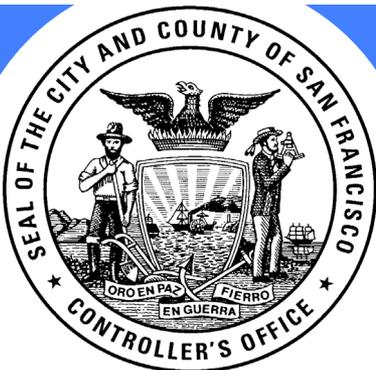


Status of the Technology Industry in San Francisco



CITY & COUNTY OF SAN FRANCISCO

Office of the Controller
Office of Economic Analysis

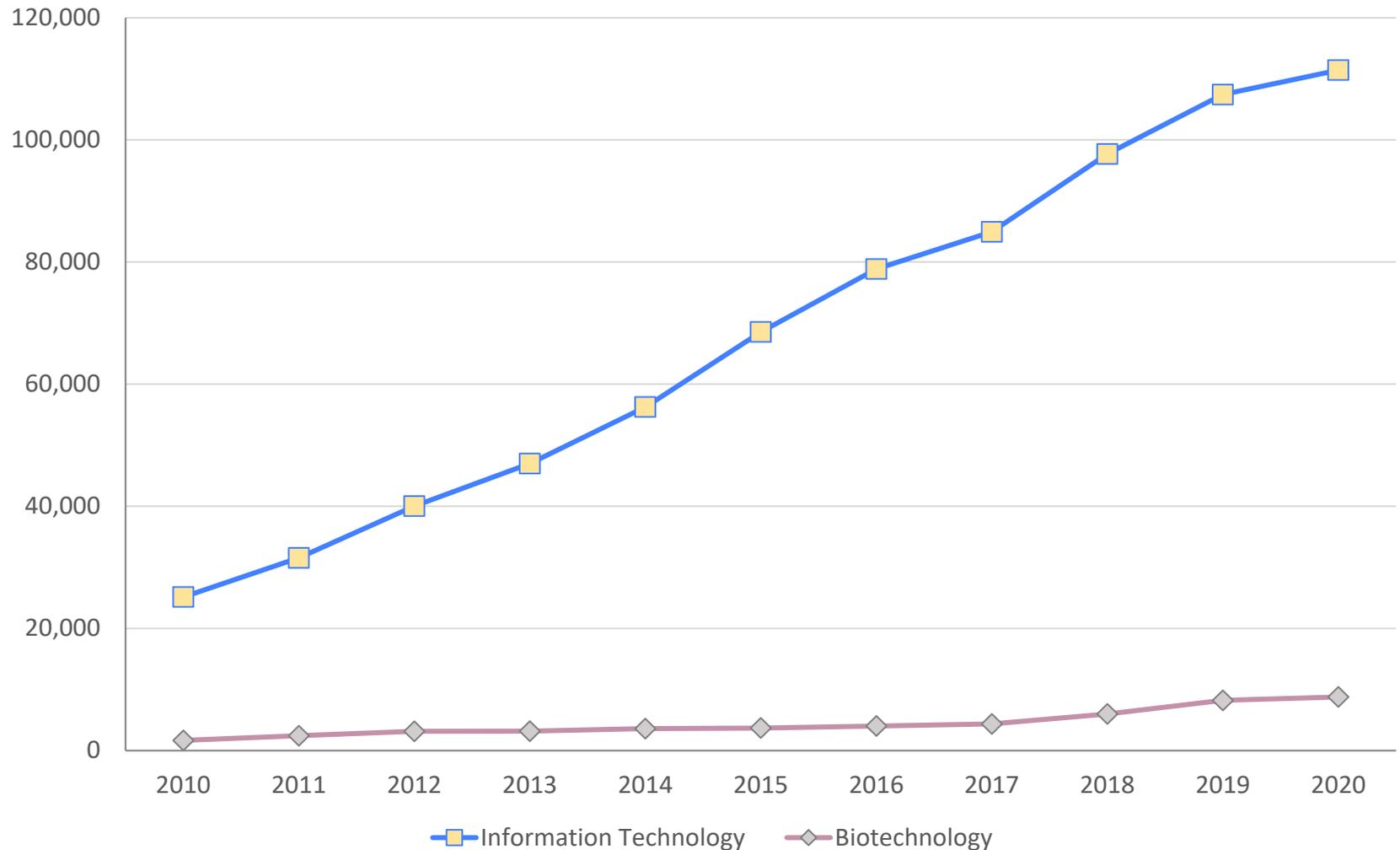
September 8, 2021

- Employment during the 2010s: Information Technology and Biotechnology
- Venture capital during the 2010s: Information Technology and Biotechnology
- 2019 Gross Receipts Tax revenue: Information Technology, Biotechnology, and other industries
- Components of Change in the Tech Industry, 2019-2020
- San Francisco venture capital investment before and during the pandemic
- Remote and non-remote job listings, before and during the pandemic; information technology and biotechnology
- Change in Gross Receipts Tax apportionment factors, by industry, 2019 and 2020.
- Single-family housing price change, Northern California zip codes, March 2020-July 2021
- Employee satisfaction with announced work-from-home policies, select large tech companies
- U.S. Office subleasing trends
- Change in office sublease supply by city
- Change in office asking rents by city
- Change in taxable sales by zip code within San Francisco
- Conclusions

Tech 13x Bigger Than Biotech, Though Both Grew Rapidly

3

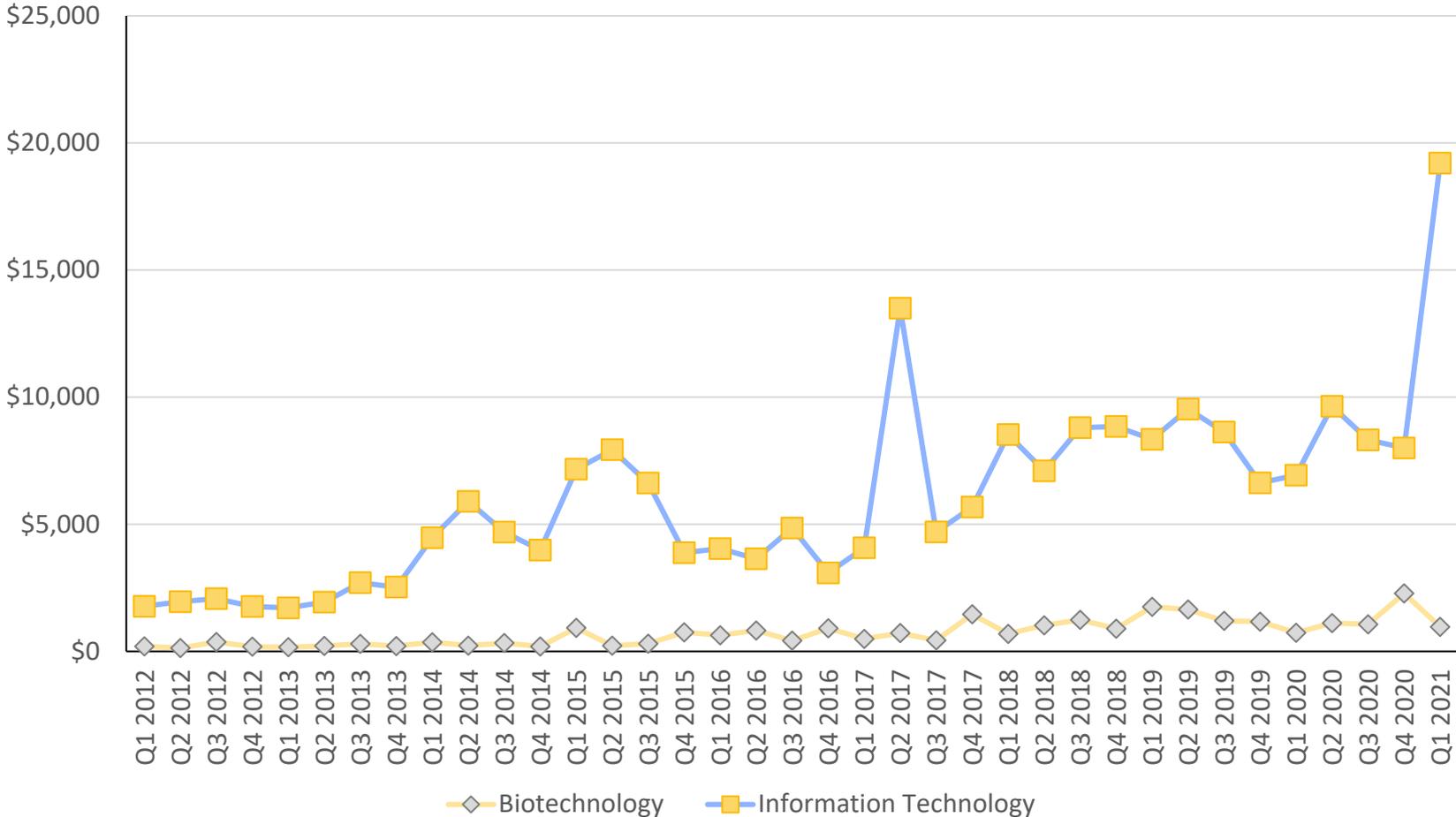
Employment at San Francisco Establishments in the Information Technology and Biotechnology Industries: 2010 - 2020



Source: Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Bay Area Venture Capital Investment in IT and Biotech

Venture Capital Investment in Bay Area Biotechnology and Information Technology Companies, 2011Q4 - 2021

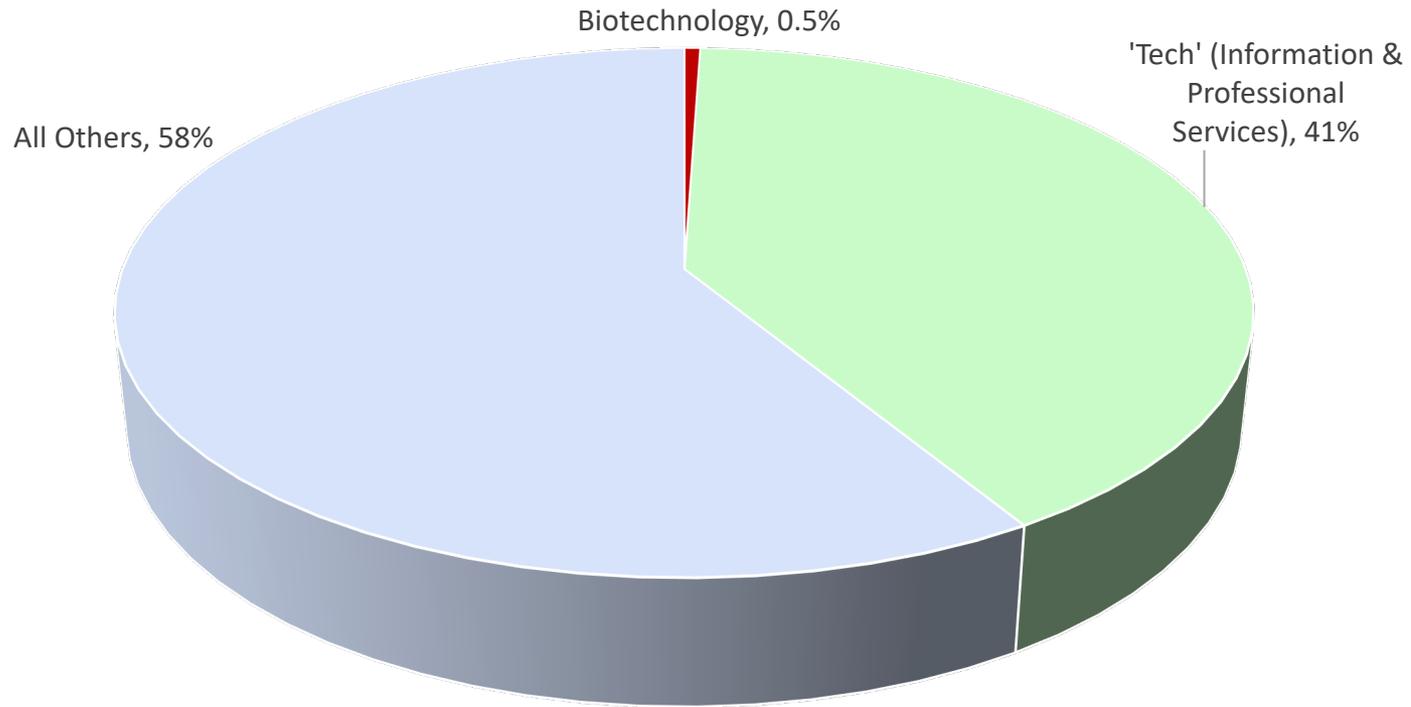


Source: PWC Moneytree

Composition of the Gross Receipts Tax Base, 2019

5

Gross Receipts Tax Revenue Owed, by Industry, 2019 (\$million)



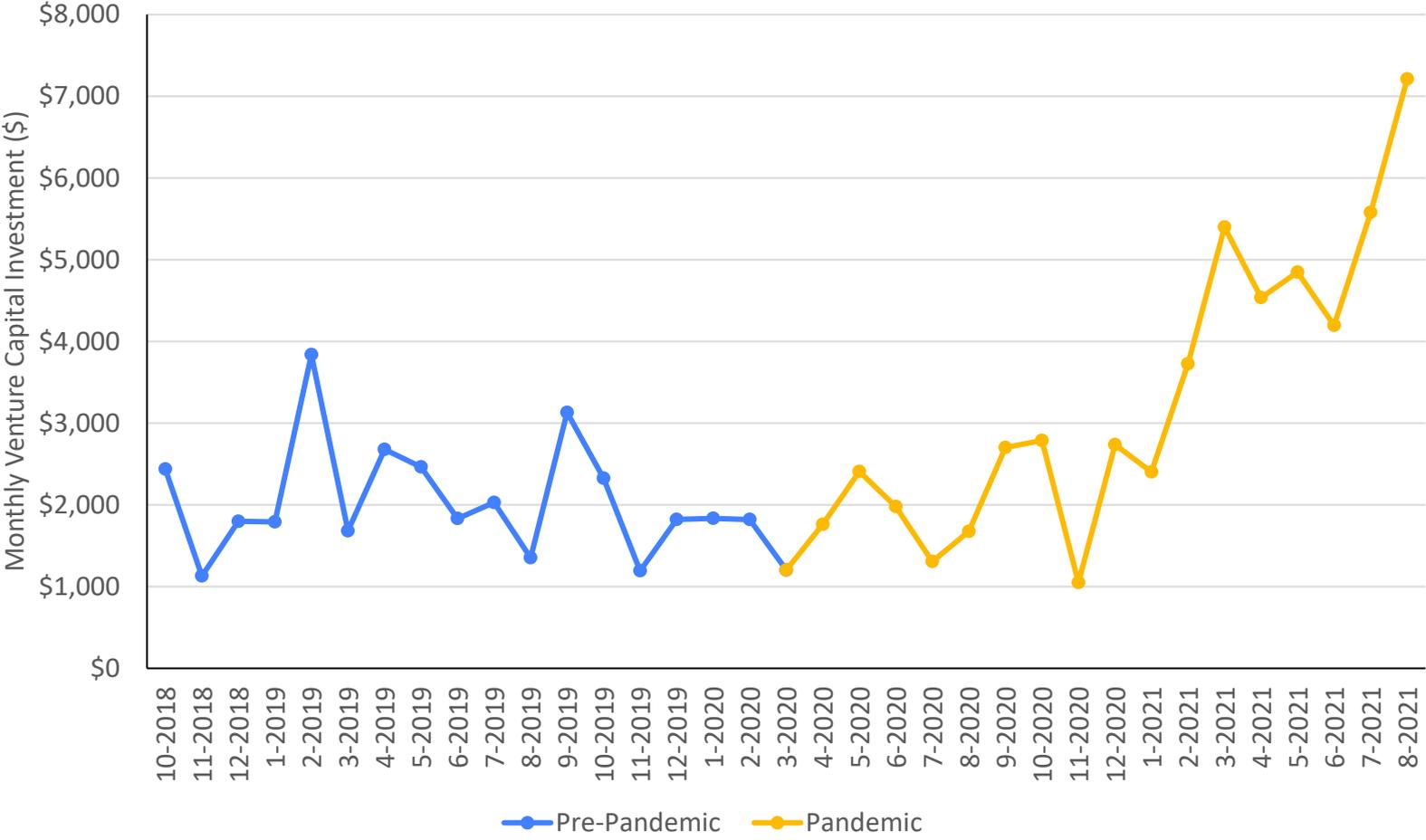
Tech Industry Components of Change, 2019-20

6

		# of Establishments	% of 2019	# of Jobs	% of 2019
Gains during 2020	New establishments	533	13%	6,649	8%
	Expansions	246	6%	9,445	12%
	Move-Ins	19	0%	456	1%
	<hr/> Total Growth	798	19%	16,550	21%
Losses during 2020	Closed Establishments	666	16%	7,498	9%
	Contractions	129	3%	956	1%
	Move-outs	17	0%	797	1%
	<hr/> Total Decline	812	20%	9,251	12%
	Total Net Change	-14	0%	7,299	9%

During the Pandemic, SF Venture Capital Growing Fast

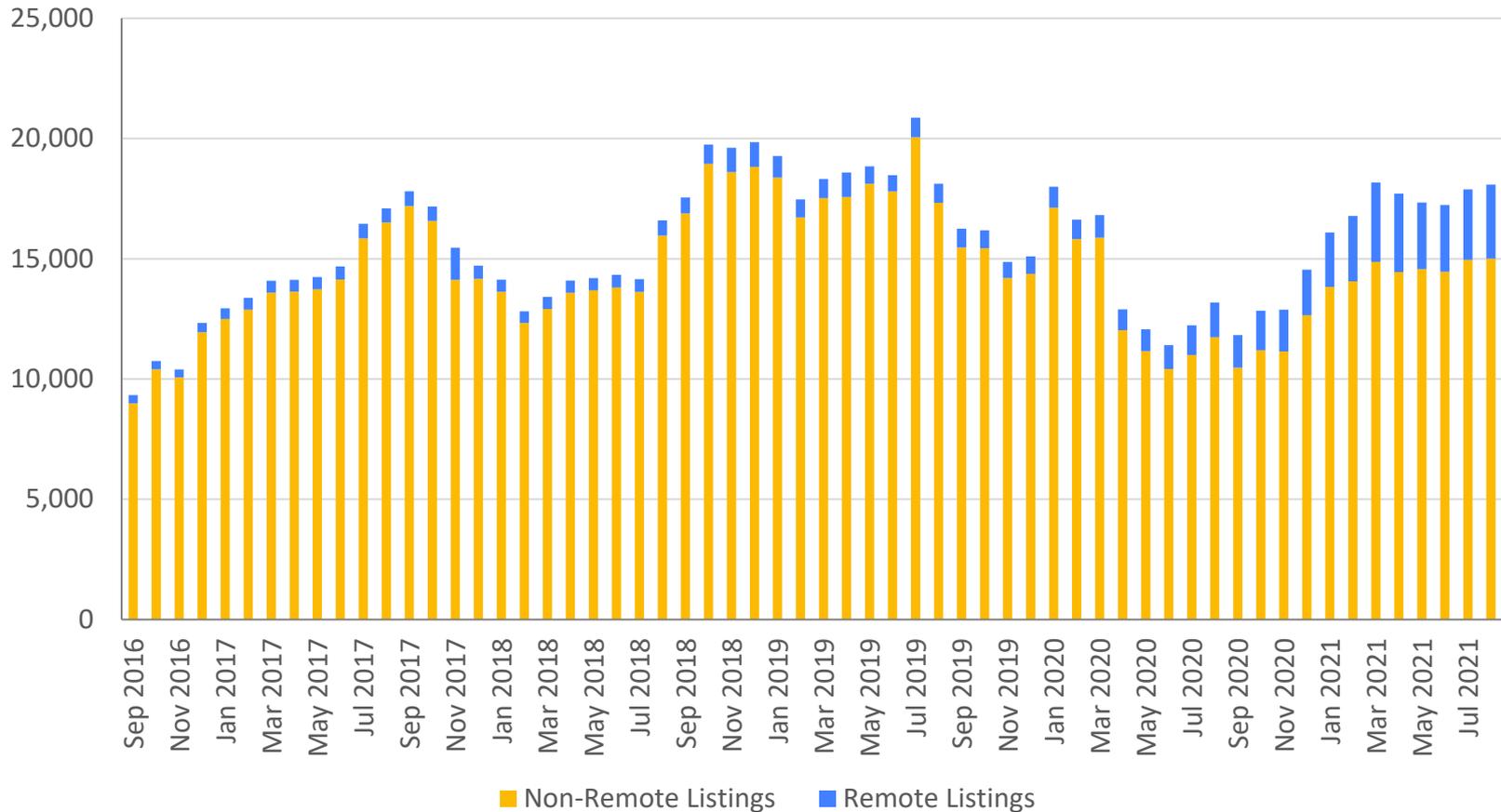
Pre-Pandemic and Pandemic-Era Venture Capital Investment in San Francisco:
October 2018 - August 2021



Source: Crunchbase

Tech Job Listings Have Recovered, But More Are Remote

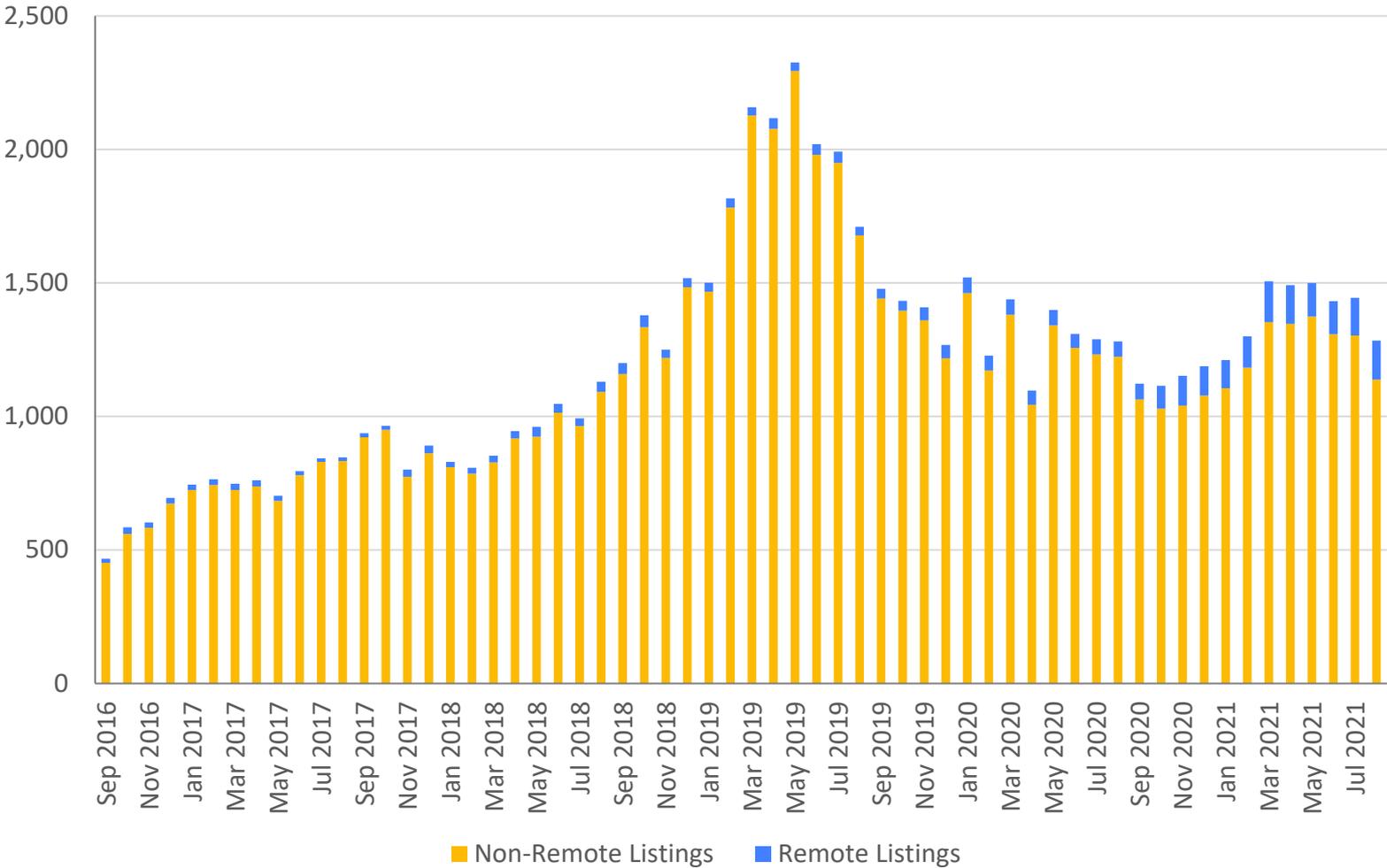
Monthly Information Technology Job Listings in San Francisco:
Remote and Non-Remote, 2016-2021



Source: EMSI

Biotech Jobs Listings Are Far Fewer, With Less Recovery

Monthly Biotechnology Technology Job Listings in San Francisco:
Remote and Non-Remote, 2016-2021

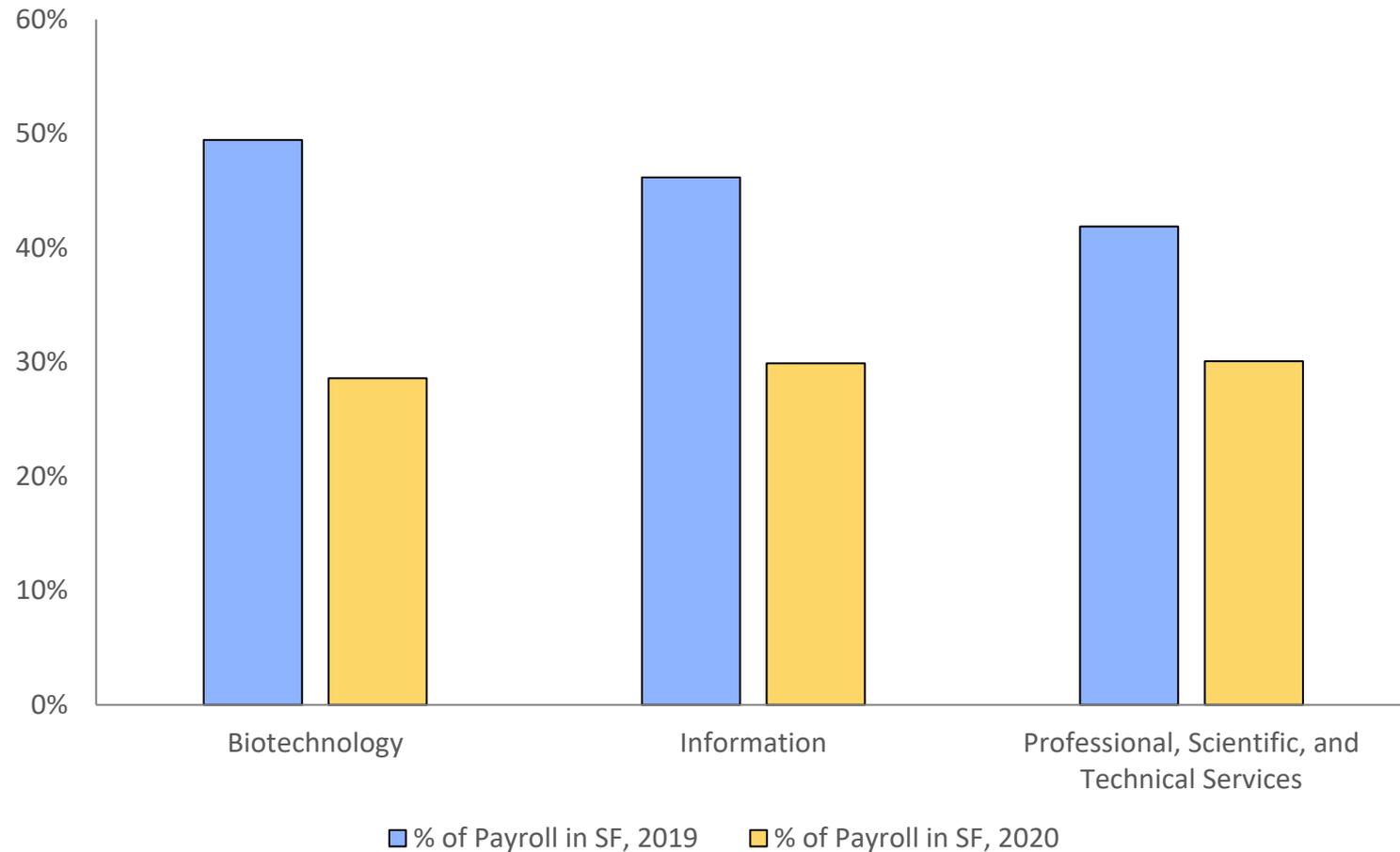


Source: EMSI

Work-from-Home Affects GRT Apportionment

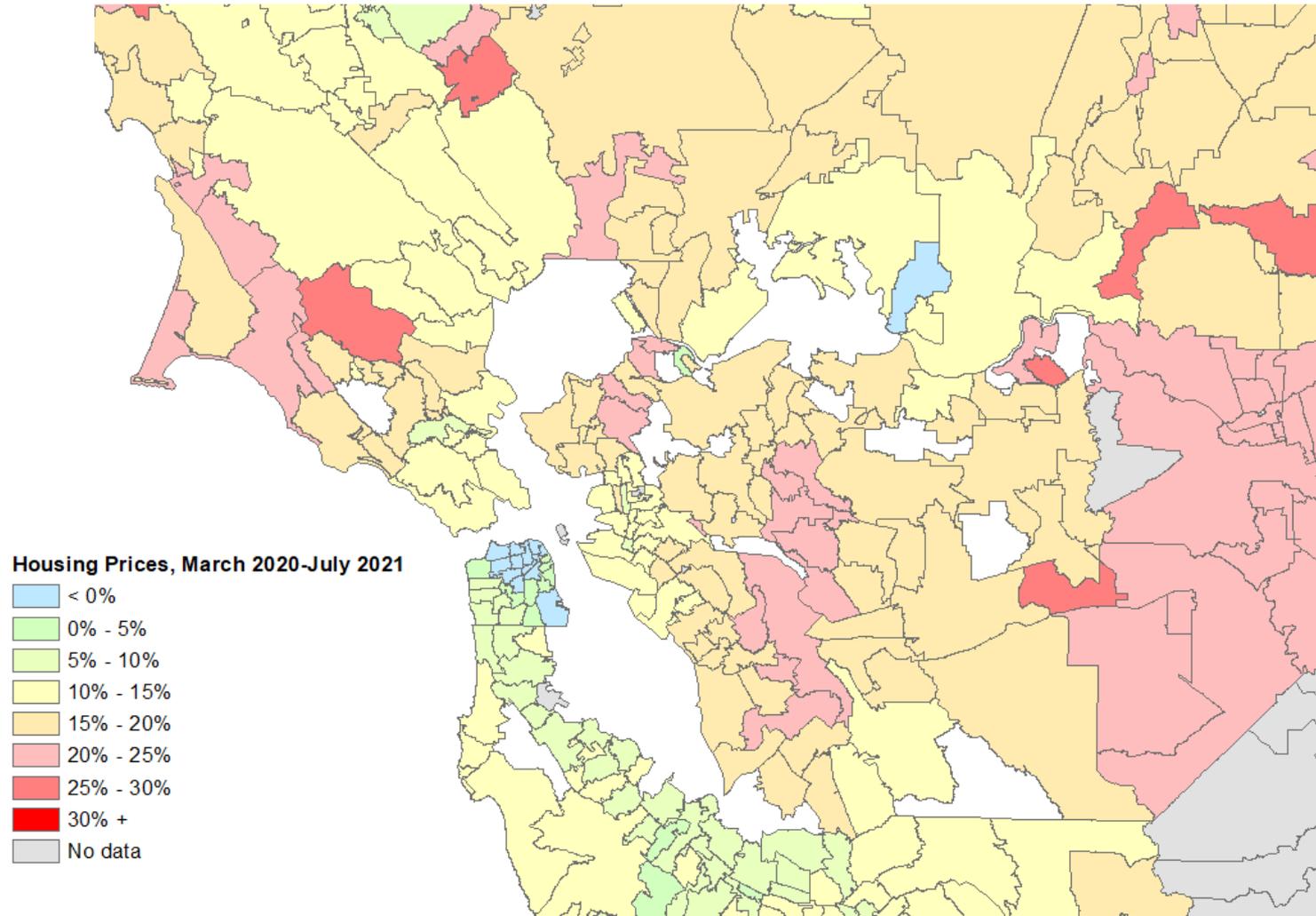
10

Average % of Industry Payroll Incurred Within San Francisco:
Biotechnology, Information, Professional Services, 2019 & 2020



Patterns of Housing Price Growth Suggest Migration

11



Source: Zillow

Existing Tech Employees: WFH Policy and Satisfaction

12

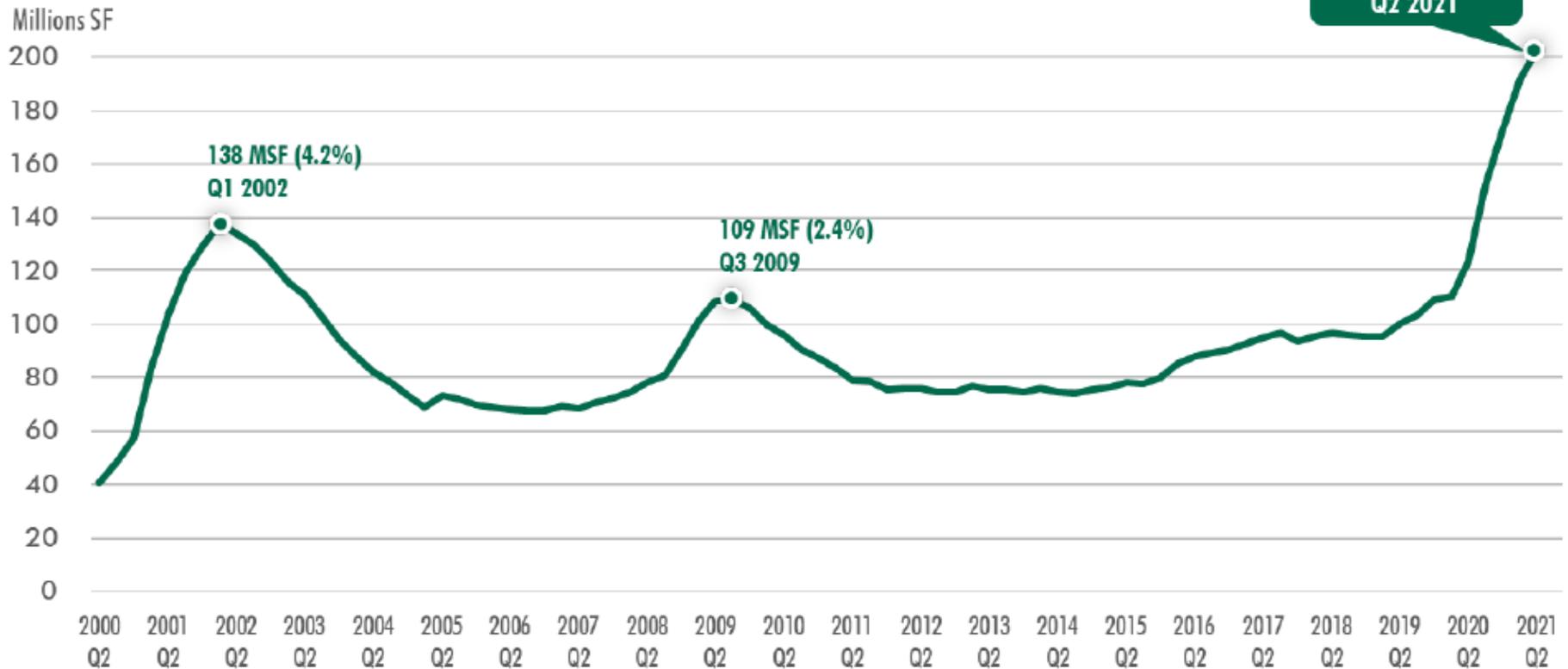
Company	Announced WFH Policy	% of Employees Satisfied with Policy	% of Employees Wanting to Leave
Indeed	Full WFH for many roles including engineering and flex for most roles	92%	3%
Facebook	Full WFH by approval or 50% time in the office	87%	11%
Twitter	WFH Forever	85%	5%
Zillow	WFH Forever for 90% of employees	82%	14%
Google	WFH by approval. Expects 60% of its employees in the office and 20% remote	54%	30%
Amazon	Mandated 3 days a week in the office starting Sep 2021	47%	40%
Apple	Mandated 3 days a week in the office starting Sep 2021	41%	37%
Uber	Mandated 3 days a week in the office starting Sep 2021	37%	42%

Source: Blind Blog – Workplace Insights, “Work From Home Policies Will Make Tech Employees Leave or Stay”, June 21, 2021

CBRE: 2020 Office Subleasing Was Historic

13

U.S. OFFICE SUBLEASE SPACE AVAILABLE INCREASED BY 80% SINCE MARCH 2020

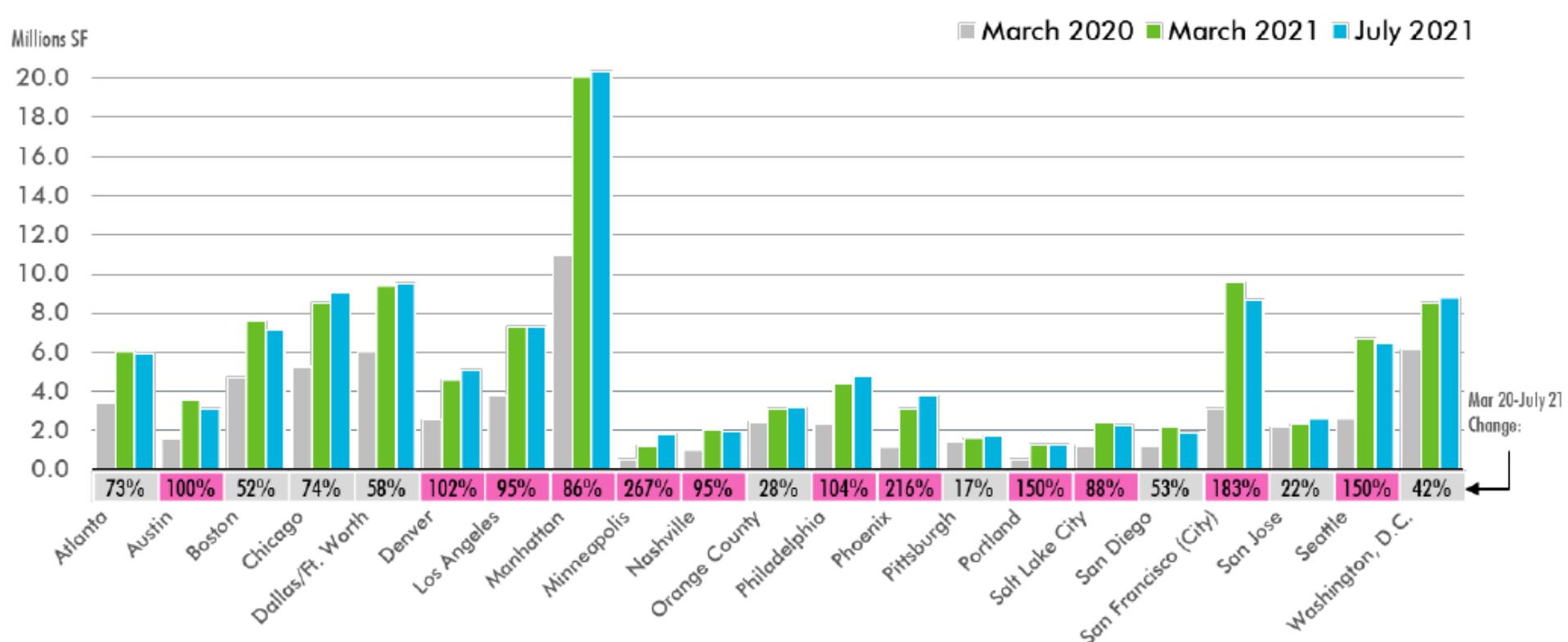


Source: CoStar Group and CBRE Tech Insights Center estimates, June 2021

CBRE

Among Large Cities, SF Sublease Space Increased Most...

U.S. OFFICE SUBLEASE SPACE AVAILABLE BY MARKET

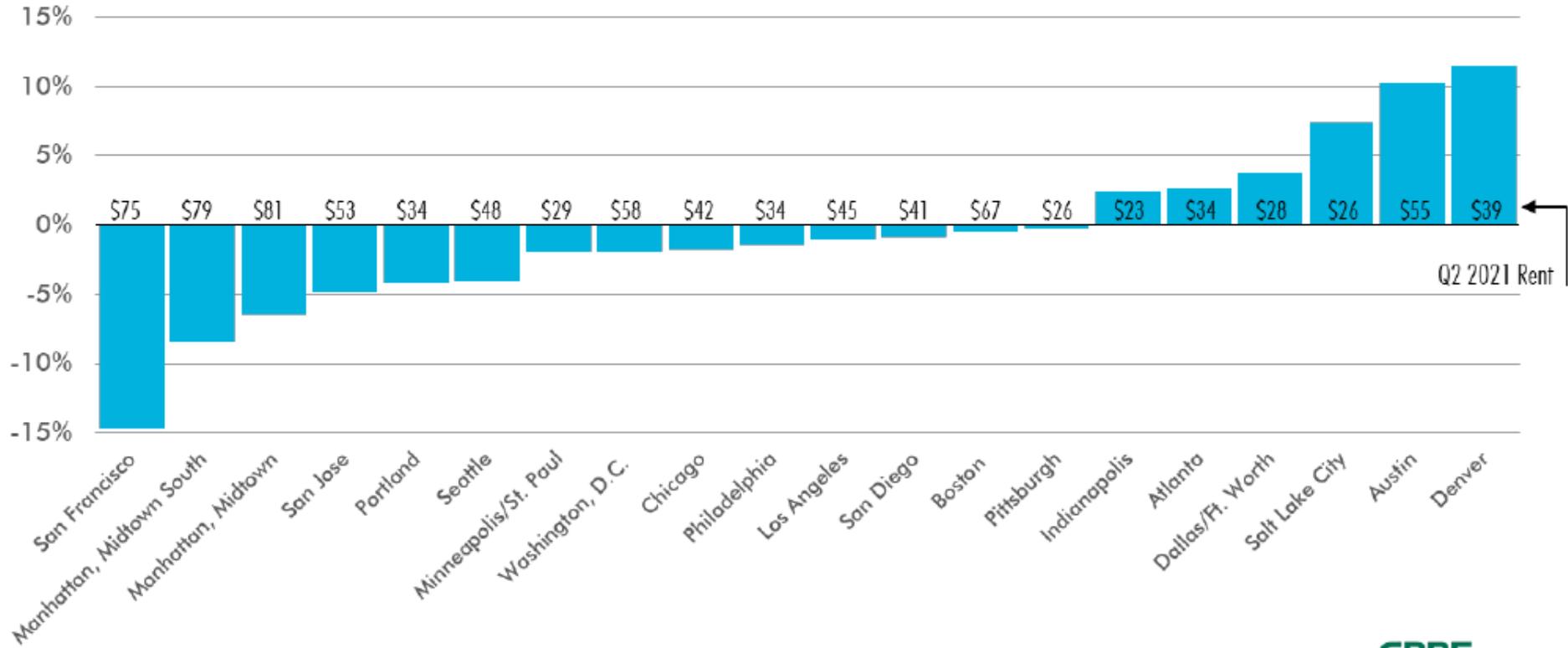


...And SF Office Rents Have Dropped the Most

15

U.S. OFFICE RENT GROWTH FOR DOWNTOWN MARKETS

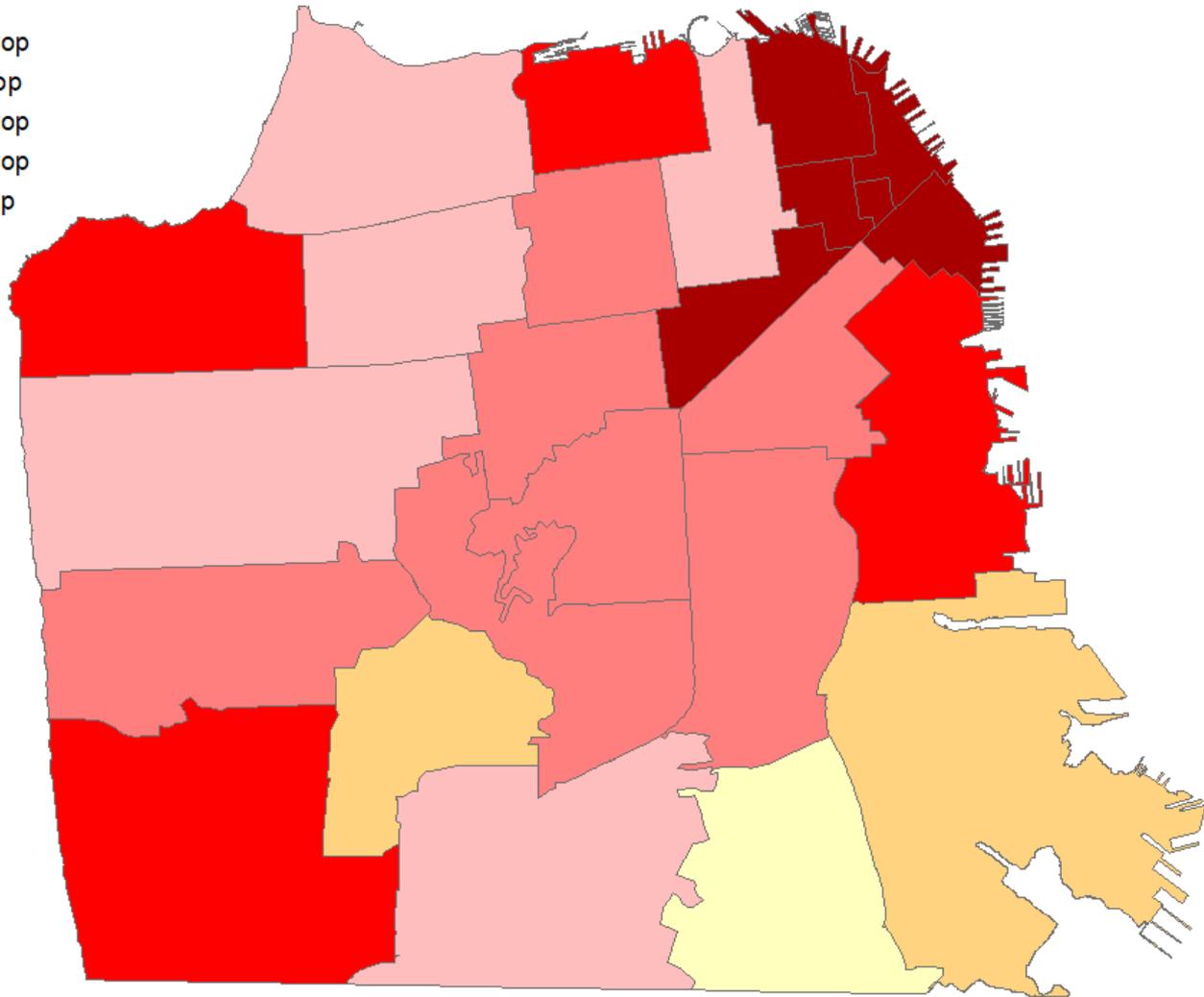
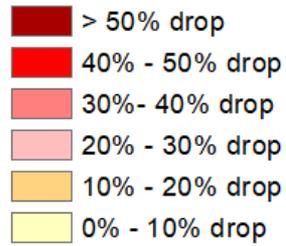
Q1 2020 vs. Q2 2021, Gross Annual Asking Rent per Sq. Ft.



Hotel & Office Vacancies Have Broader Impacts

16

Change in Taxable Sales, 2019Q1 - 2020Q1



Source: SF Controller's Office / CDTFA

1. During the 2010s, the tech industry emerged as San Francisco's primary economic driver.
2. Despite changes in the industry since the pandemic, there is no sign of a significant shift of tech employment or investment to other metro areas.
 - The city continued to add tech employment during 2020, albeit remotely.
 - Venture capital investment in San Francisco is at an all-time high.
 - There has been no significant exodus of tech companies from San Francisco.
3. However, the rise of remote work creates a major risk for the city's economy.
 - Tech employees are expecting generous work-from-home policies.
 - Historic amounts of office space are being placed in the sublease market. Among large cities, San Francisco is leading that trend.
 - Shifts in the housing market reflect a weakening premium for housing near San Francisco.
4. While the office market will eventually adjust to reduce the current vacancy, in the medium term, work-from-home will have important implications for the recovery of other industries in the city, and on the City's tax revenues.

- Slide 3: For the purposes of this slide, "Tech" / "Information Technology" refers to NAICS codes 334, 5112, 518, 51913, and 5415. "Biotech" refers to NAICS codes 54171 and 3254.
- Slide 4: For the purposes of this slide, "Tech" refers to the PWC categories "Internet", "Software (non-internet/mobile)" and "Mobile & Telecommunications" and "Biotech" refers to the PWC categories "Biotechnology", "Pharmaceuticals / Drugs", "Disease Diagnosis", "Drug Delivery", "Drug Development" and "Drug Discovery". "Bay Area" refers to the San Jose-San Francisco metro area as defined by PWC.
- Slide 5: "Tech" cannot be precisely defined using City tax filings, so the more inclusive category of Information + Professional, Scientific, and Technical Services is used instead.
- Slide 6: The same definition of "Tech" as used for Slide 3 is used here. Biotechnology is not included.
- Slide 7: All venture capital funding to companies headquartered in San Francisco, including pre-seed, seed, Series A-H, and unspecified. Angel investments are not included.
- Slides 8-9: "Tech" and "Biotech" are defined as in slides 3 & 6.
- Slide 11: Map shows annualized change in single-family housing values, at the zip code level, as estimated by Zillow.

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