



Home Prices, and Economic Conditions & Trends Affecting Bay Area Real Estate

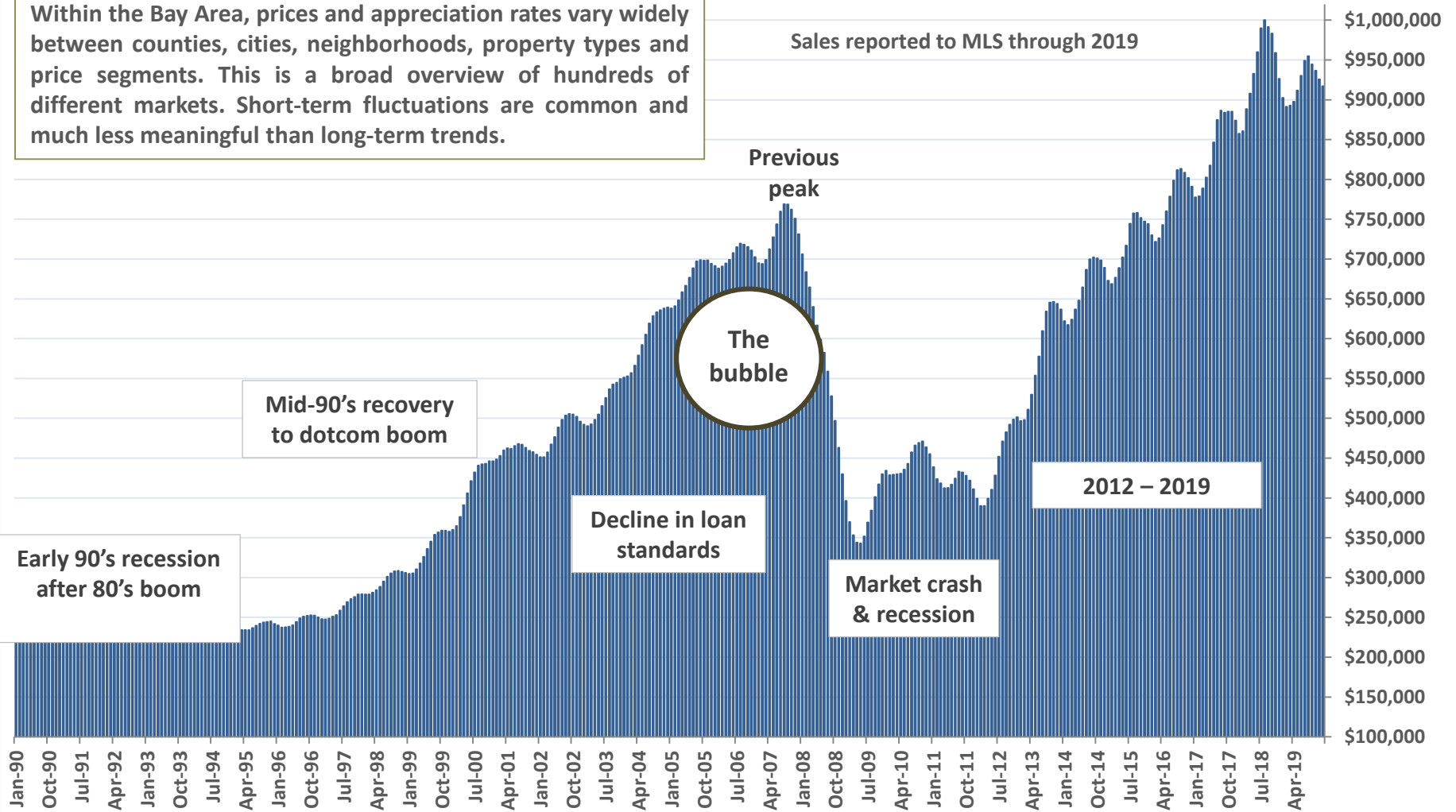
Selected Charts

There is a staggering number of economic, political, social and even ecological issues and factors constantly at play - locally, nationally and internationally - which can impact the Bay Area economy and housing market. These include home prices and affordability, interest rates, stock markets, politics, ecological disasters, employment, population, migration trends, national immigration policies, wage growth, how often people move, new home construction, consumer confidence, venture capital investment, initial public offerings, household debt, tax law changes, high-tech booms, creative financial engineering, and many others. Different analysts and economists often draw widely varying conclusions from this data.

Bay Area Home Price Appreciation

Median House Sales Prices, 1990 – Present, 6-Month Rolling Average

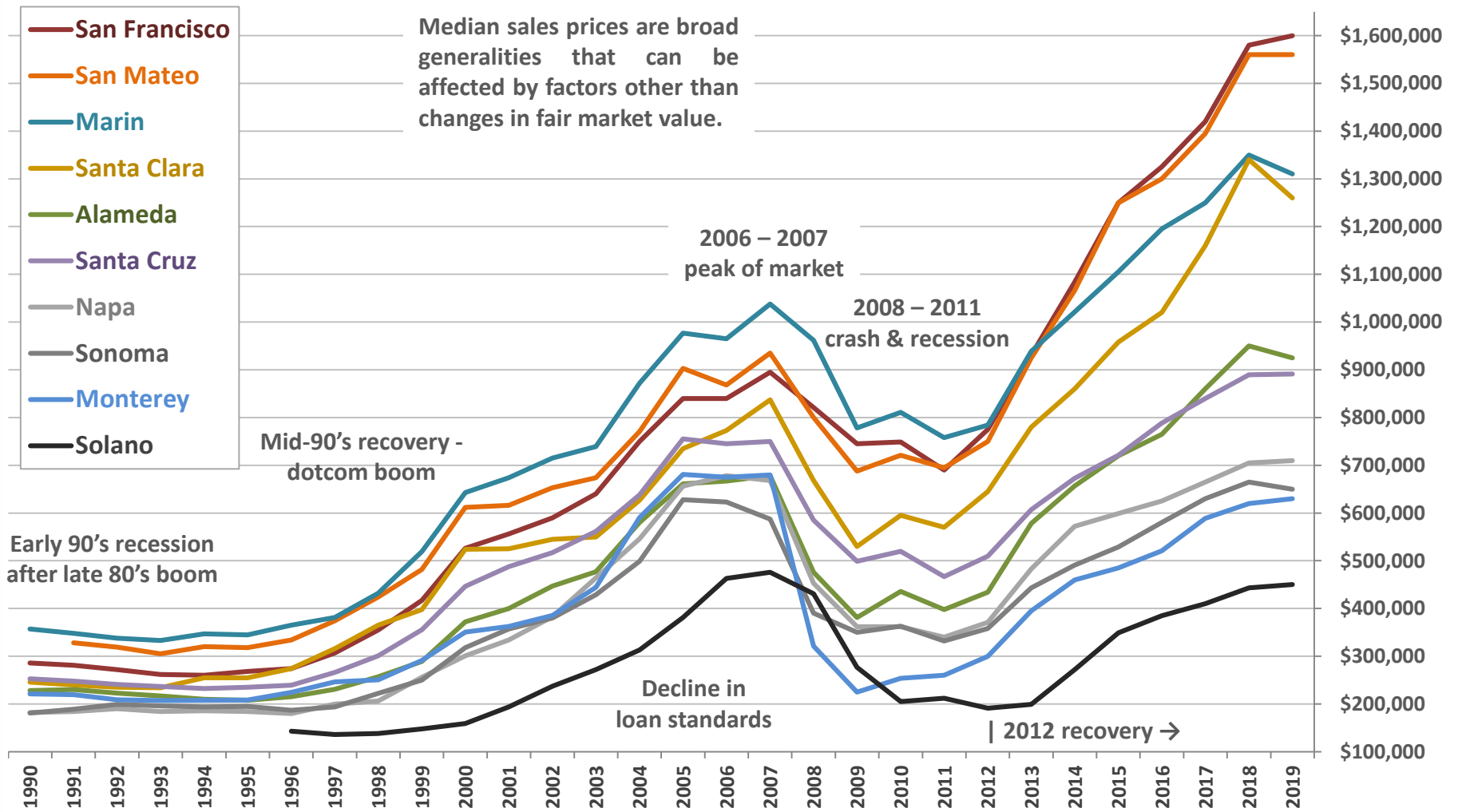
Within the Bay Area, prices and appreciation rates vary widely between counties, cities, neighborhoods, property types and price segments. This is a broad overview of hundreds of different markets. Short-term fluctuations are common and much less meaningful than long-term trends.



Each point reflects the 6 month rolling average of monthly median sales prices for existing houses, 9 Bay Area Counties, per CA Assoc. of Realtors. Analysis may contain errors and subject to revision. All numbers approximate.

Annual Median Bay Area House Sales Prices

Single Family Home Sales, 1990 – 2019



Sales reported to MLS. Median prices disguise an enormous variety of prices in the underlying individual sales. Data from the California Associations of Realtors Annual Historical Data Summary and local MLS associations. Deemed reliable but may contain errors and is subject to revision. All numbers should be considered approximate.



Potential Factors in Bay Area Real Estate Markets in 2020

Positive Factors

- The Bay Area is still the most dynamic economic and technologically innovative region in the world, continuing to generate enormous amounts of new wealth – and home to some of the most profitable companies in the world
- The Bay Area remains a magnet for many of the best and brightest around the world.
- Employment at all-time highs, with unemployment rates at all-time lows.
- Interest rates are close to historic lows, a critical issue in the cost of housing.
- Stock markets are at all-time highs increasing household wealth.
- Venture capital investment remains strong, continuing to flood the Bay Area with funding (but VC sentiment can shift quickly).
- The Bay Area is internationally considered to be one of the great metro areas of the world, financially, culturally and for sheer beauty.



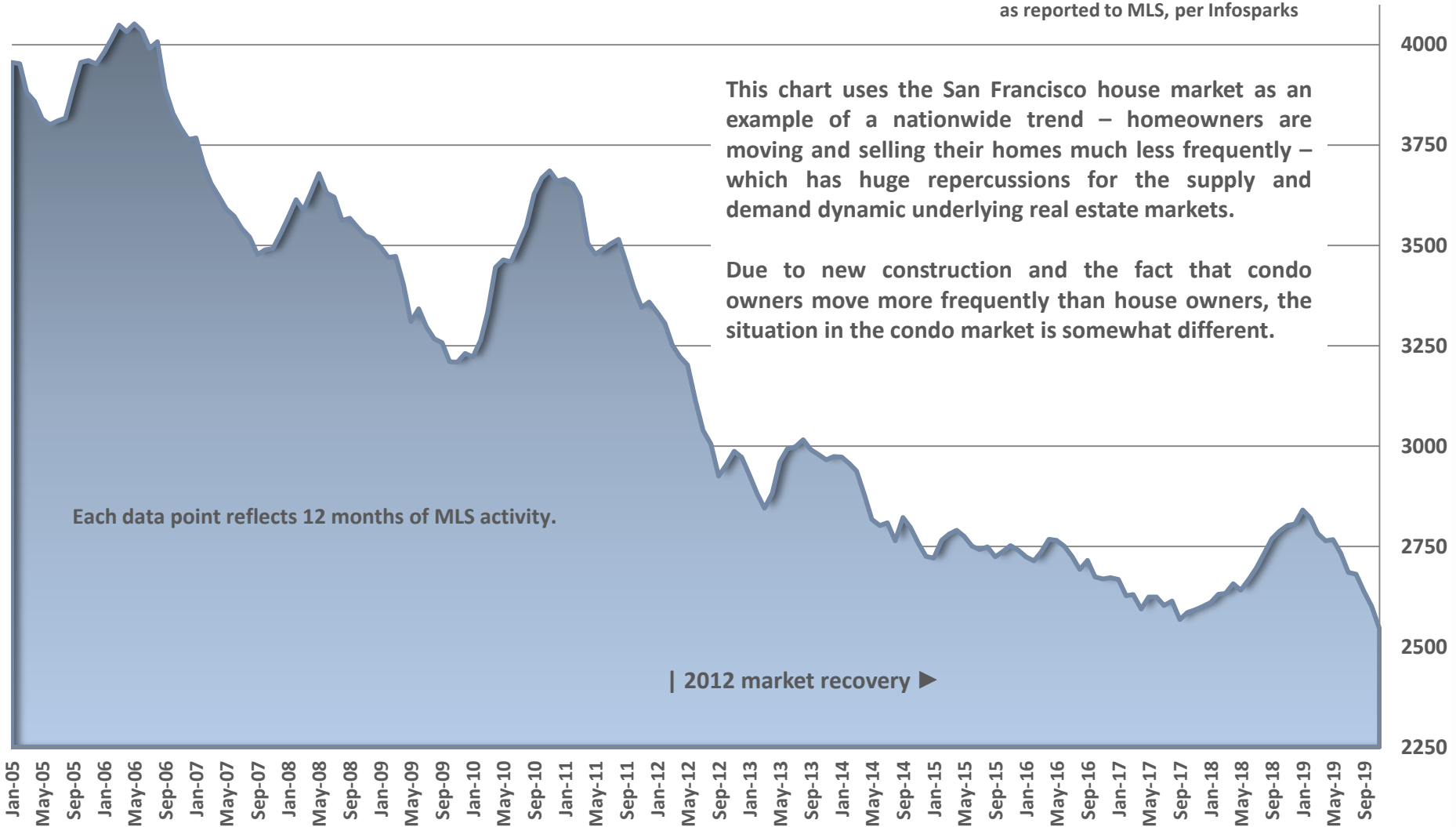
Negative Factors

- Highest housing costs in the nation = huge political, social and economic issues.
- Increasing out-migration of working residents, retirees and businesses.
- National policies negatively affecting foreign immigration and investment.
- Highest state income taxes in the country, competing against no-income-tax states with their own high-tech centers or retiree-attractive communities.
- Recent federal income tax laws negatively impact ongoing cost of housing for more expensive markets in Bay Area.
- High local taxes and regulatory costs for businesses.
- Consumer, corporate, national government and international debt levels at all-time highs - and increasing. Debt typically plays a large role in negative economic adjustments.
- Possible signs of over-exuberance in financial markets after a long economic up-cycle.
- Potential for increased international conflict, politically & economically.
- Climate change/ecological issues.

Reduction in Supply

San Francisco New-Listing Volumes, since 2005

12-month-rolling house new-listing totals
as reported to MLS, per Infosparks



As reported to MLS: Many new-project condo listings are not entered into MLS. Data from sources deemed reliable but may contain errors and subject to revision. All numbers to be considered approximate.

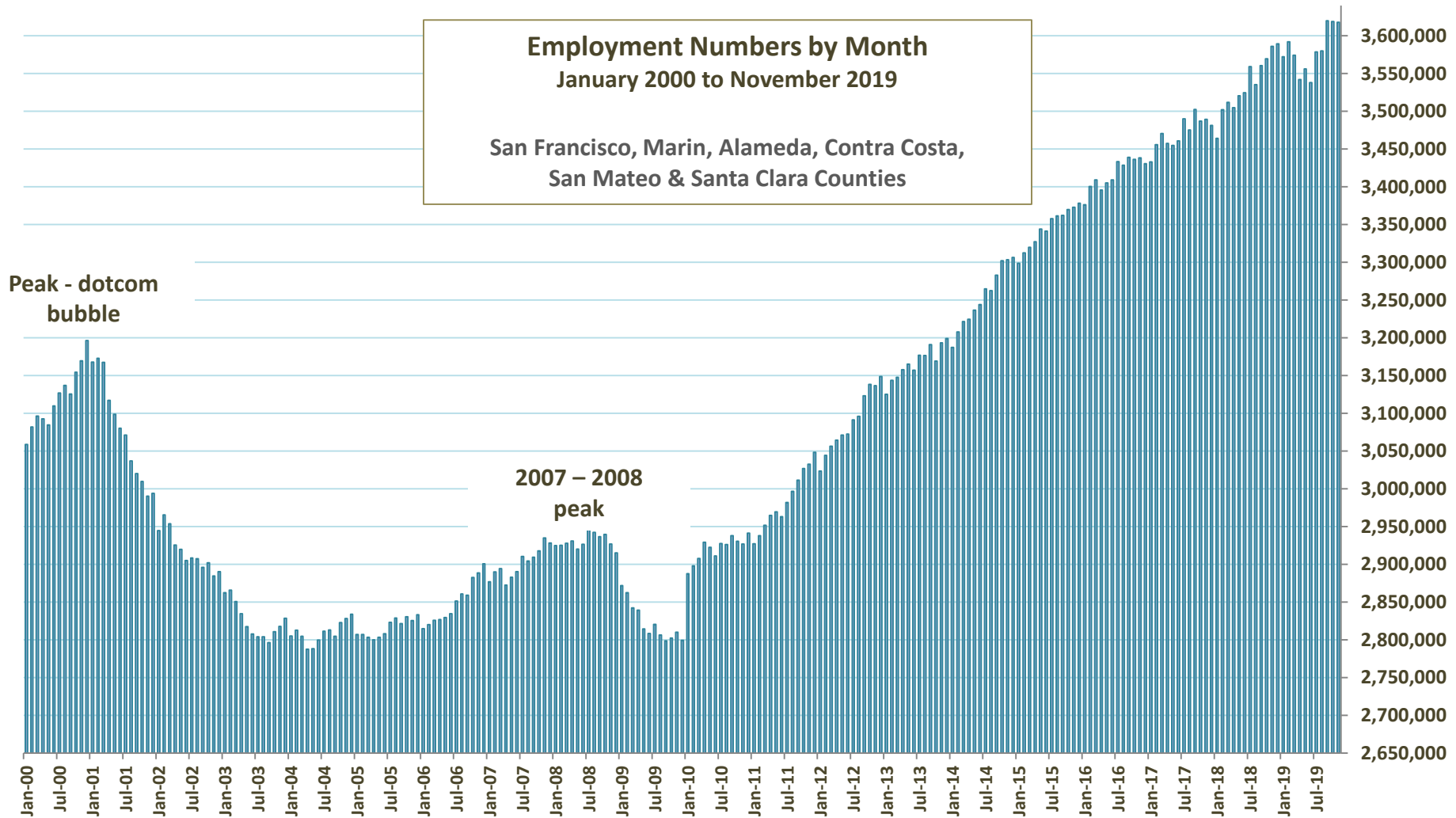
San Francisco Bay Area Employment Trends

Number of Employed Residents since 2000

Per California Employment
Development Dept. (EDD)

Employment Numbers by Month
January 2000 to November 2019

San Francisco, Marin, Alameda, Contra Costa,
San Mateo & Santa Clara Counties



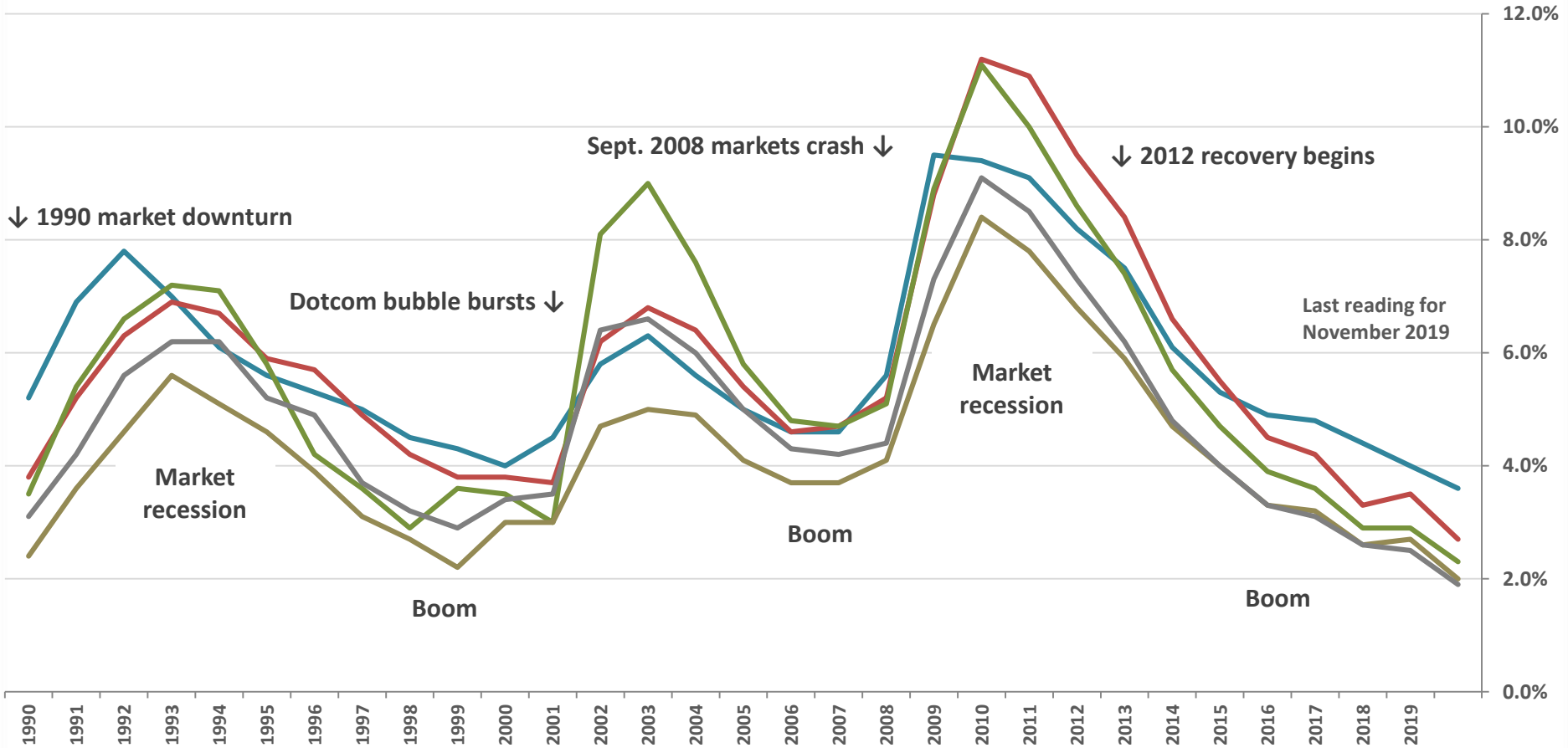
EDD data 6 inner Bay Area Counties. Last month's data is labeled "preliminary" by EDD. EDD often goes back to revise past data releases. Data from sources deemed reliable but may contain errors and subject to revision.



Bay Area Unemployment Rates

Selected Bay Area Counties, January Data Points, 1990 – 2019

- United States
- Alameda & Contra Costa
- Santa Clara
- San Francisco & San Mateo
- Marin



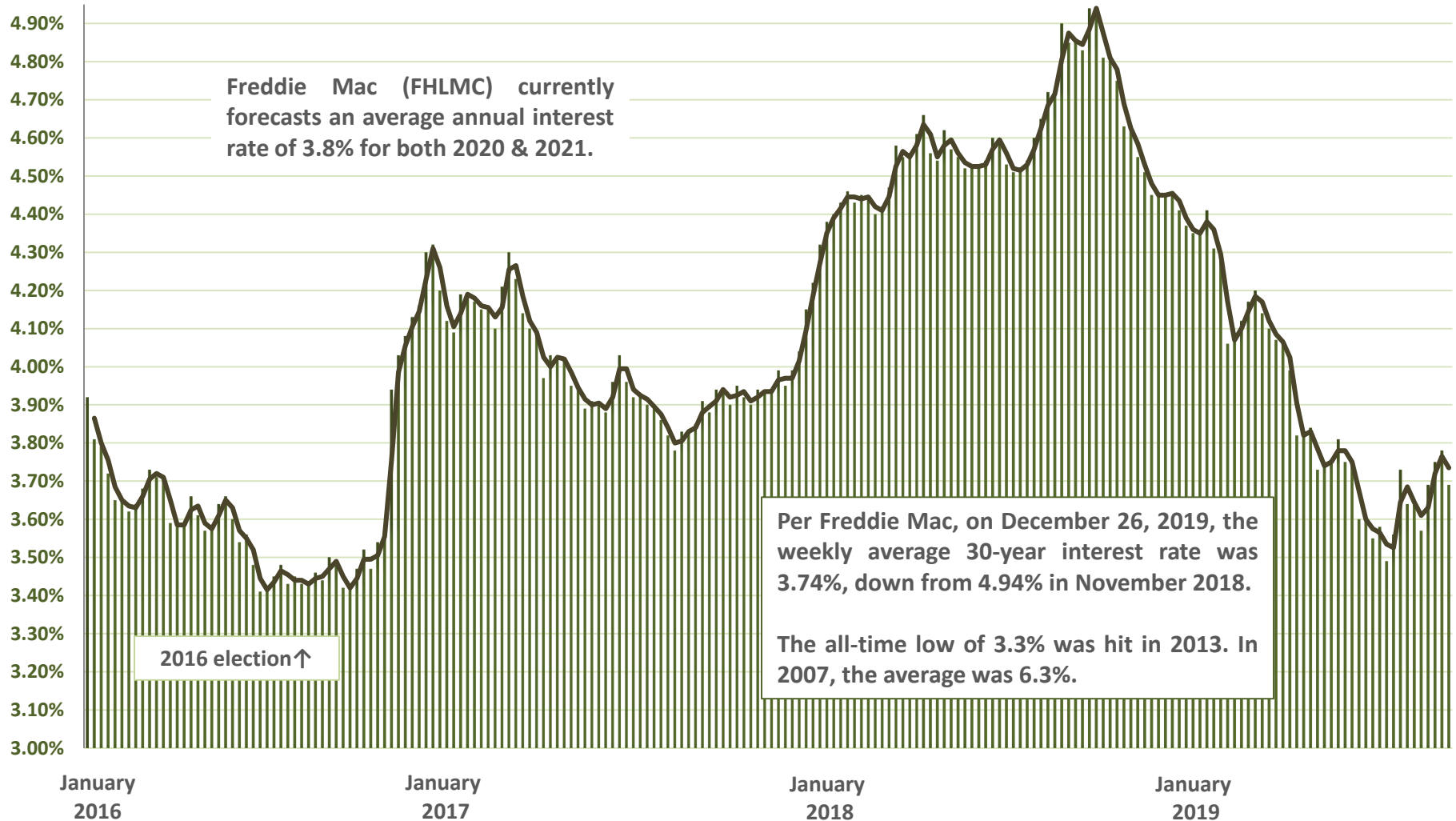
Per CA EDD and other sources. January data points except for last reading. Data from sources deemed reliable, but may contain errors and subject to revision.



Mortgage Interest Rate Trends, 2016 – 2019

30-Year Conforming Loans, Weekly Average Readings

Rates published by the FHLMC,
January 7, 2016 – December 26, 2019



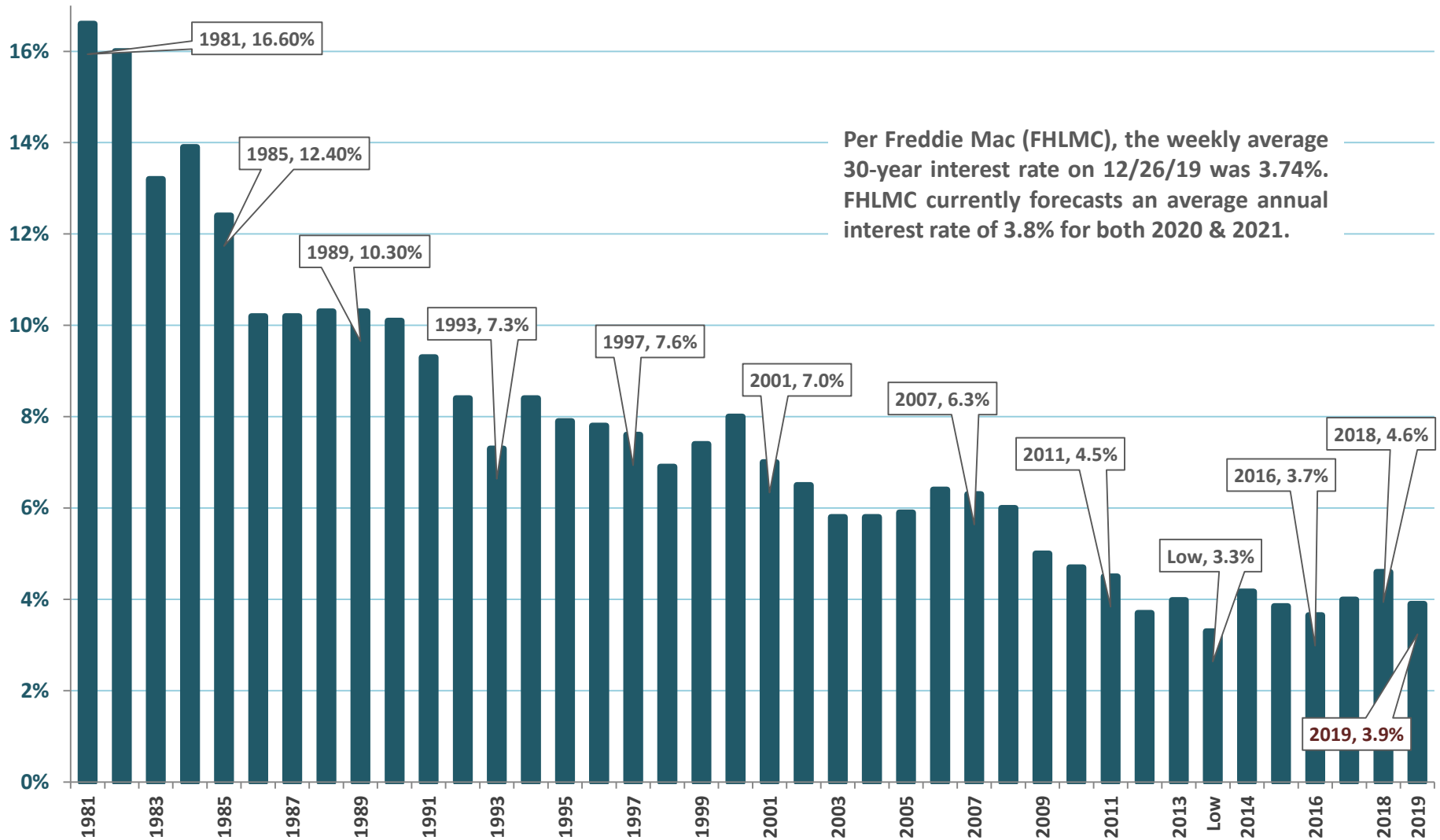
Interest rates may fluctuate suddenly and dramatically, and it is very difficult to predict rate changes. Data from sources deemed reliable but not guaranteed. Anyone interested in residential home loans should consult with a qualified mortgage professional and their accountant.

COMPASS

Average Annual Interest Rates

30-Year Conforming Loans, by Year, 1981 – Present

Annual average rates, plus last weekly rate, published by the FHLMC



Interest rates may fluctuate suddenly and dramatically. Data from sources deemed reliable but not guaranteed. Anyone interested in residential home loans should consult with a qualified mortgage professional and accountant.



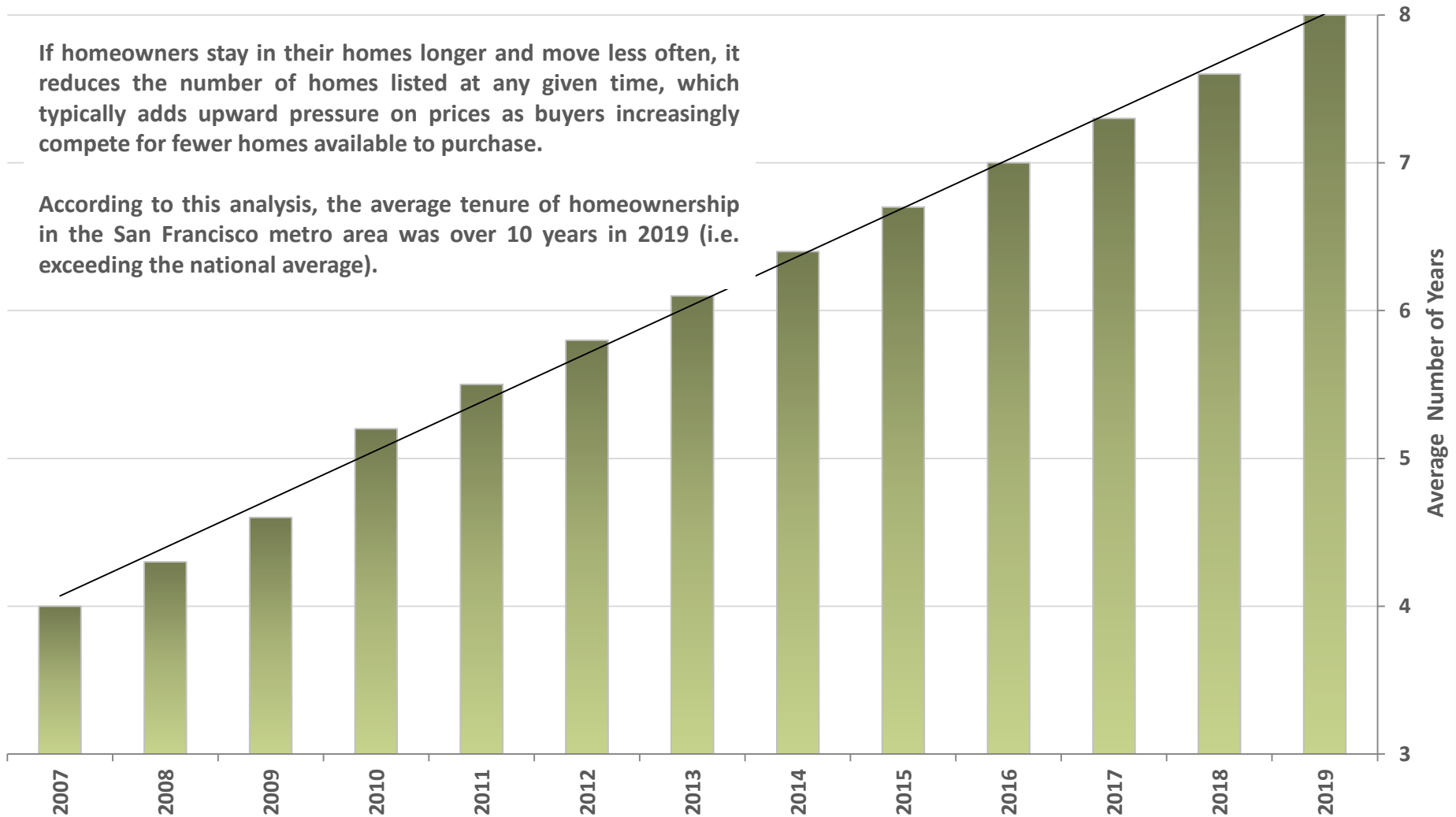
Average Length of U.S. Homeownership

Average Number of Years between Purchase & Sale

Smoothed trend line using data per Attom Data Solutions

If homeowners stay in their homes longer and move less often, it reduces the number of homes listed at any given time, which typically adds upward pressure on prices as buyers increasingly compete for fewer homes available to purchase.

According to this analysis, the average tenure of homeownership in the San Francisco metro area was over 10 years in 2019 (i.e. exceeding the national average).

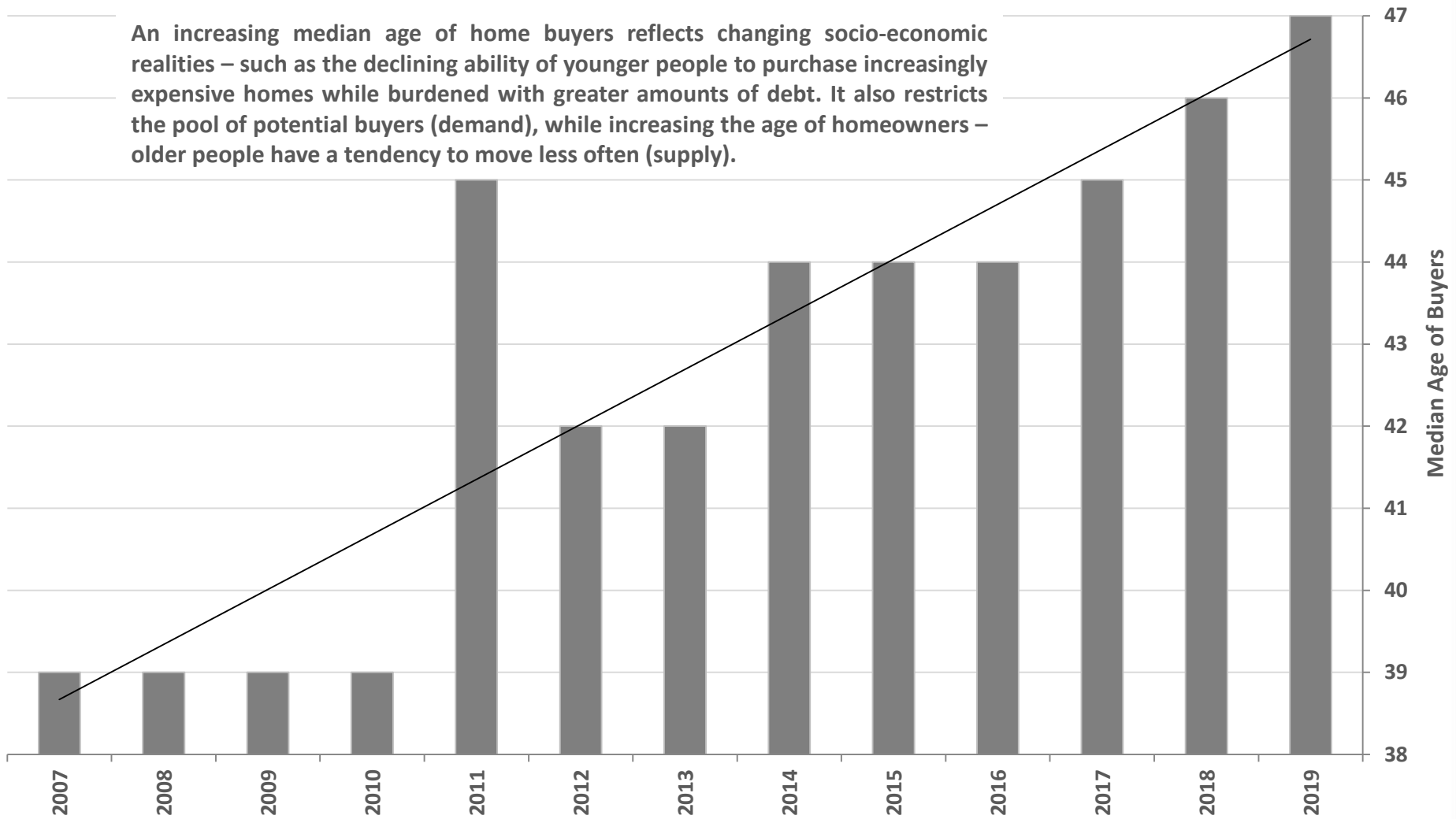


Smoothed annual trend line – using only begin and end data, 2007 and 2019 – of quarterly analysis by Attom Data Solutions. Data from sources deemed reliable but may contain errors and subject to revision. All numbers to be considered approximate.

Median Age of Home Buyers

Average Number of Years between Purchase & Sale

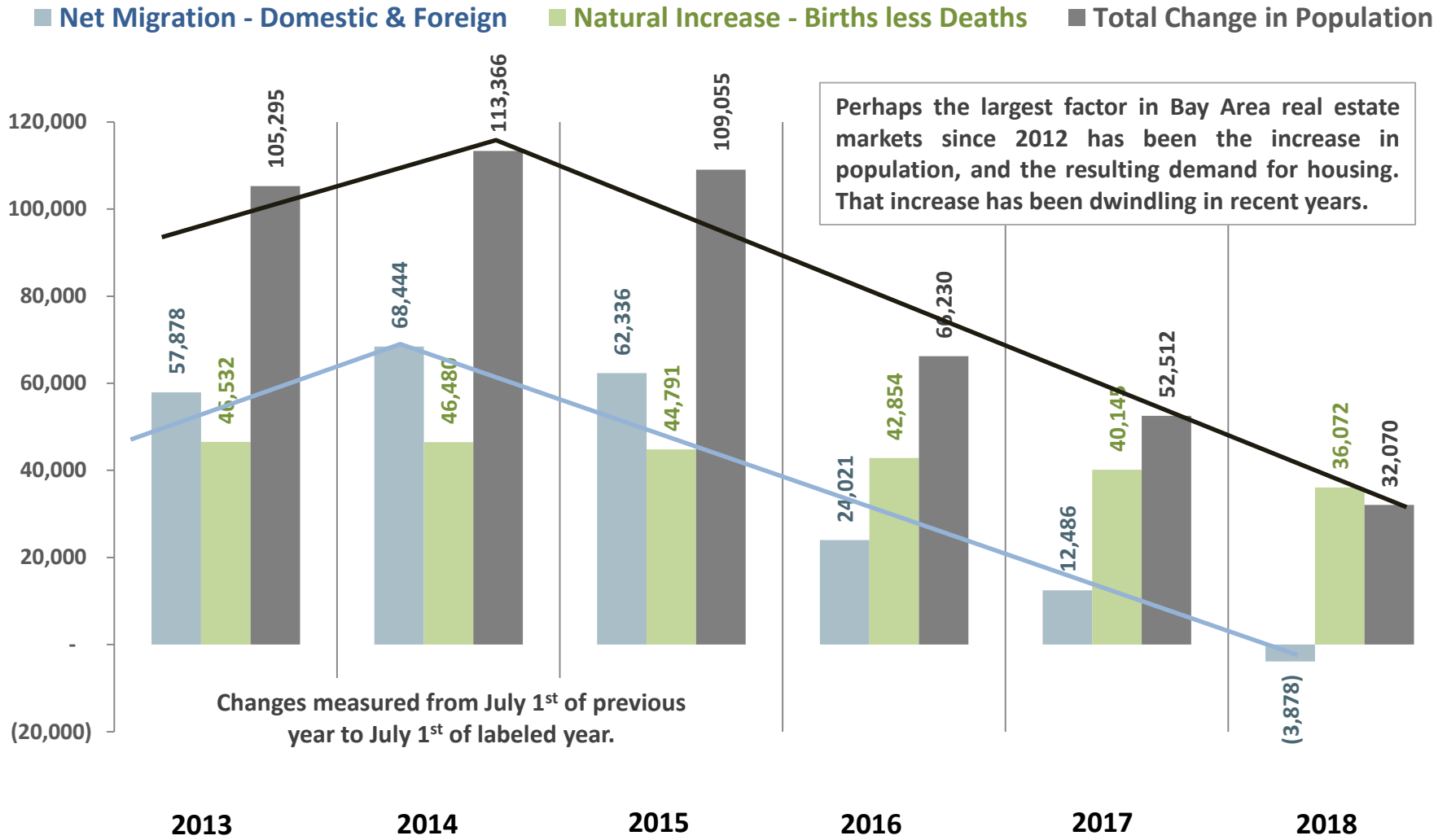
An increasing median age of home buyers reflects changing socio-economic realities – such as the declining ability of younger people to purchase increasingly expensive homes while burdened with greater amounts of debt. It also restricts the pool of potential buyers (demand), while increasing the age of homeowners – older people have a tendency to move less often (supply).



Per data from survey performed by National Association of Realtors, as analyzed by Bloomberg News. Data from sources deemed reliable but may contain errors and subject to revision. All numbers to be considered approximate.

San Francisco-San Jose Combined Metro Statistical Area

Bay Area Annual Population Changes – 7 Counties – Census Estimates

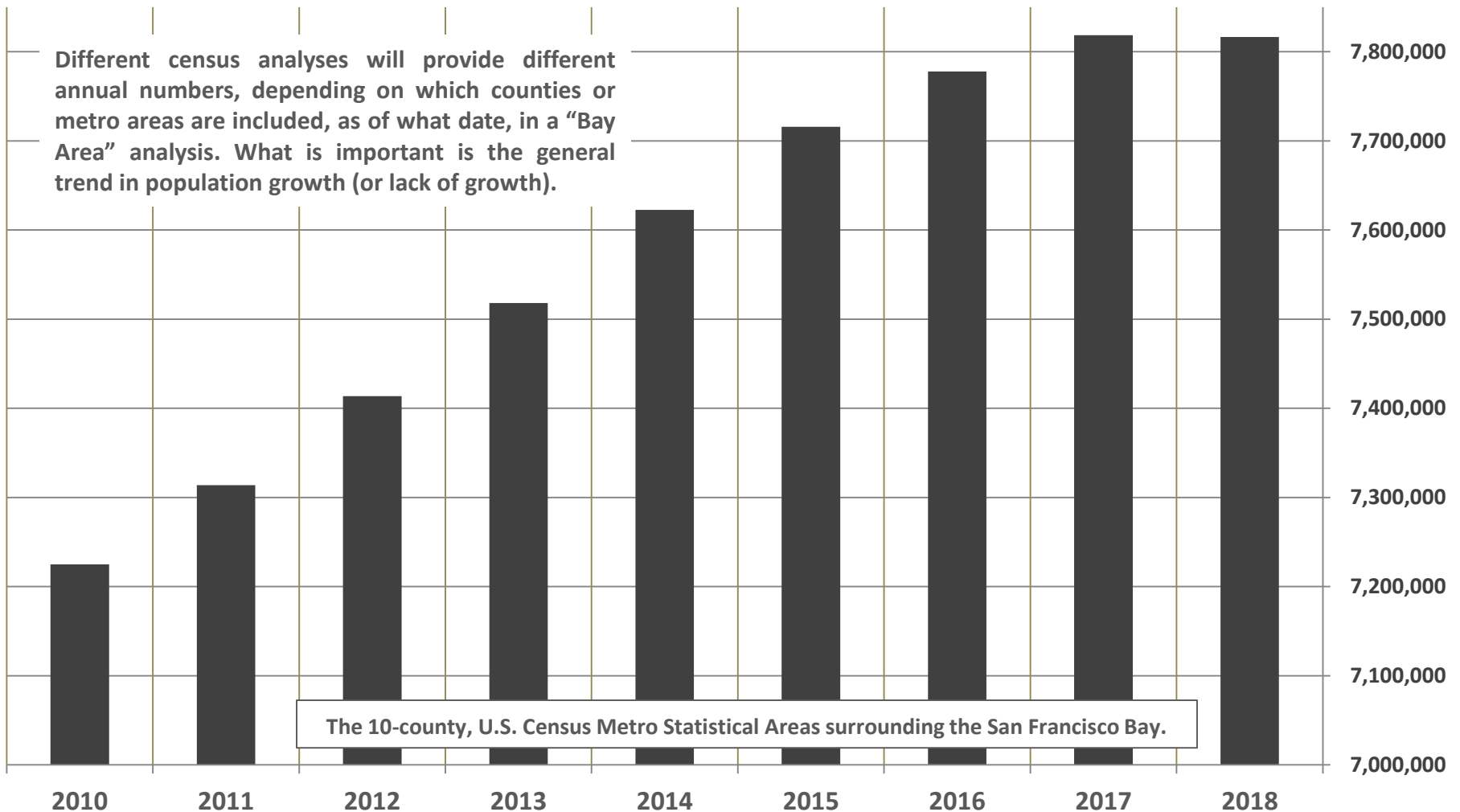


U.S. Census estimates for SF, Marin, San Mateo, Santa Clara, Alameda, Contra Costa & San Benito Counties. Combining the San Francisco and San Jose metro statistical areas. Data from sources deemed reliable but may contain errors and subject to revision. All numbers are approximate.



Bay Area (10 Counties) Population Trends since 2010

U.S. Census Estimates for July 1st of Each Year



Different census analyses can provide slightly different numbers. Data from sources deemed reliable but may contain errors and subject to revision. Some MSA population figures were rounded off and all numbers should be considered approximations.

Foreign National Homebuyers in America

Estimated Dollar Volume Sales in Billions, Top 5 Countries

National Association of Realtors estimates

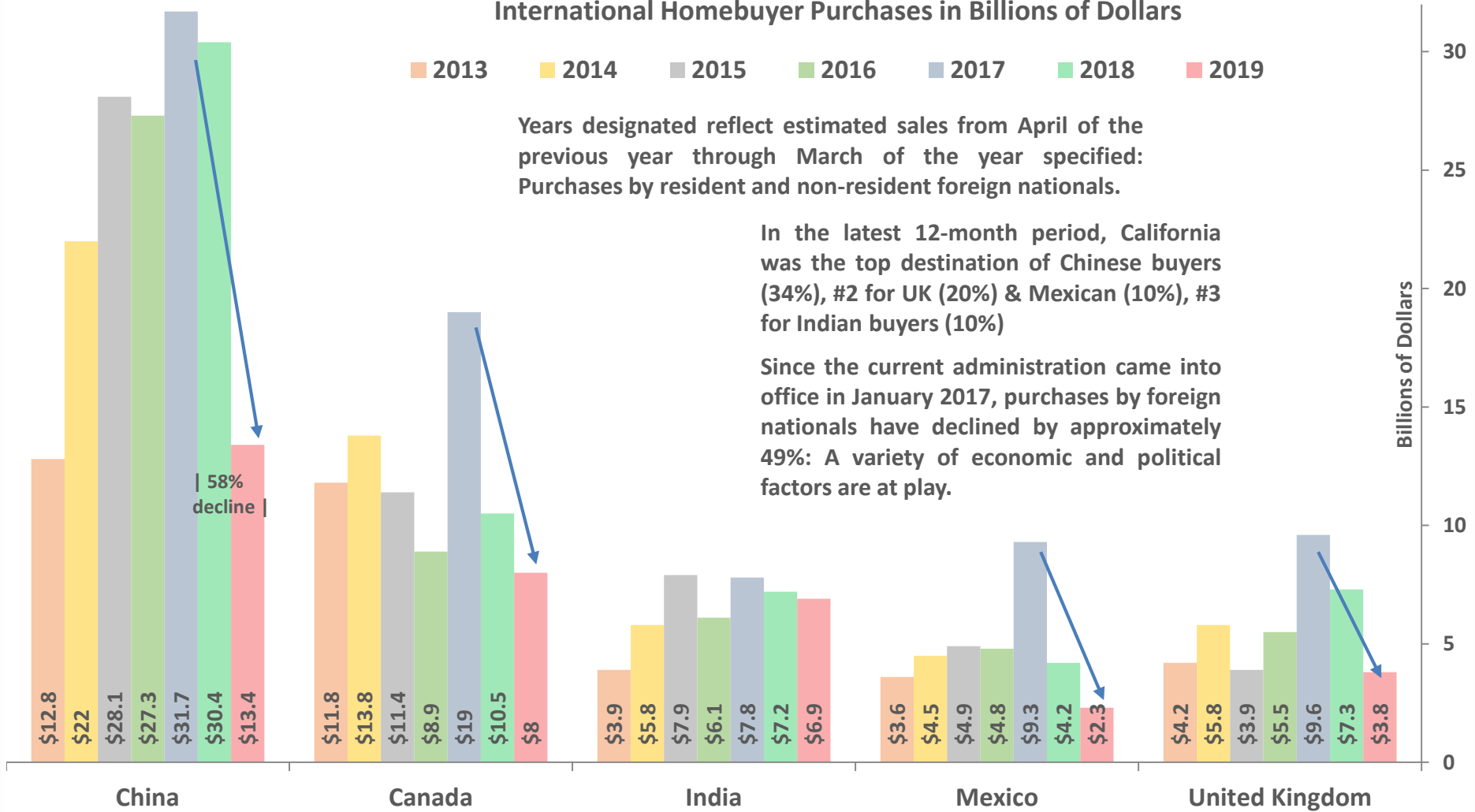
International Homebuyer Purchases in Billions of Dollars

2013 2014 2015 2016 2017 2018 2019

Years designated reflect estimated sales from April of the previous year through March of the year specified: Purchases by resident and non-resident foreign nationals.

In the latest 12-month period, California was the top destination of Chinese buyers (34%), #2 for UK (20%) & Mexican (10%), #3 for Indian buyers (10%)

Since the current administration came into office in January 2017, purchases by foreign nationals have declined by approximately 49%: A variety of economic and political factors are at play.

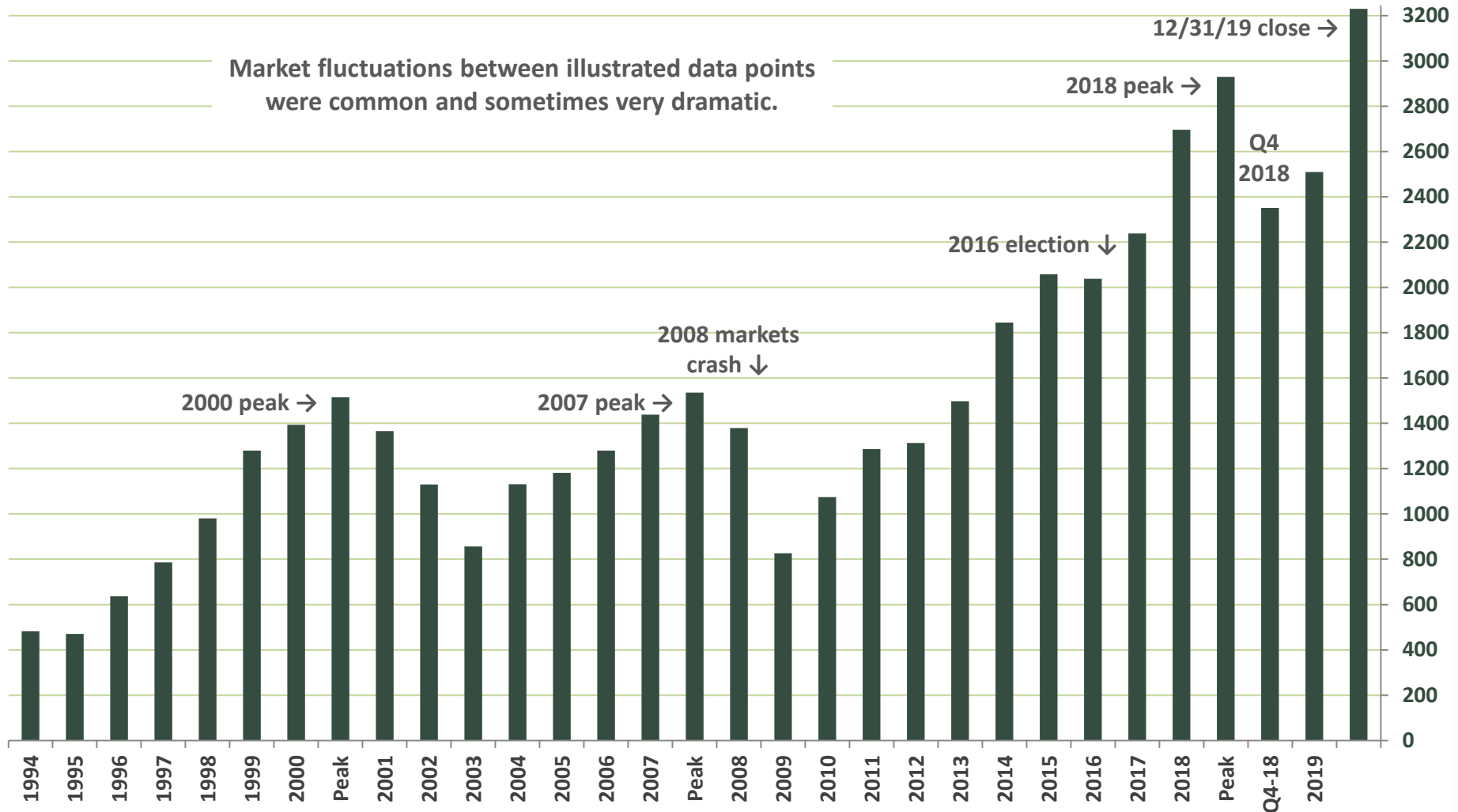


Estimates from the "Profile of International Transactions in U.S. Residential Real Estate 2019" published by the National Association of Realtors in July 2019, based upon a survey of Realtors. Data from sources deemed reliable, but may contain errors and subject to revision. All numbers should be considered very approximate, good-faith estimates.



S&P 500 Stock Index, January 1994 – December 31, 2019

January Opening Values except as specified



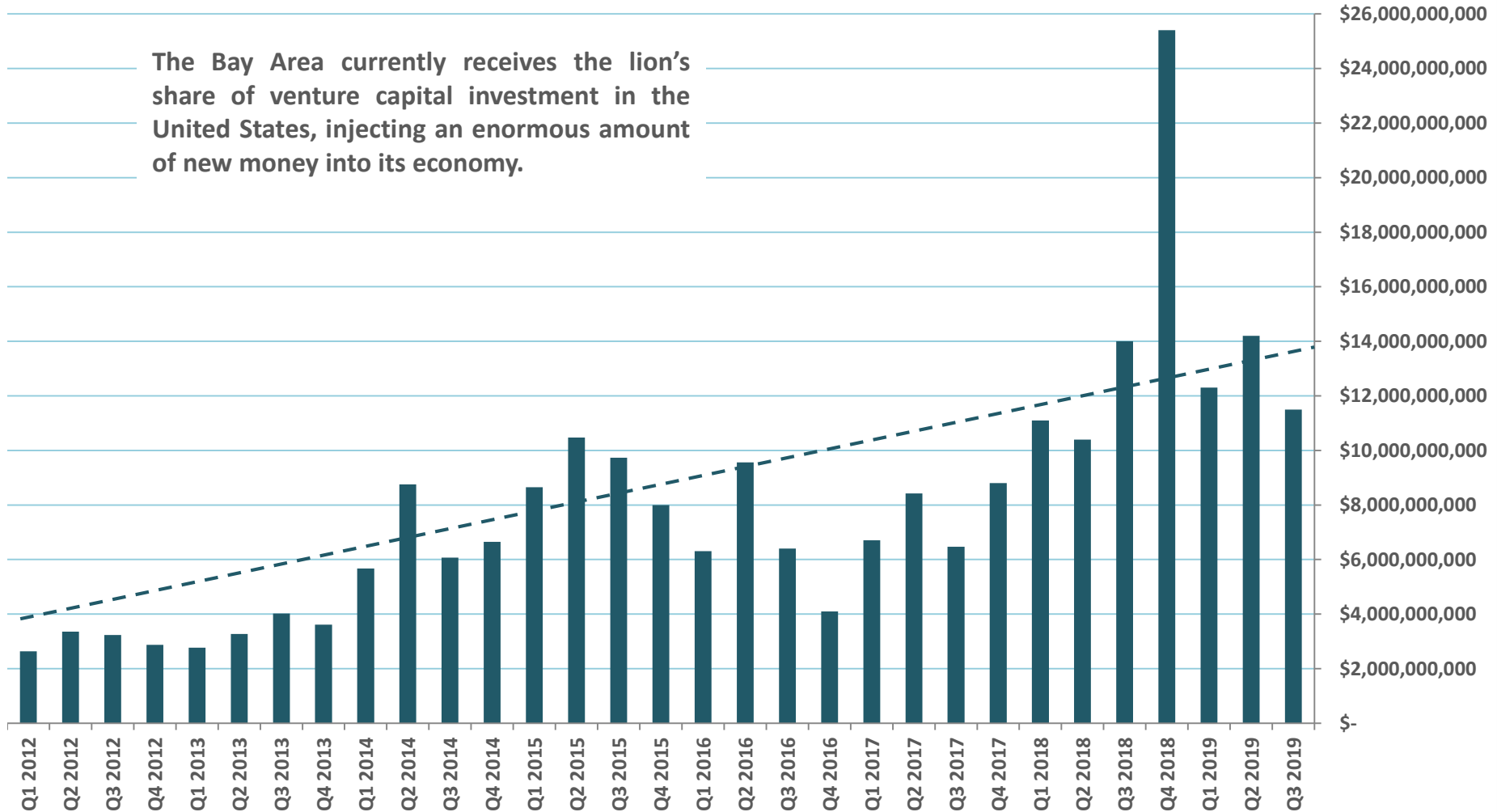
An approximate illustration only. January opening value data points except as noted in horizontal axis. Data from sources deemed reliable but may contain errors and subject to revision. Financial markets can be prone to significant volatility even on a short-term basis.

Bay Area Deal Activity & Venture Capital Investment

2012 to Present, by Quarter

Data per PwC Moneytree Q3 2019 report for "Silicon Valley," which includes San Francisco

The Bay Area currently receives the lion's share of venture capital investment in the United States, injecting an enormous amount of new money into its economy.



Data per <https://www.pwc.com/us/en/industries/technology/moneytree.html>. Data from sources deemed reliable, but may contain errors and subject to revision. All numbers to be considered approximate.

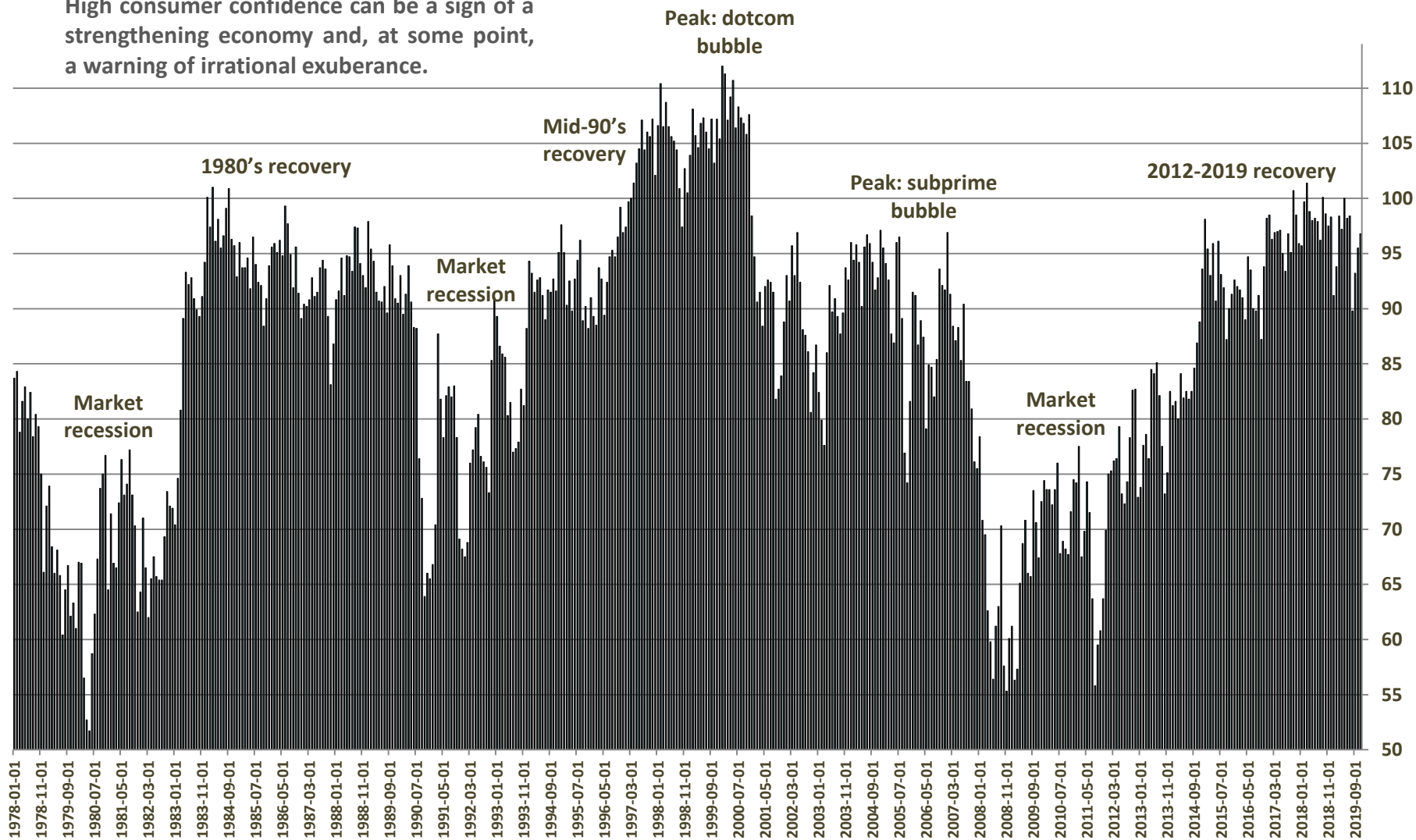


Consumer Sentiment (Confidence) Index

University of Michigan, January 1978 – November 2019

As published by the Federal Reserve Bank of St. Louis

High consumer confidence can be a sign of a strengthening economy and, at some point, a warning of irrational exuberance.



University of Michigan: Consumer Sentiment [UMCSENT], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UMCSENT>, August 11, 2018. Not seasonally adjusted. 1966, Q1 = 100.

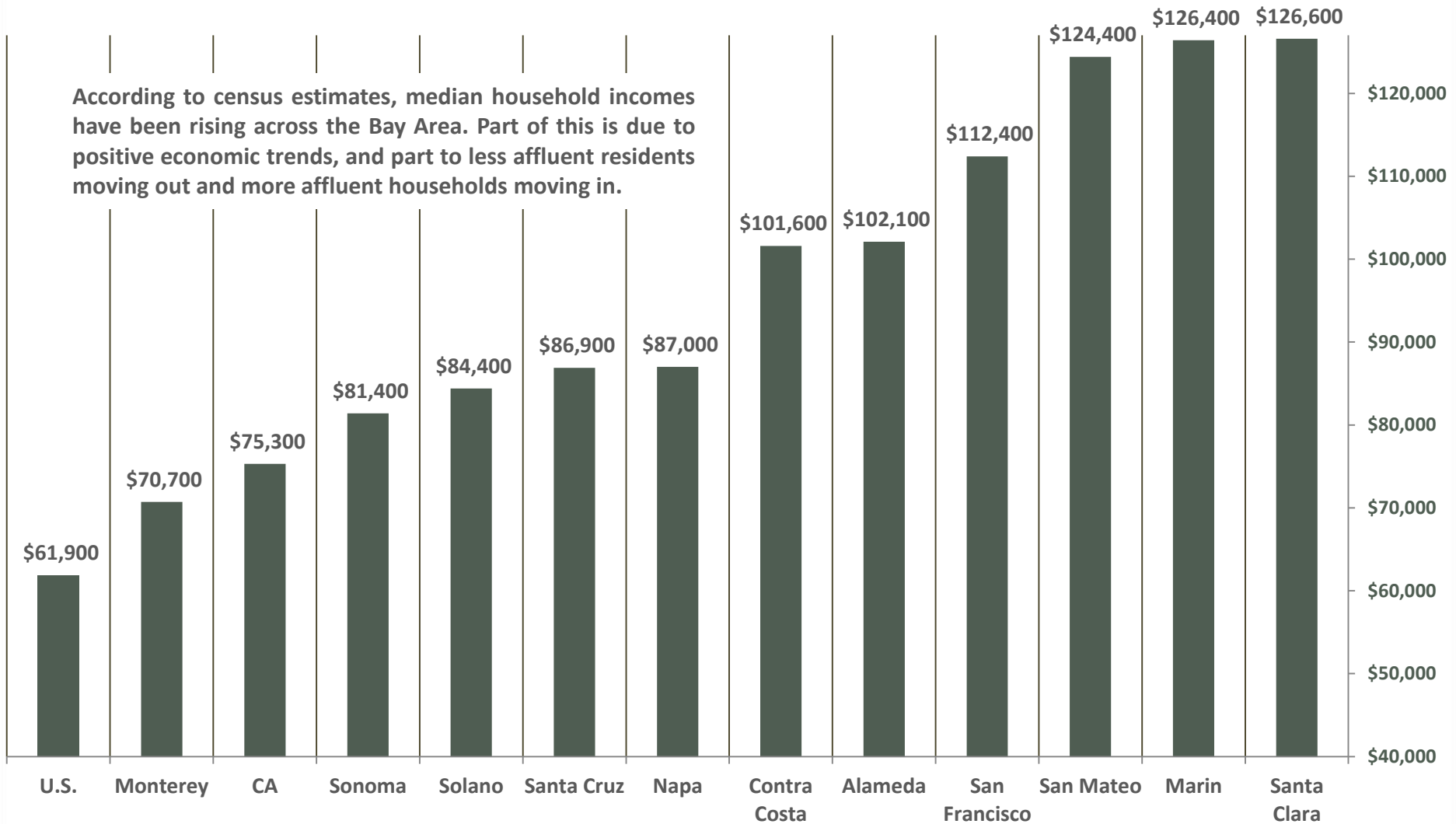
COMPASS

Median Household Income

by Bay Area County, 2018 U.S. Census Estimates

Per U.S. Census ACS 1-year estimates

According to census estimates, median household incomes have been rising across the Bay Area. Part of this is due to positive economic trends, and part to less affluent residents moving out and more affluent households moving in.



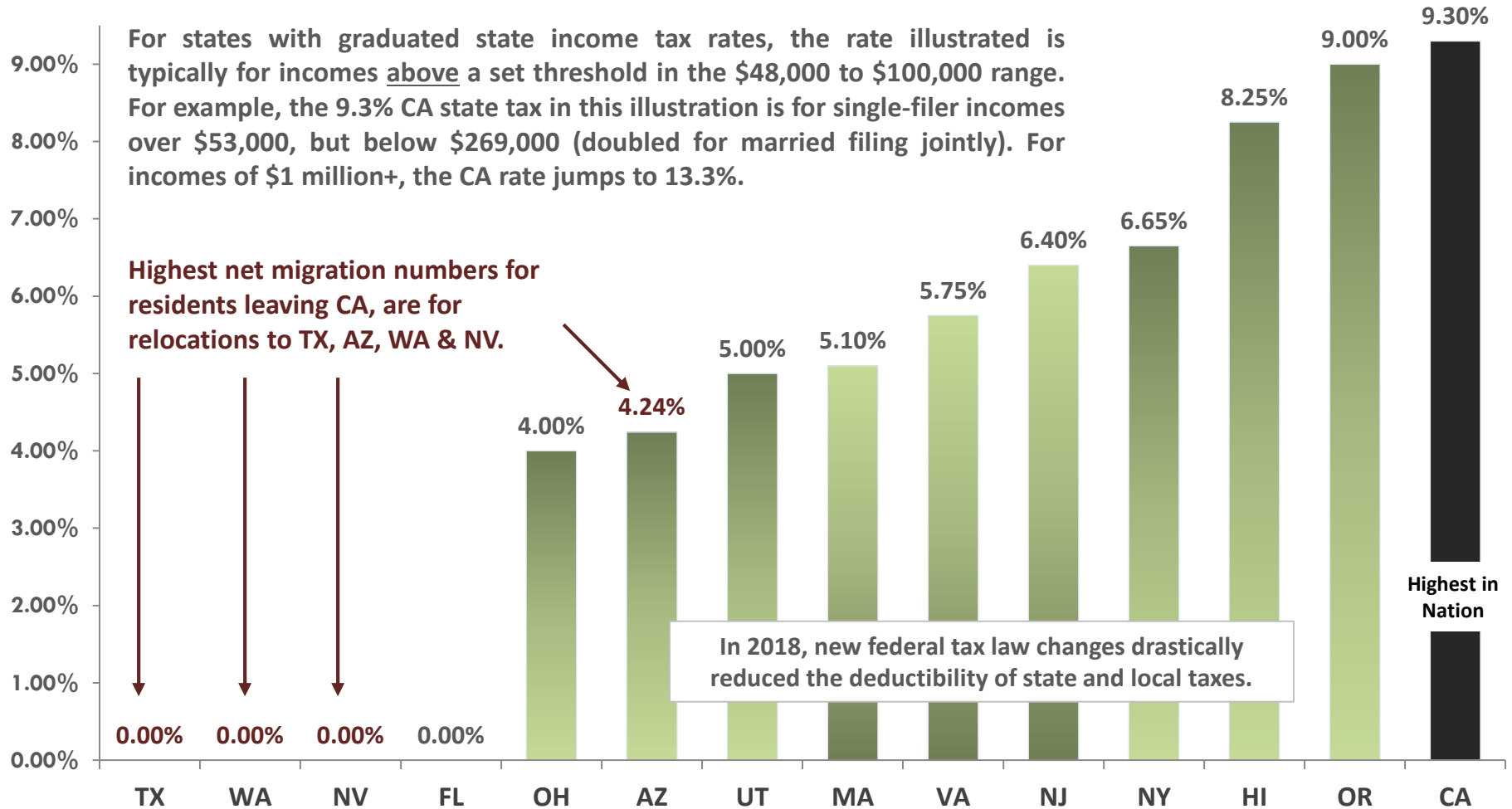
These analyses were performed in good faith with data derived from sources deemed reliable, but may contain errors and are subject to revision. All numbers should be considered approximate.

COMPASS

State Income Tax Rates

Selected States, Approximate Rates

Per the Tax Foundation



Data from www.taxfoundation.org, as of 2017 rates. deemed reliable, but the above analysis may contain errors and is subject to revision. Some states have graduated tax rates. All percentages should be considered general approximations for illustrative purposes only. Net migration stats from 2016 census data.

Percentage of Households Able to Afford Median Priced House

by Bay Area County, Q3 2018 vs. Q3 2019

Per CAR Housing
Affordability Index

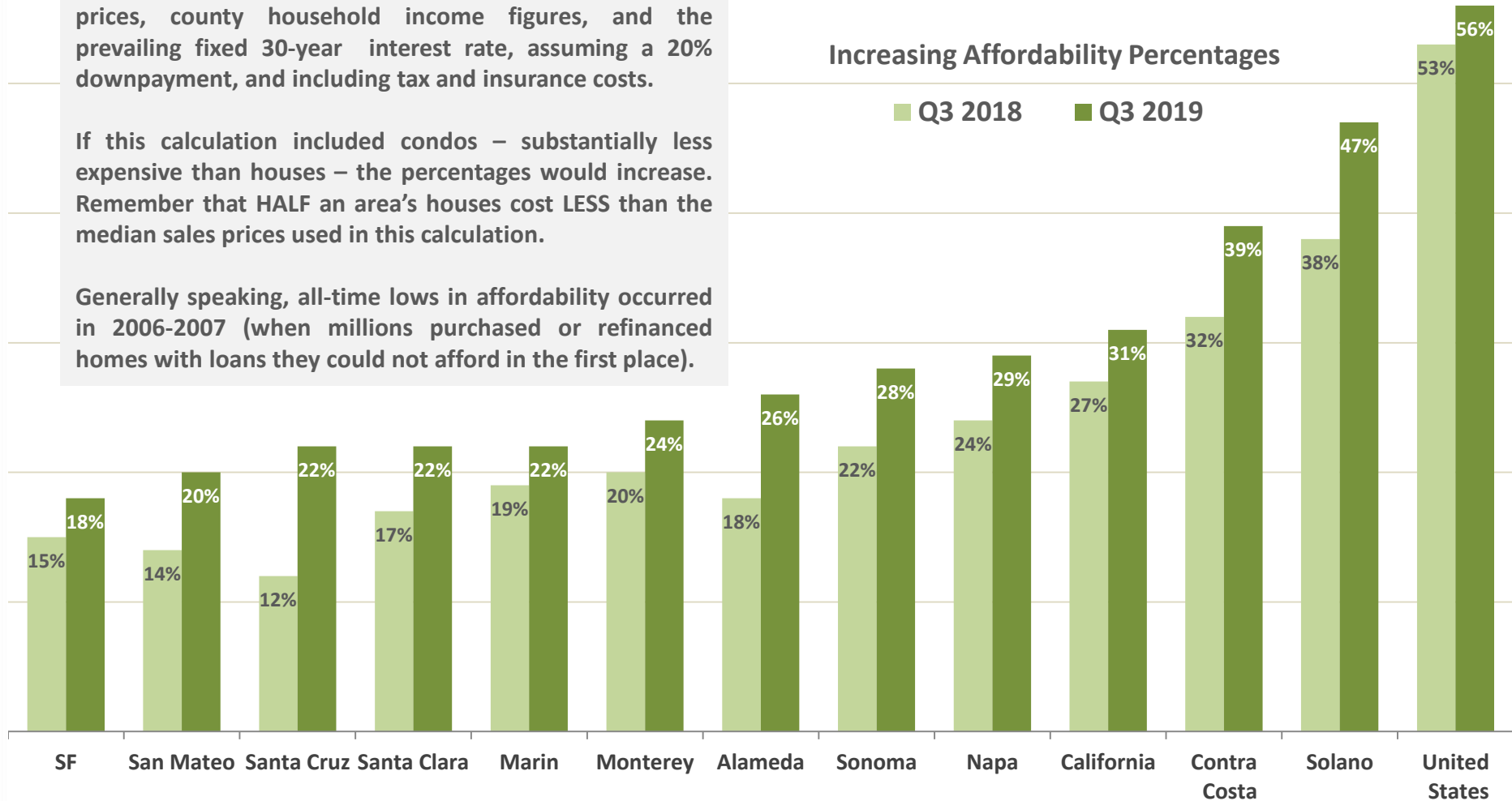
This statistic is calculated using Q3 median house sales prices, county household income figures, and the prevailing fixed 30-year interest rate, assuming a 20% downpayment, and including tax and insurance costs.

If this calculation included condos – substantially less expensive than houses – the percentages would increase. Remember that HALF an area’s houses cost LESS than the median sales prices used in this calculation.

Generally speaking, all-time lows in affordability occurred in 2006-2007 (when millions purchased or refinanced homes with loans they could not afford in the first place).

Increasing Affordability Percentages

■ Q3 2018 ■ Q3 2019



Calculation per California Association of Realtors: C.A.R.'s Traditional Housing Affordability Index (HAI). Methodology can be found on www.CAR.org, Market Data section.



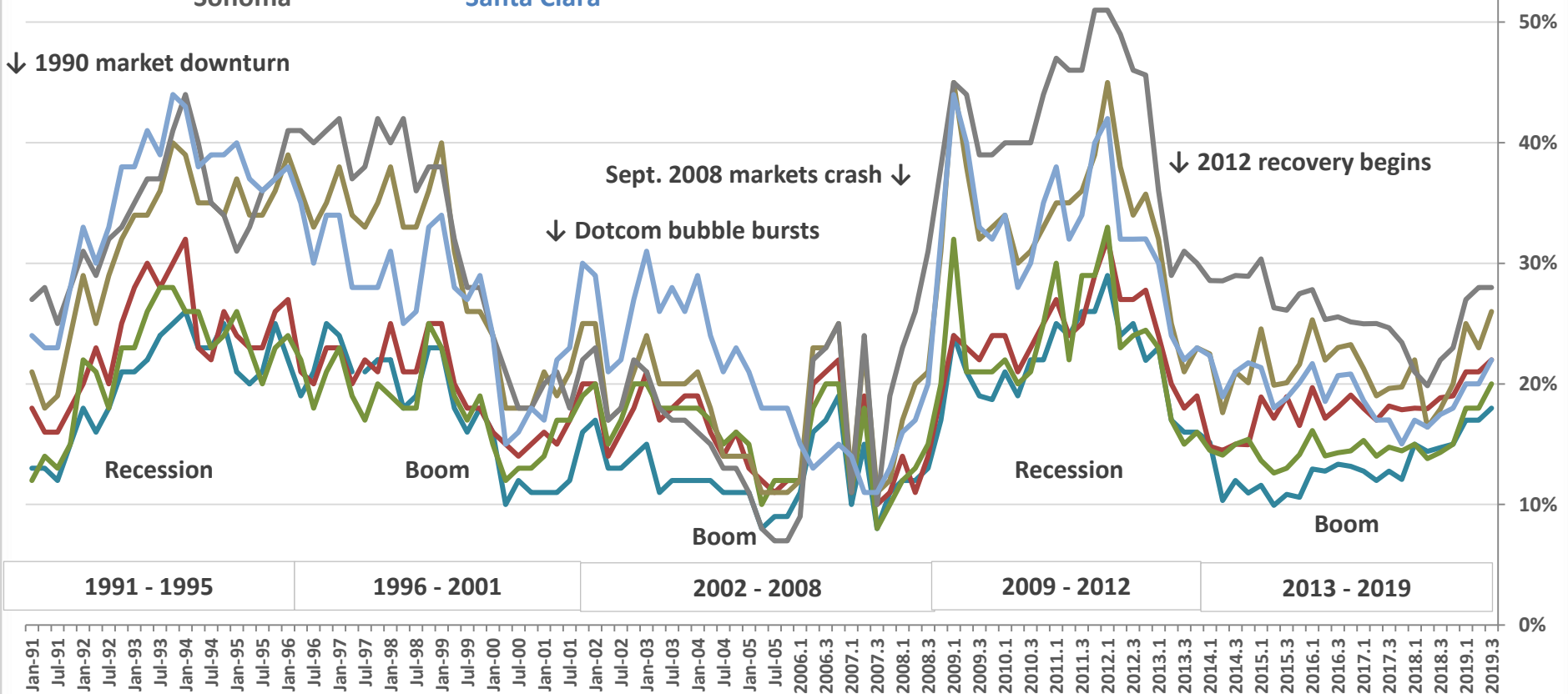
Bay Area Housing Affordability Trends

Selected Bay Area Counties, 1991 – Q3 2019

Per CAR Housing Affordability Index

- San Francisco
- Marin
- San Mateo
- Alameda
- Sonoma
- Santa Clara

The Housing Affordability Index measures the percentage of households that can afford to buy the median priced house. The big factors are median sales price, mortgage interest rates, and household income distribution. The lower the percentage, the less affordable the housing.



Data from sources deemed reliable, but may contain errors and subject to revision. The methodology for CAR Housing Affordability Index calculations can be found here: <https://www.car.org/en/marketdata/data/haimethodology>



National Housing Affordability Index by Metro Statistical Area (MSA)

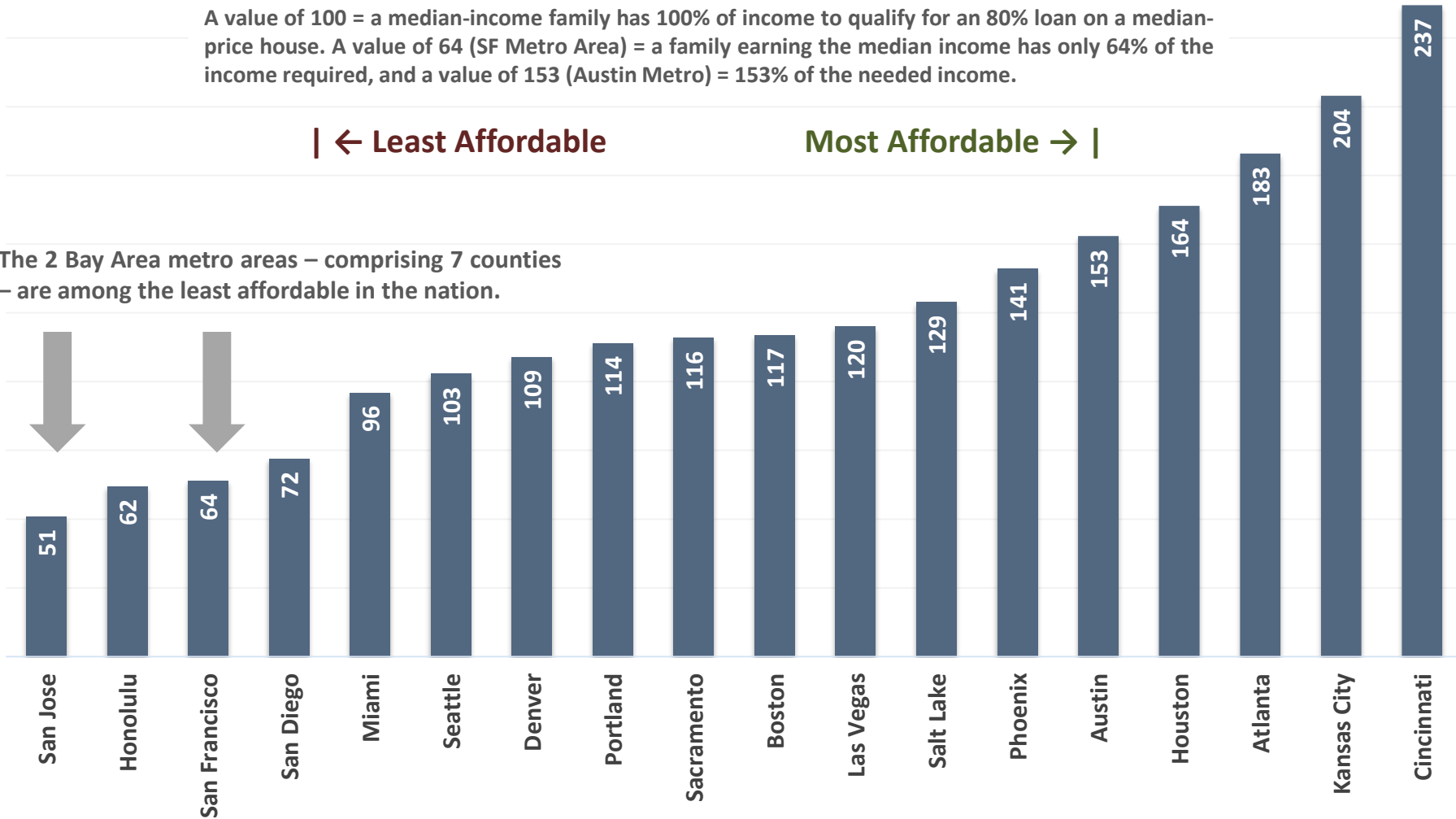
©2019 "Housing Affordability Index." *National Association of REALTORS®*. All rights reserved. Reprinted with permission. August 21, 2019, <https://www.nar.realtor/research-and-statistics/housing-statistics/housing-affordability-index>

A value of 100 = a median-income family has 100% of income to qualify for an 80% loan on a median-price house. A value of 64 (SF Metro Area) = a family earning the median income has only 64% of the income required, and a value of 153 (Austin Metro) = 153% of the needed income.

| ← Least Affordable

Most Affordable → |

The 2 Bay Area metro areas – comprising 7 counties – are among the least affordable in the nation.



Metro statistical areas often encompass large areas: the SF MSA includes Alameda, Contra Costa, San Mateo, Marin and San Francisco Counties.

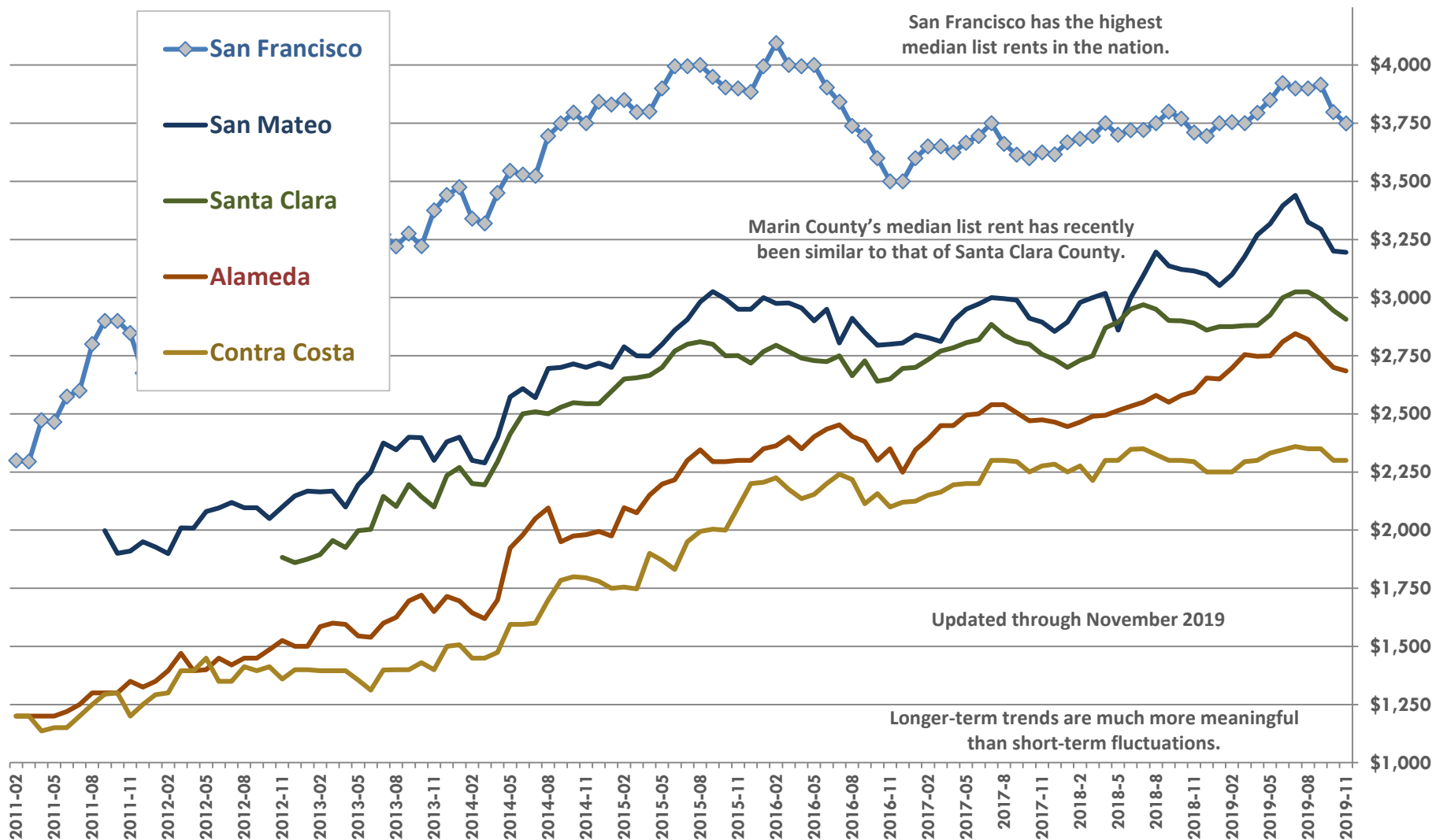
2018 preliminary measurements: 20% downpayment on median-price existing single family dwelling at prevailing loan rates; principal & interest cannot equal more than 25% of median family income. Index methodology: www.nar.realtor/topics/housing-affordability-index



Estimated Median List Apartment Rents

Bay Area Counties since 2011

Data per Zillow Research, 5+ unit buildings through November 2019



Per Zillow rental data by month: <https://www.zillow.com/research/data/#rental-data>. Data from sources deemed reliable, but may contain errors and subject to revision. All numbers to be considered approximate.



Household, Federal, Corporate & International Debt Trends

January 2020 Review

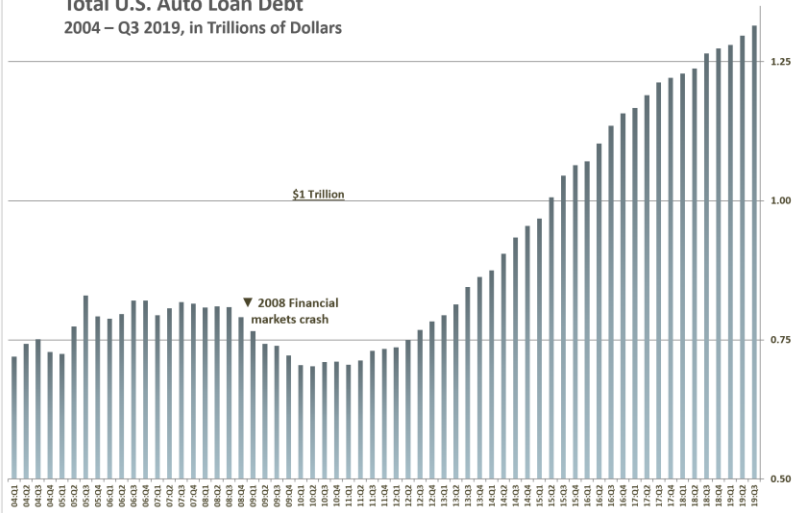
Throughout the world, debt has increased to new heights in recent years, typically surging past previous peaks seen prior to the 2008 financial markets crash. However, due to the large drop in interest rates since then, the cost of servicing this debt is much lower than it was at that time. Low rates have encouraged consumers, companies and governments around the world to take on more debt, and for investors searching for yield to purchase debt of lower quality and more risk. Debt that must be serviced, and typically paid back at some point.

Interest rates are currently close to historic lows, but rates can be subject to sudden, dramatic changes, affecting the cost of servicing. Internationally, the currency upon which a particular debt is based can also be subject to such changes.

Debt and debt defaults often play a very large role in economic crises, acting as precipitating, destabilizing and/or heightening factors, as well as significantly limiting the ability of indebted parties – whether individual, corporate or governmental entities – to respond effectively to ameliorate such crises. At times of such crises, the collateral upon which debt was extended in the first place (stocks, homes and other assets) can decline rapidly in value, putting the debtor “under water,” i.e. the sale of the collateral cannot cover the debt. The subprime-financing foreclosure crisis is a classic example.

For all these reasons, increasing levels of debt – and the inability to service or pay back the debt – are often harbingers of a positive economic upcycle moving toward a negative down-cycle, whether characterized by a market crash, recession or downturn of lesser scale.

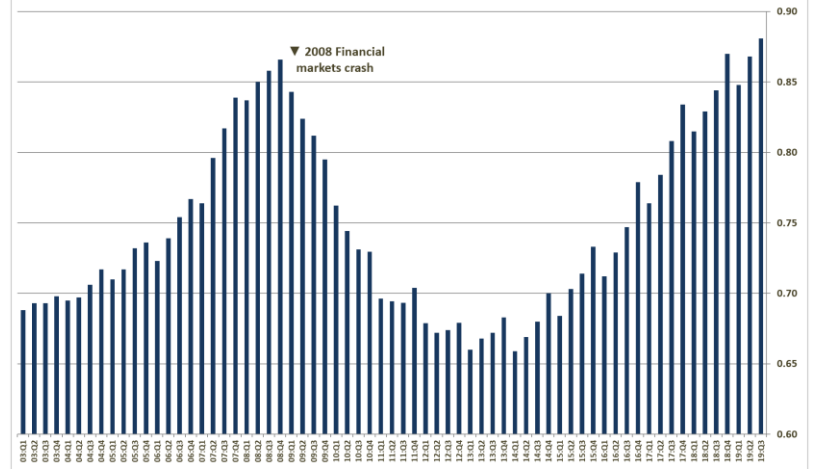
Total U.S. Auto Loan Debt 2004 – Q3 2019, in Trillions of Dollars



Data as published by the Federal Reserve Bank of New York. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

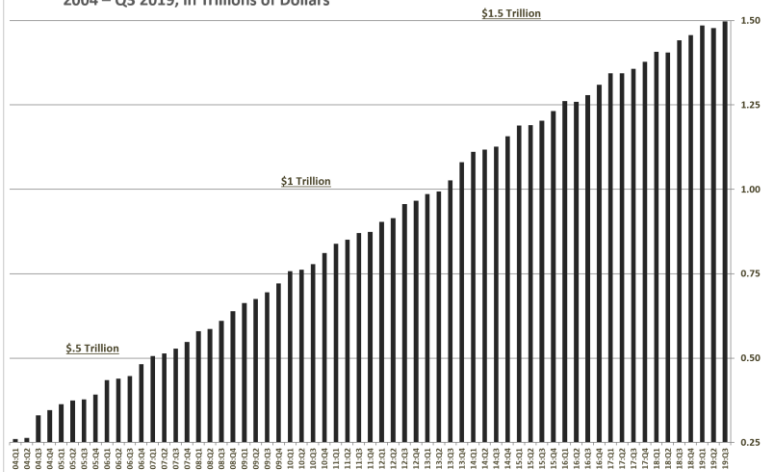
Total U.S. Credit Card Debt 2003 – Q3 2019, in Trillions of Dollars



Data as published by the Federal Reserve Bank of New York. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

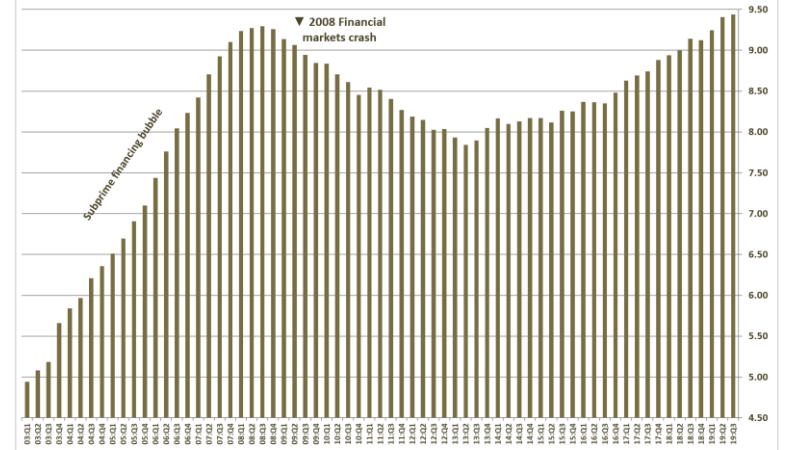
Total U.S. Student Loan Debt 2004 – Q3 2019, in Trillions of Dollars



Data as published by the Federal Reserve Bank of New York. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

Total U.S. Mortgage Debt 2003 – Q3 2019, in Trillions of Dollars

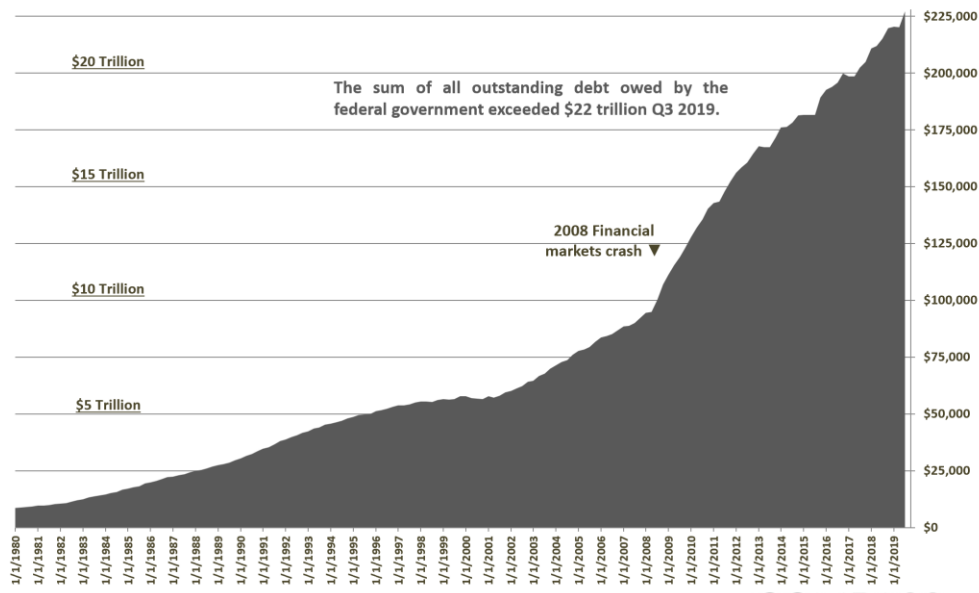


Data as published by the Federal Reserve Bank of New York. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

COMPASS

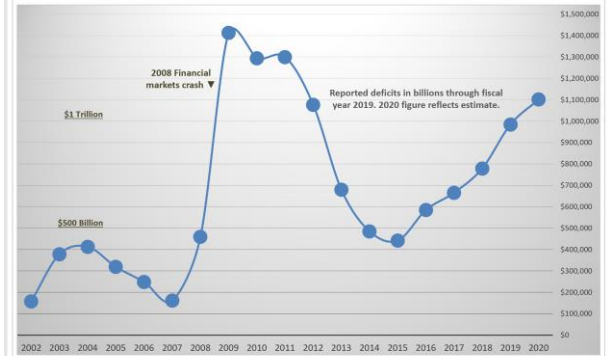
Federal Debt: Total Public Debt 1980 – Q3 2019, in Millions of Dollars



Data as published by the Federal Reserve Bank of St. Louis. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

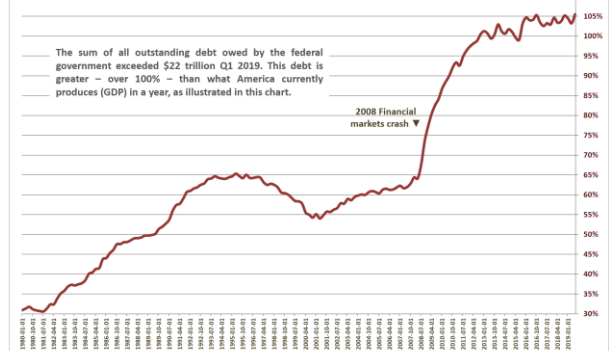
U.S. Government Deficit since 2002, in Billions of Dollars



Data per Federal Reserve Bank of St. Louis, but may contain errors and subject to revision.

COMPASS

Federal Debt: Total Public Debt as Percentage of Gross Domestic Product, 1980 – Q3 2019

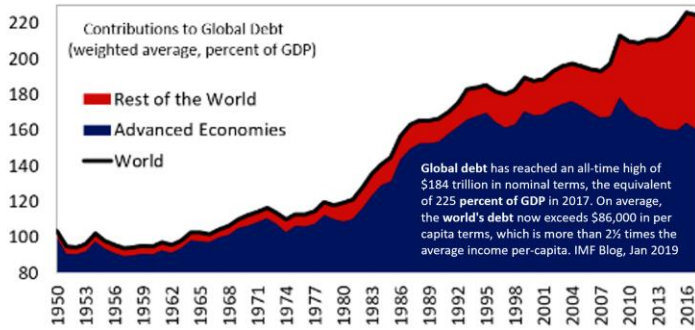


Data as published by the Federal Reserve Bank of St. Louis. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

COMPASS

Global Debt as Percentage of GDP Since 1950, Advanced Economies & Rest of World

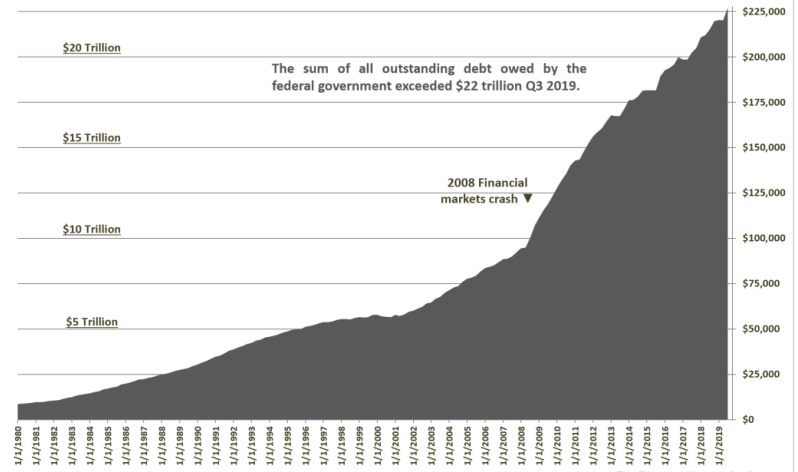


Sources: Global Debt Database and authors' calculations.

Chart by International Monetary Fund, "New Data on Global Debt" By [Samba Mbaye](#) and [Marialuz Moreno Badia](#), January 2, 2019, IMF Blog

COMPASS

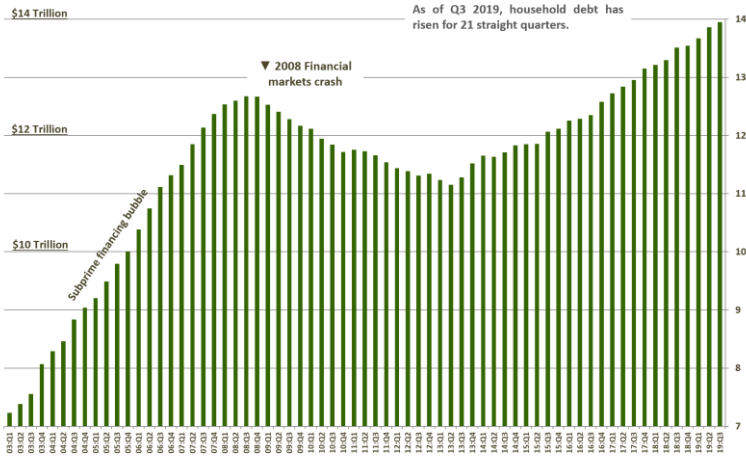
Federal Debt: Total Public Debt 1980 – Q3 2019, in Millions of Dollars



Data as published by the Federal Reserve Bank of St. Louis. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

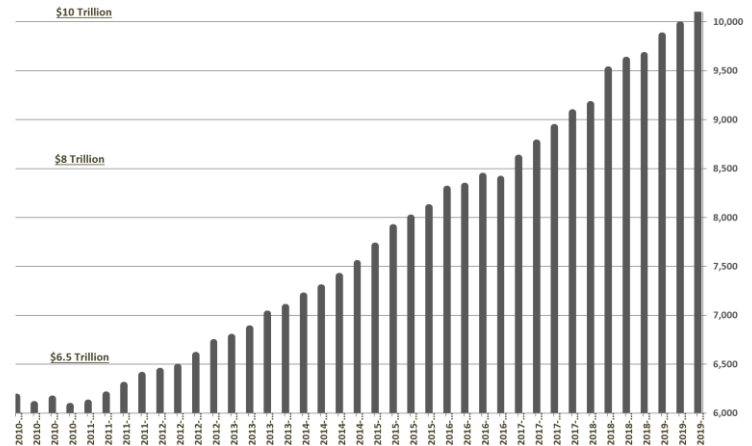
Total U.S. Household Debt 2003 – Q3 2019, in Trillions of Dollars



Data as published by the Federal Reserve Bank of St. Louis. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

COMPASS

U.S. Nonfinancial Corporate Business; Debt Securities & Loans 2010 – Q3 2019, Liability in Millions of Dollars



Data as published by the Federal Reserve Bank of St. Louis. Data from sources deemed reliable but may contain errors and subject to revision. All numbers should be considered approximate.

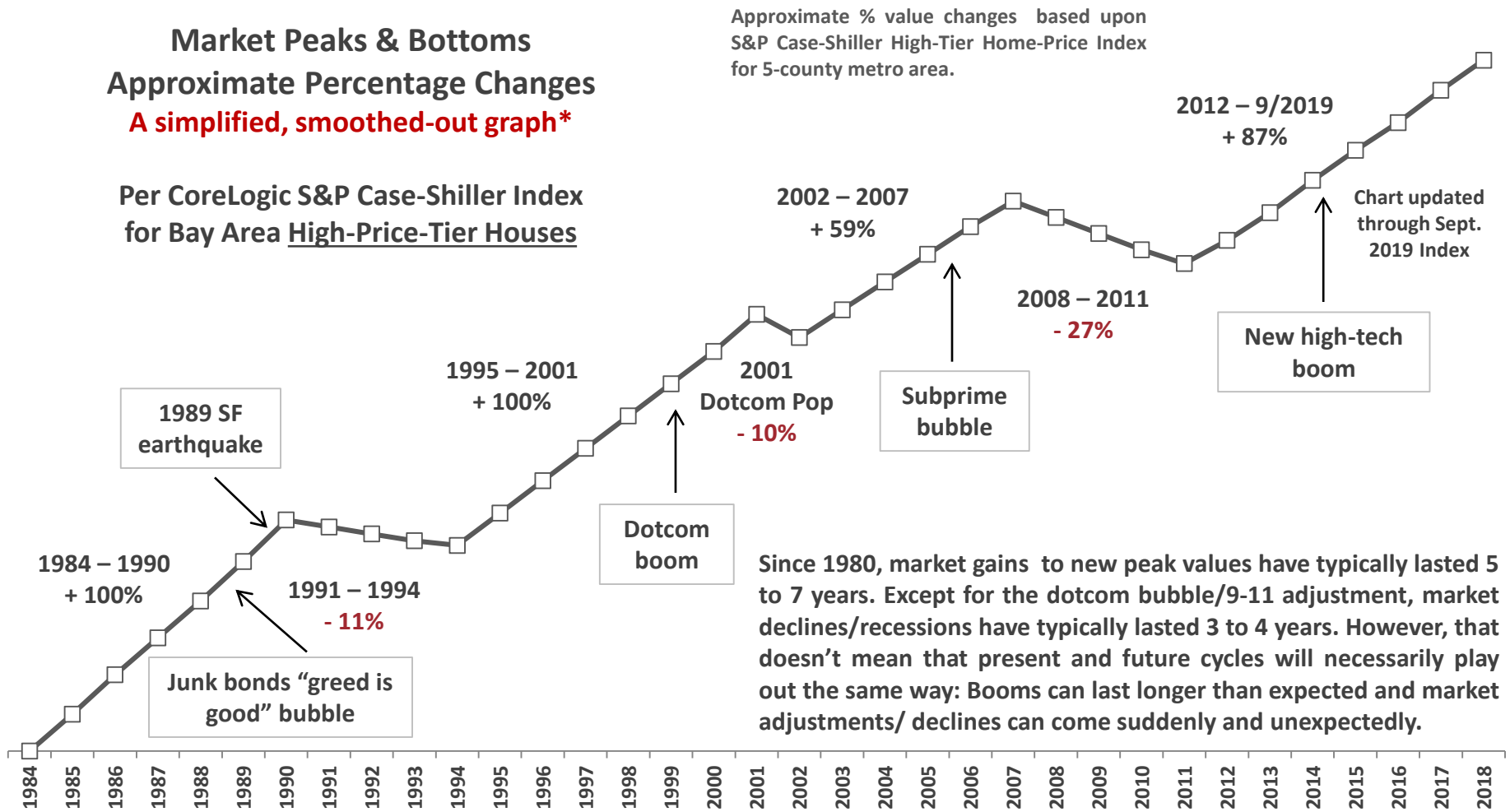
COMPASS

COMPASS

San Francisco Bay Area Real Estate Market Cycles

Home Price Increases & Declines, by Percentage, 1984 – Present

<https://my.spindices.com/index-family/real-estate/sp-corelogic-case-shiller>

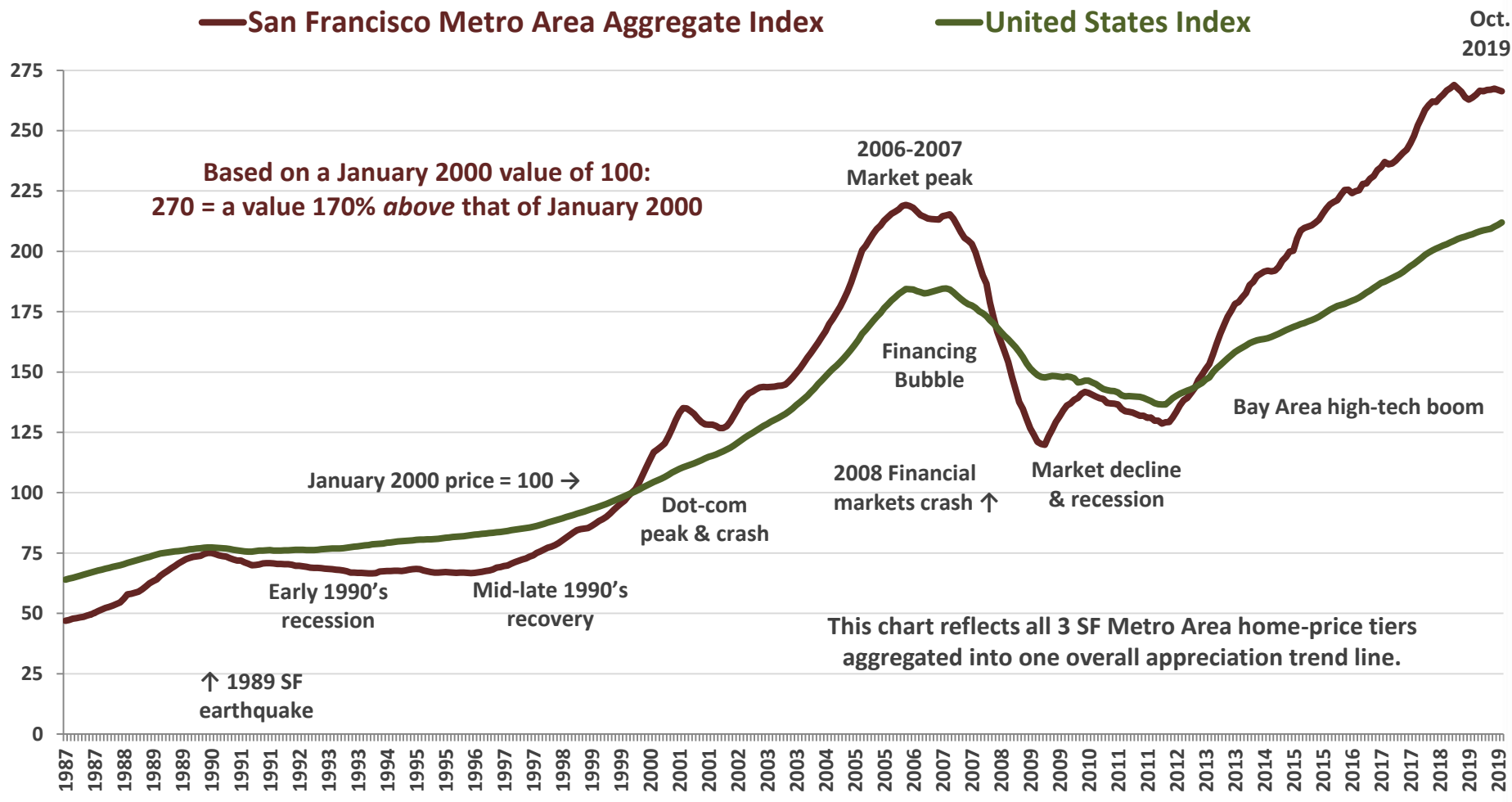


* The years between market peaks and bottoms are not accurately represented, but entered as straight lines between high and low points to illustrate percentage changes over time. Shorter-term fluctuations are not reflected on this chart. All numbers are approximate and subject to revision.

CoreLogic S&P Case-Shiller Home Price Index: Appreciation since 1987

United States vs. San Francisco Metro-Area (Overall, Aggregate Index)

Seasonally adjusted



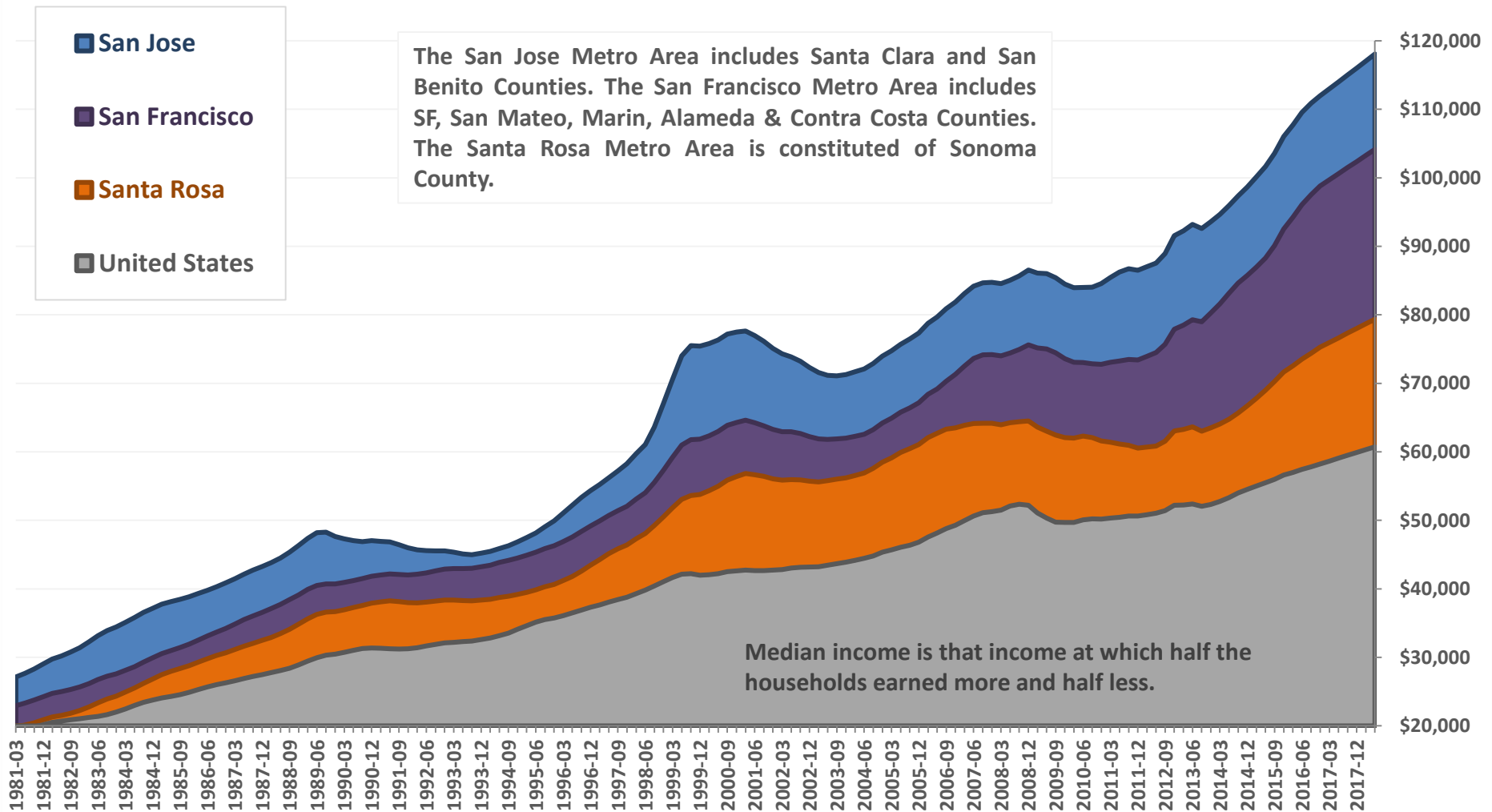
*The C-S Index 5-county San Francisco Metro Statistical Area includes San Francisco, Marin, San Mateo, Alameda and Contra Costa counties. The Index is published 2 months after the month specified and reflects a 3-month rolling average. The chart reflects all price segments in the metro area, and San Francisco County is only a small percentage of overall metro area house sales.
<https://my.spindices.com/index-family/real-estate/sp-corelogic-case-shiller>



Median Household Income

1981 – 2018, by Metro Area (which are larger than the cities themselves)

Per Zillow Research

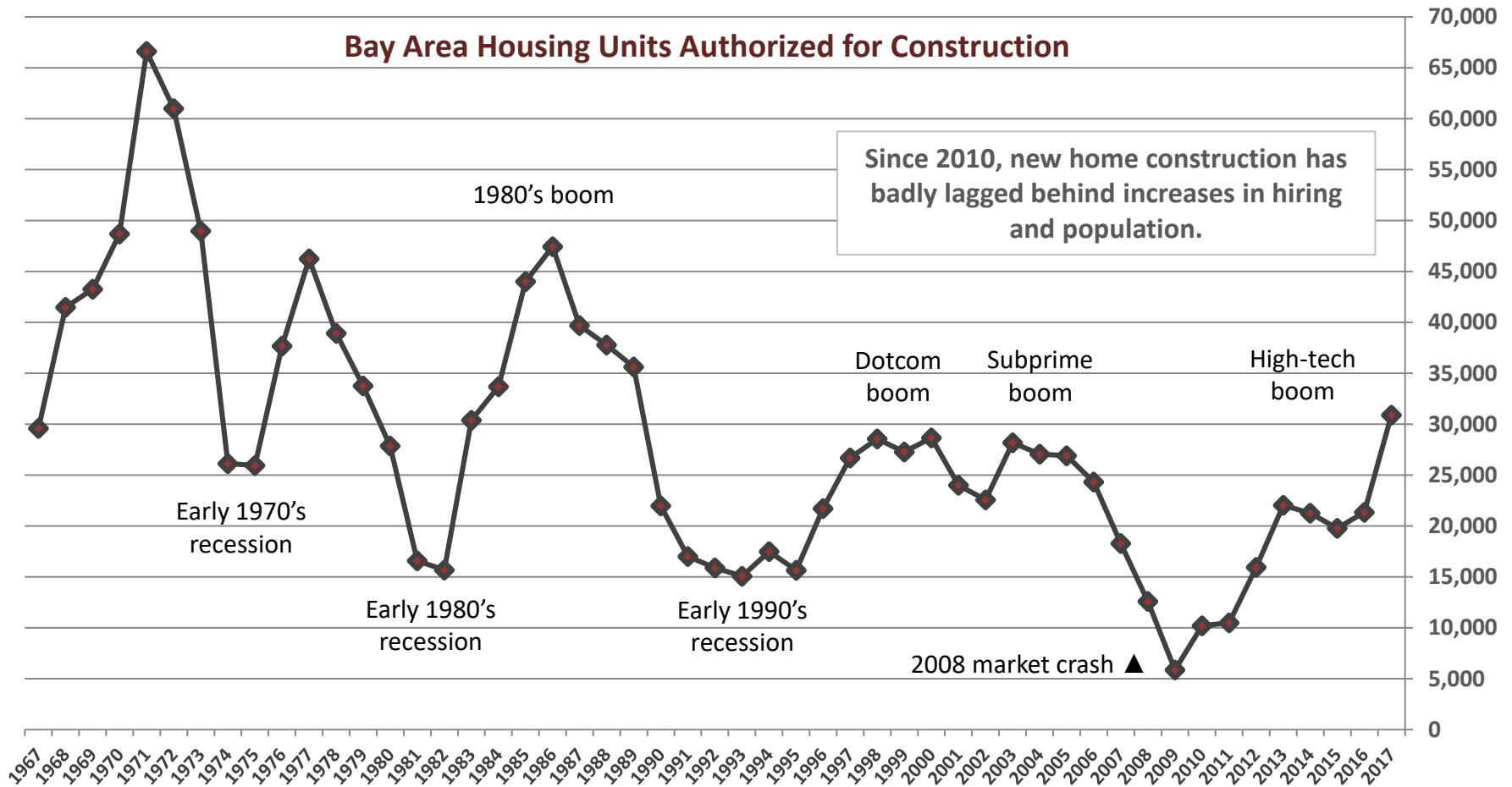


Data from Zillow Research: <https://www.zillow.com/research/data/>. Analysis may contain errors and subject to revision. All numbers to be considered approximate.

Bay Area New Home Construction

Housing Units Permitted by Year since 1967

Bay Area Housing Units Authorized for Construction

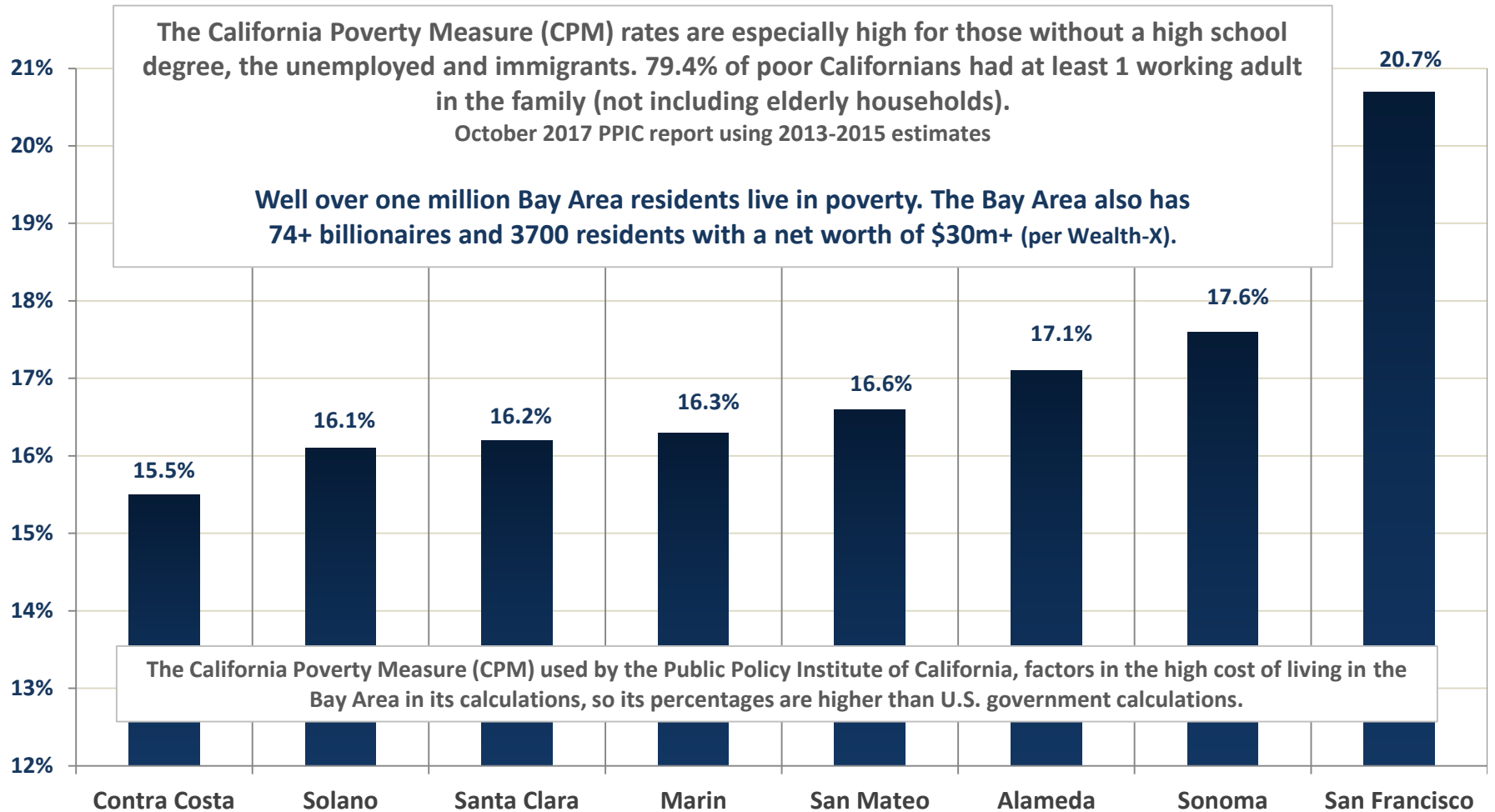


Data the Metropolitan Transportation Commission "Vital Signs," 1967-2015, then from the Construction Industry Research Board, 2016 to present. Data from sources deemed reliable, but may contain errors and subject to revision. All numbers approximate.

Poverty in the Bay Area

Percentage of Residents Living in Poverty

Public Policy Institute of CA, CPM estimates, 2013-2015



These analyses were performed in good faith with data derived from sources deemed reliable, but they may contain errors and are subject to revision. All numbers should be considered approximate.

These analyses were made in good faith with data from sources deemed reliable, but may contain errors and are subject to revision. It is not our intent to convince you of a particular position, but to attempt to provide straightforward data and analysis, to help you make your own informed decisions. Shifts in financial cycles are extremely difficult to predict: Booms can go on much longer than expected or get second winds; rational economic growth can shift into irrational exuberance; local, national or international economic and political events can arise suddenly to cause major economic adjustments. Though highly experienced in Bay Area real estate markets, we are not economists, nor can we predict the future.

Compass is a real estate broker licensed by the State of California, DRE 01527235. Equal Housing Opportunity. This report has been prepared solely for information purposes. The information herein is based on or derived from information generally available to the public and/or from sources believed to be reliable. No representation or warranty can be given with respect to the accuracy or completeness of the information. Compass disclaims any and all liability relating to this report, including without limitation any express or implied representations or warranties for statements contained in, and omissions from, the report. Nothing contained herein is intended to be or should be read as any regulatory, legal, tax, accounting or other advice and Compass does not provide such advice. All opinions are subject to change without notice. Compass makes no representation regarding the accuracy of any statements regarding any references to the laws, statutes or regulations of any state are those of the author(s). Past performance is no guarantee of future results.