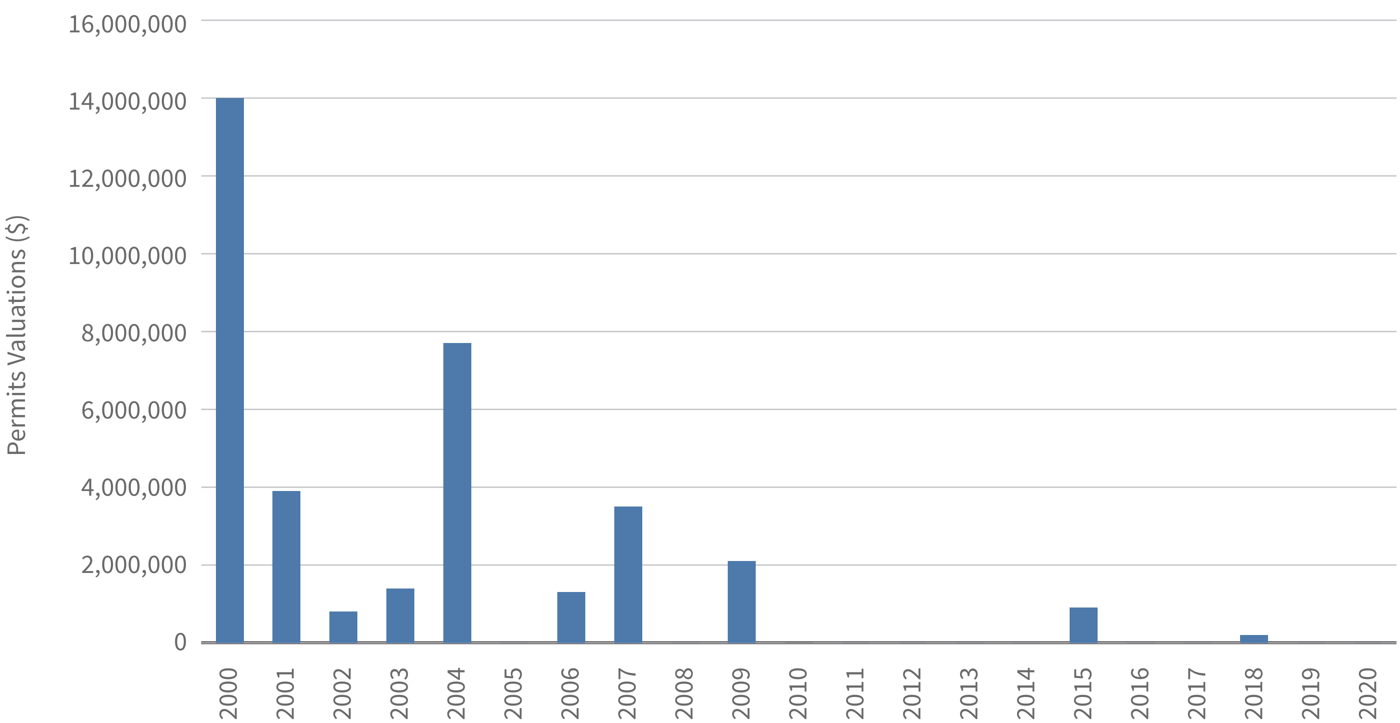
CITY OF OAKLAND COMMERCIAL BUILDING PERMITS



Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

One of the driving forces behind the drop in permit values in the City of Oakland was a decline in commercial permit activity. Commercial permit valuations were just $14.4 million in 2020, an -89% decline from 2019 levels. This decline in commercial permitting activity was more substantial than the 33% decline in the state overall over the same period and was felt in both office and retail permitting activity. There were no permits for office buildings issued in 2020 after just $150,000 in permit valuations were issued in 2019. Retail permit valuations totaled just $14.4 million, accounting for all the commercial permitting activity in the city in 2020. However, retail permitting was down -53% relative to 2019 levels and down -71% relative to 2018 levels.

CITY OF OAKLAND INDUSTRIAL BUILDING PERMITS

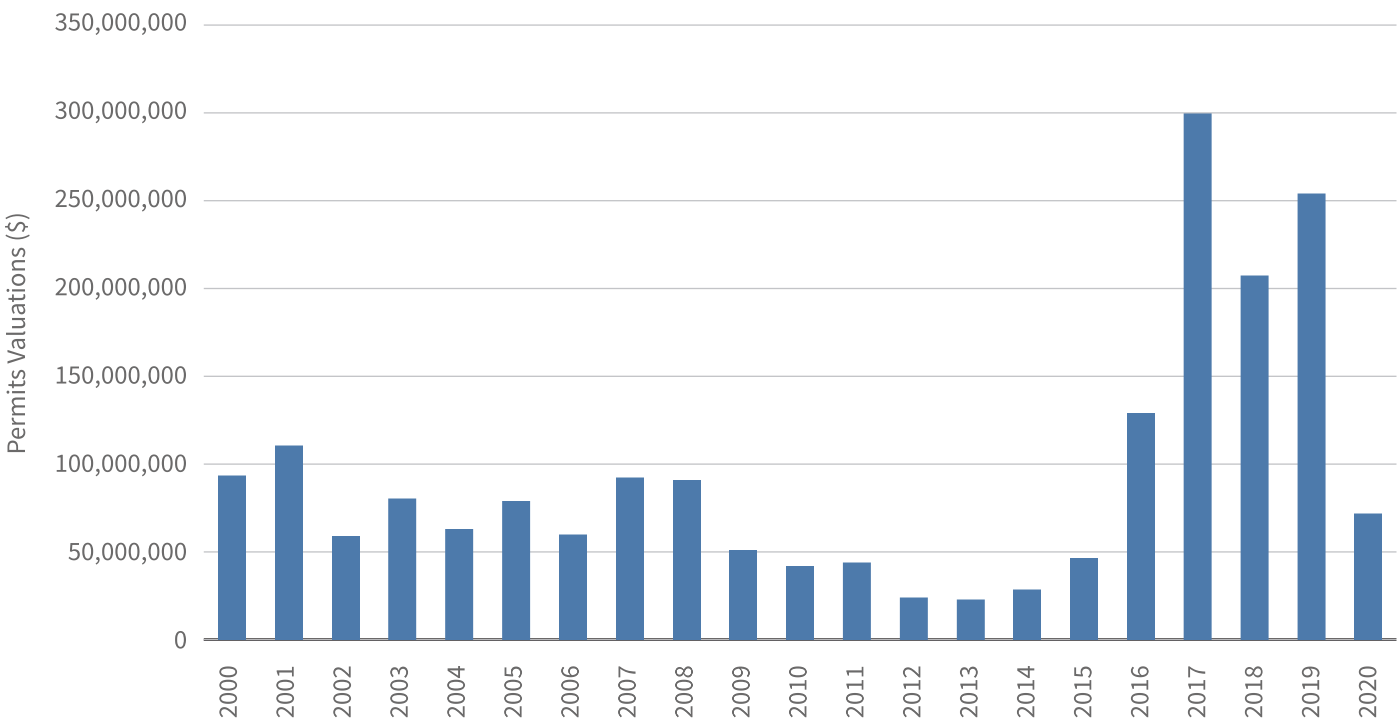


Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

Industrial permitting activity has remained virtually non-existent in the City of Oakland. In 2020 there were no industrial permits issued in the city. This is not a recent trend. However, since 2010 there has been just $1.1 million in permit valuations issued in Oakland. While industrial space plays an important role in the city's economy, much of the space developed in recent years has been done so through alterations and additions to existing space.

The majority of non-residential permitting activity in 2020 in the City of Oakland was for alterations and additions. Permit valuations for alterations and additions totaled $121.1 million in 2020, accounting for 94% of total non-residential permit values for the year in Oakland. Still, permit valuations for alterations and additions in the city fell -58% from 2019 to 2020. This decline in permitting activity was more substantial than the -35% drop in the state overall during the same period.

CITY OF OAKLAND NON-RESIDENTIAL ALTERATIONS AND ADDITIONS

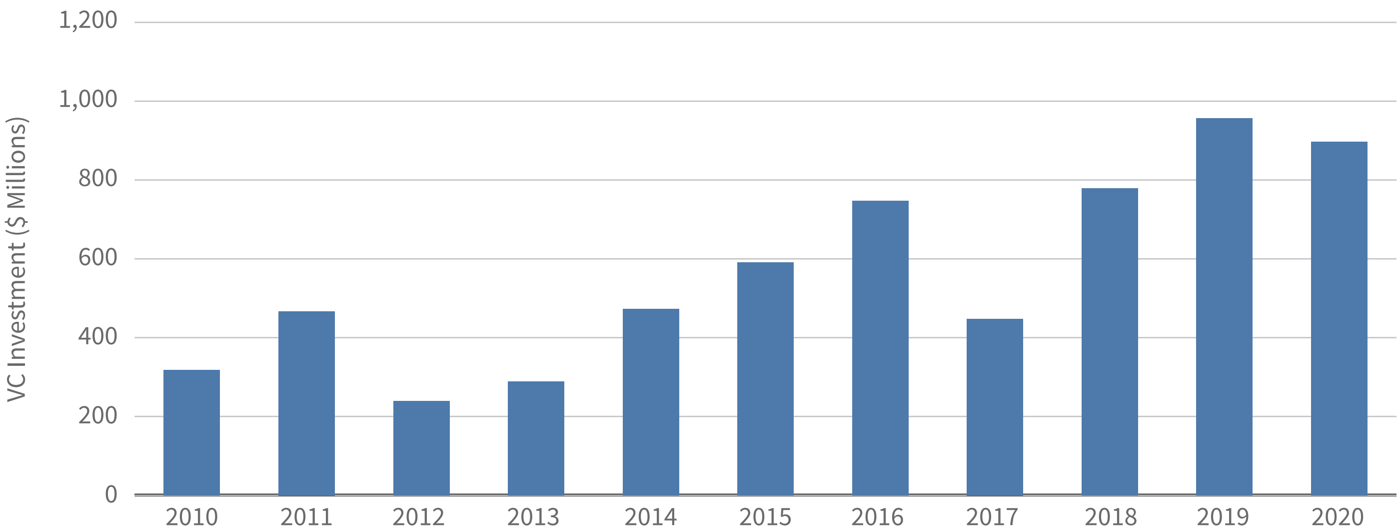


Source: Construction Industry Research Board (CIRB); Analysis by Beacon Economics

SECTION 3: THE OAKLAND ECONOMY TECH AND VENTURE CAPITAL

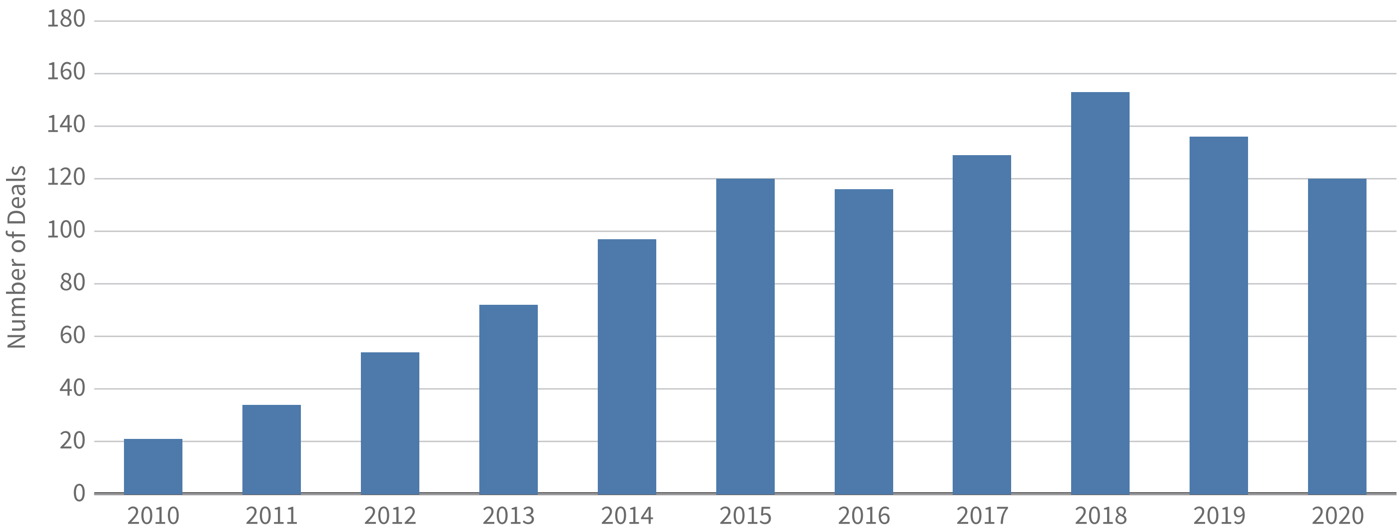
The tech industry continues to play an instrumental role in the economies of the City of Oakland and the Bay Area. Venture capital (VC) investment is ones of the ways the tech industry grows, with VC investment typically funding relatively high-risk pursuits by firms primarily engaged in tech-related activities. The amount of venture capital invested can be an indicator of the innovative, entrepreneurial and potentially sector-disrupting activities in a regional economy. Often, the companies receiving such funding spur increases in labor demand, real estate value and substantial long-term gains for the regional economy.

CITY OF OAKLAND VC INVESTMENT



Source: Pitchbook; Analysis by Beacon Economics

CITY OF OAKLAND VC DEALS



Source: Pitchbook; Analysis by Beacon Economics

HOW VC INVESTMENT IS IMPACTING OAKLAND

Despite the economic headwinds from COVID-19 impacting Oakland's labor markets and commercial real estate space, VC investment has remained fairly steady in the city (after posting a landmark year in 2019). This trend has also occurred in the broader Bay Area and California overall, signifying the region should rebound quickly as mitigation efforts are reversed and businesses return to more normal operating practices and procedures.

VC investment in the City of Oakland totaled $897 million in 2020, a -6.2% decrease over 2019 levels. However, it's important to note that 2019 was a landmark year for VC investment in Oakland, and the $897 million in VC investment in 2020 was the second highest level of VC investment for a given year on record, only trailing 2019. Indeed, VC investment in the city has grown a sizeable 182% since 2010.

The number of VC deals in Oakland totaled 120 in 2020, a -11.8% decrease over 2019 levels. Still, the city has become a significant source for VC investment deals over the last decade. From 2010 to 2020, the number of VC investment deals has grown by over 470%, with the city averaging 130 deals annually over the last five years.

TOP VC INVESTMENT DEALS IN 2020

City of Oakland

Company Name	Industry	Deal Date	Deal Type	Deal Size ($ Millions)
Marqeta	Financial Software	28-May-20	Later Stage VC	150.00
Fivetran	Business/Productivity Software	30-Jun-20	Later Stage VC	100.00
Everlaw	Business/Productivity Software	10-Sep-20	Later Stage VC	78.00
Eko	Monitoring Equipment	9-Nov-20	Later Stage VC	65.00
LaunchDarkly	Business/Productivity Software	16-Jan-20	Later Stage VC	54.00
Roofstock	Real Estate Services (B2C)	8-Jan-20	Later Stage VC	50.00
Mynd Management	Real Estate Services (B2C)	30-Jun-20	Later Stage VC	41.50
OhmConnect	Information Services (B2C)	16-Nov-20	Later Stage VC	25.00
Outlier	Business/Productivity Software	15-Jan-20	Early Stage VC	22.10
Lilac Solutions	Other Metals, Minerals and Mining	20-Feb-20	Early Stage VC	20.00
CNote	Financial Software	11-Sep-20	Seed Round	19.95
Vivun	Business/Productivity Software	14-Oct-20	Early Stage VC	18.00
Boxbot	Logistics	5-Mar-20	Early Stage VC	16.00
Treez	Business/Productivity Software	17-Sep-20	Early Stage VC	13.00
Eclipse Foods	Food Products	17-Nov-20	Early Stage VC	12.00

Source: Pitchbook; Analysis by Beacon Economics

The City of Oakland has also seen a sizable number of larger deals in 2020. Marqeta, a financial software company, received the most VC investment over the last year, with funding totaling $150 million in 2020. Other Oakland companies receiving a significant amount of VC investment include: Fivetran ($100 million), Everlaw ($78 million), Eko ($65 million), LaunchDarkly ($54 million), and Roofstock ($50 million). The list below provides a brief description of the top 15 companies by deal size in Oakland over the last year. These companies span a wide range of sectors, including Financial Software, Business/Productivity Software, Monitoring Equipment, Real Estate Services, Information Services, Minerals and Mining, Logistics, and Food Products.

- **Marqeta**: Developer of an application programming interface payment platform designed to offer card-issuing and payment processing services. The company's platform offers a set of controls and configurations to meet the needs of on-demand service businesses and alternative lenders, as well as those looking for payouts for workers, flexible expense management, and scalable, secure virtual card transactions. Marqeta enables developers and financial institutions to simplify managing payment programs.

- **Fivetran:** Developer of an automated data integration platform designed to centralize data into cloud warehouses. The company's platform uses connectors that deploy in minutes and completely replicate applications, databases, events and files, thereby enabling businesses to extract data from different cloud storage and database sources and load it to their data warehouse anytime.

- **Everlaw:** Developer of a cloud-based litigation platform intended for corporate counsels, litigators and government attorneys. The company's platform combines speed, security and ease-of-use into a unified, comprehensive solution that unlocks the collaborative power of teams and enables them to investigate issues more thoroughly, uncover a truth more quickly, and present their findings more clearly. Everlaw enables clients to discover, reveal and act on information to better drive internal investigations and positively impact the outcome of the litigation.

- **Eko (monitoring equipment):** Developer of a unified heart disease monitoring system intended to provide all-in-one cardiac screening services. The company's system is a combination of software and hardware to engage and manage multiple medical conditions such as telemedicine, CHS monitoring, remote patient care, hearing support, murmurs and Arrhythmias care, and others, enabling cardiologists to diagnose and treat cardiovascular diseases in a simplified manner.

- **LaunchDarkly:** Developer of a feature management platform designed to eliminate risk for developers and operations teams from the software development cycle. The company's platform is a unified platform where the developer, product, marketing, sales and customer success teams can manage code in real time, enabling SaaS and e-commerce companies to separate business logic from code and use a flag management program to control the feature life-cycle from launch to sun-setting and to manage feature flags at scale.

- **Roofstock:** Operator of an online property investment marketplace designed to help people buy and sell a tenant-occupied rental property. The company's marketplace provides detailed home and tenant information, local vetted property management options, as well as general market insights, tools, data, and analytics to evaluate listings. Roofstock enables investors to treat their real estate investments more like stock portfolios, focusing on asset allocation, rather than dealing with the hassles of researching and buying vacant homes that need to be repaired and leased.

- **Mynd Management:** Operator of a property management platform intended to ease property rental management services. The company's platform leverages technology, systems, and data to enable efficient and effective management of properties, enabling property owners to view real-time information on rental income, vacancies, work orders, and generate higher returns.

- **OhmConnect:** Developer of an energy-saving platform designed to revolutionize the way energy is used. The company's platform offers smart meter analytics and energy market integration to help residential users to sell their energy reductions directly into energy markets and get paid for the energy they saved via demand response, enabling users to improve the health of the planet.

- **Outlier (business/productivity software):** Developer of a business analysis platform designed to monitor business data and notify when unexpected changes occur. The company's platform optimizes marketing programs, tracks changes in buyer segments, finds product development issues, and finds insights across all data, enabling businesses to make strategic data-driven decisions easily.

- **Lilac Solutions:** Developer of lithium extraction technology designed to absorb lithium from brine resources. The company's technology is based on ion-exchange theory that facilitates production of lithium from brine resources with a minimal cost and low environmental footprint, enabling lithium producers to accelerate project development, boost lithium recovery, streamline operations and unlock new resources.

- **CNote:** Developer of an investment platform intended to build a more inclusive economy through financial innovation. The company's platform directs every dollar invested toward funding females, minority-led small businesses, affordable housing, and economic development in financially underserved communities across America, thereby enabling users to make money by investing in causes and communities that they care about.

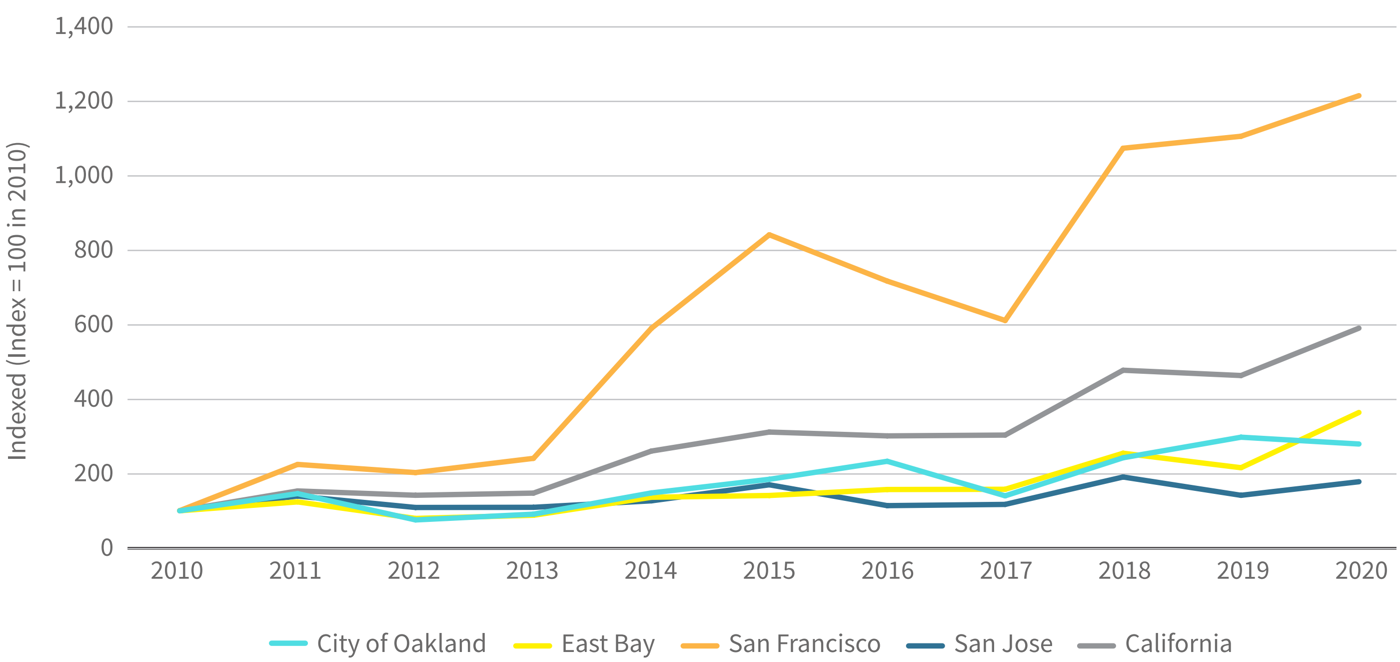
- **Vivun:** Developer of an AI-powered platform designed to increase strategic potential, pre-sales, and create a seamless interlock between sales and product. The company's software helps pre-sales leaders achieve operational excellence by equipping them with the metrics they need as the result of individual contributors having a single place to manage their work, enabling organizations to increase forecast accuracy, find revenue by reviving dormant opportunities, and deliver winning products by tapping into collective insights from the field.

- **Boxbot:** Developer of automation technology designed to address issues with e-commerce delivery. The company's technology incorporates the use of robotics and autonomous systems to address last-mile issues in logistics, enabling businesses and individuals to optimize the experiences of suppliers and consumers.

- **Treez:** Developer of cannabis business management software designed to optimize and automate cannabis dispensary operations. The company's product features plant-and-cultivation tracking, integrated payments and data insights, and adapts to one's business model, whether it is a sleek high volume operation or a neighborhood shop. Treez enables companies to continually improve every aspect of their business, from employee management to inventory control and patient hospitality.

- **Eclipse Foods:** Manufacturer of plant-based food products intended to provide a substitute for animal dairy products. The company offers food products that are made using plant-processing technology and provide dairy flavor, texture and functionality, enabling customers to enjoy plant-based healthy foods and various kinds of spreads without compromising the taste of traditional dairy products.

VC INVESTMENT GROWTH



Source: Pitchbook; Analysis by Beacon Economics

OAKLAND VC VS. BAY AREA AND CALIFORNIA

VC investment has remained strong in the Bay Area and California in 2020. In California, it reached a staggering $85.7 billion in 2020, a 27.5% increase over 2019 levels. While the City of Oakland (-6.2%) saw VC investment pull back from its landmark year in 2020, the East Bay (69.2%), San Francisco (9.9%), and San Jose (26.6%) all saw VC investment grow from 2019 to 2020.

Since 2010, VC Investment in the City of Oakland has grown 182%, outpacing the 81% growth in San Jose over the same period. In contrast, Oakland has lagged behind growth in the East Bay (267%), San Francisco (1,117%), and California (493%).

ABOUT BEACON ECONOMICS

Founded in 2007, Beacon Economics, an LLC and certified Small Business Enterprise with the state of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas include sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis required to understand the significance of on-the-ground realities and to make informed business and policy decisions.

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- Economic, Fiscal, and Social Impact
- Economic and Revenue Forecasting
- Regional and Sub-Regional Analysis
- Housing, Land Use, and Real Estate Advisory
- Litigation and Testimony
- Sustainable Growth and Development

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