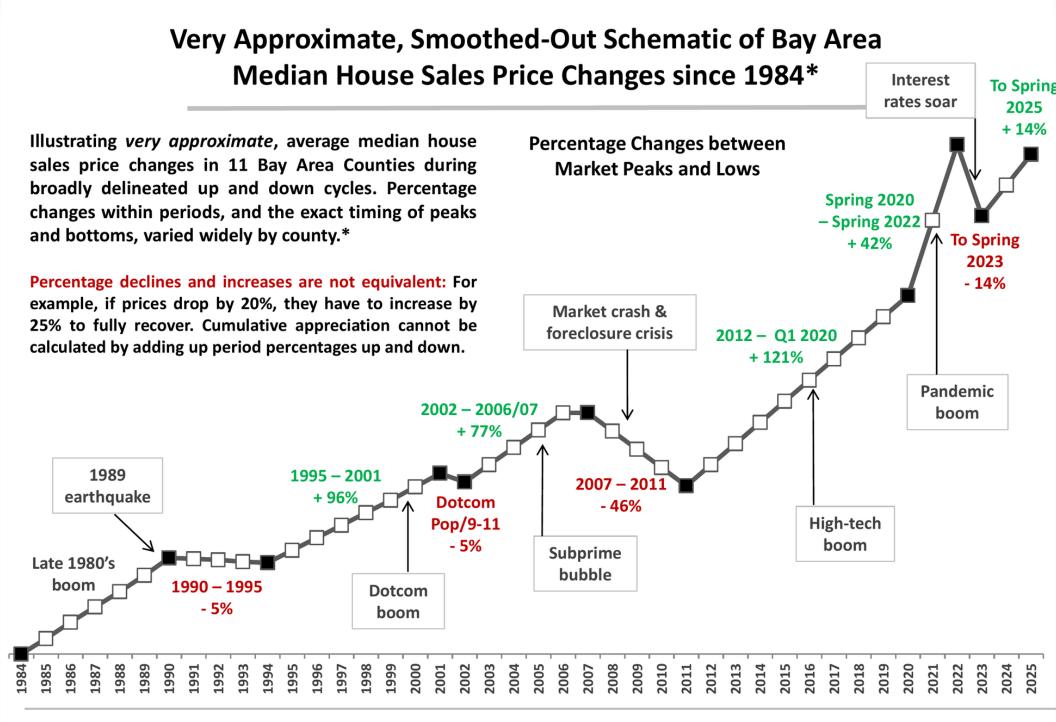


San Francisco Bay Area Home Price Appreciation & Market Cycles since 1990

Market booms, crashes, recessions, recoveries & corrections over 35 years

Important notes and caveats regarding the context and methodology of this report are detailed on the last page. All calculations to be considered very approximate, good-faith estimates. How this report applies to any particular home is unknown without a specific comparative market analysis.



^{*}For 11 Bay Area Counties. Sales data per CA Association of Realtors or NorCal Regional MLS. Years between market peaks and bottoms *are not accurately represented*, but entered as straight lines: *Shorter-term fluctuations are not reflected*. Adjusted for larger anomalies when identified. Percentages are very approximate, good-faith estimates.



Financial and real estate markets have run in cycles for at least hundreds of years. Though varying in their details, causes and effects, there are many similarities in how they play out, providing greater context to how markets work over time.

Many economic, political, social, demographic and environmental factors play roles in real estate markets, including interest rates, inflation, financial markets, new wealth creation (or destruction), housing affordability, employment, population migration, aging, governmental economic interventions, national and international crises, irrational exuberance, risk management, tax law, debt, consumer confidence, natural disasters, and, as we have recently seen, even pandemics.

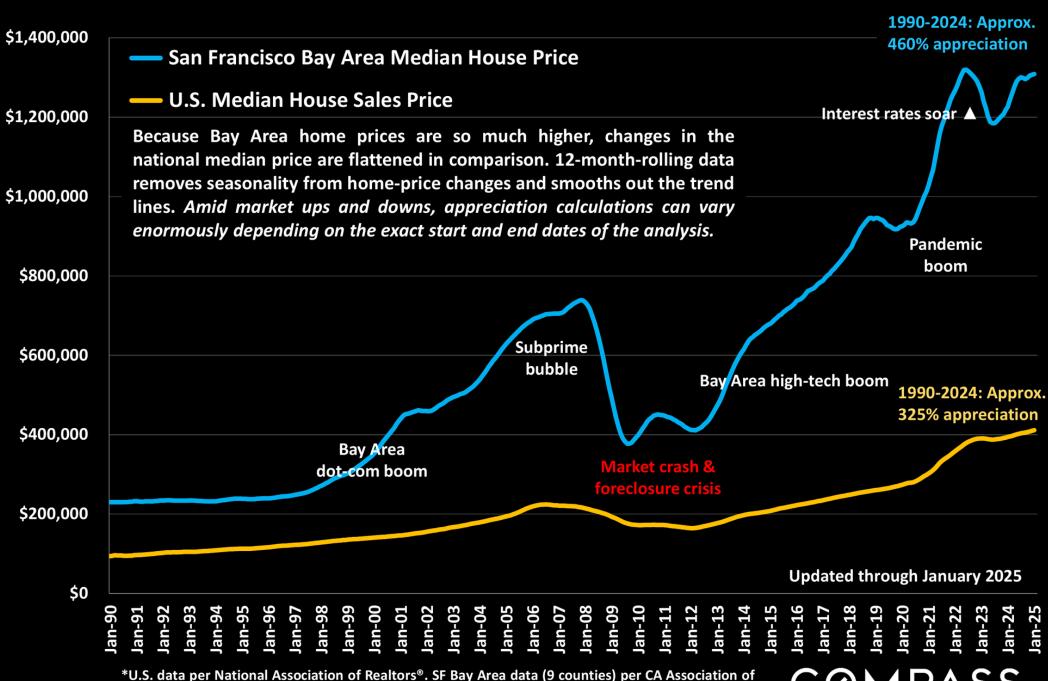
Human psychology also plays a defining role, with optimism, confidence, and often, ultimately, "irrational exuberance" fueling upcycles. ("The world is different now. The old rules don't apply, and these boom times will continue forever.") Conversely, fear, doubt and pessimism play a role in the shift to, and then underpin down-cycles. ("The housing market probably won't recover in our lifetimes.") Whatever the phase of the cycle, people tend to believe it will last forever, but, of course, the nature of cycles is to keep turning.

It is extremely difficult to predict when different parts of a cycle will begin or end. Boom times, even periods of "irrational exuberance," can go on much longer than expected, or get second winds, with huge jumps in values. On the other hand, negative shocks can appear with startling suddenness, often triggered by unexpected events or factors that affect a variety of economic fundamentals, hammer confidence, and cause shifts into slowdowns, "market corrections" or recessions of varying degrees and duration. These negative adjustments can feel like a switch being flipped, the slow deflation of a tire with a small puncture, or traffic going 120 miles per hour suddenly decelerating. Prices can flatten, adjust 5% to 10%, or, as with the subprime bubble, crash. (The subprime bubble and crash was caused by very unusual circumstances, as discussed later in this report.)

Note that different Bay Area markets often behaved very differently during the various cycles, depending on the factors at play. For example, San Francisco was hit hardest after the 1989 earthquake and during the early 1990's recession; then saw one of the highest appreciation rates during the dotcom boom – and a bigger price drop after it popped. It had a moderate-sized subprime bubble and crash; very high appreciation during the high-tech boom; lower appreciation *compared* to other counties during the pandemic boom, a larger sales price decline after the mid-2022 market correction, and a smaller rebound 2023-2025. In real estate, the devil is always in the details.

Median Single-Family-Home Sales Prices

San Francisco Bay Area vs. U.S., 12-Month-Rolling Average, since 1990*

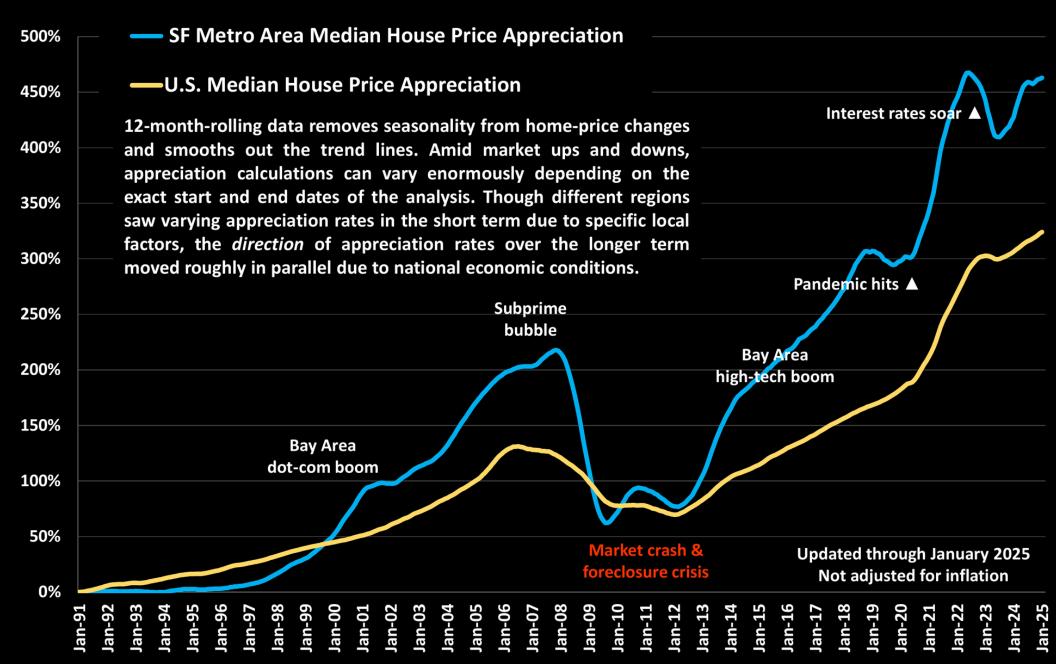


*U.S. data per National Association of Realtors®. SF Bay Area data (9 counties) per CA Association of Realtors. All rights reserved. Existing single-family home sales, not seasonally adjusted. <u>All numbers</u> approximate. Data from sources deemed reliable but may contain errors and subject to revision.



Median Single-Family-Home Sales Price Appreciation

San Francisco Bay Area vs. U.S., Percentage Increase since 1990*



*Using 12-month-rolling average of month median sales prices: U.S. data per National Association of Realtors®. SF Bay Area data (9 counties) per CA Association of Realtors. Existing single-family home sales, not seasonally adjusted. All numbers approximate. Data from sources deemed reliable but may contain errors and subject to revision.



Bay Area Home Price Appreciation – Long-Term Overview Monthly Median House Sales Prices since 1990, 3-Month Rolling Average

2007

peak

Decline in loan standards

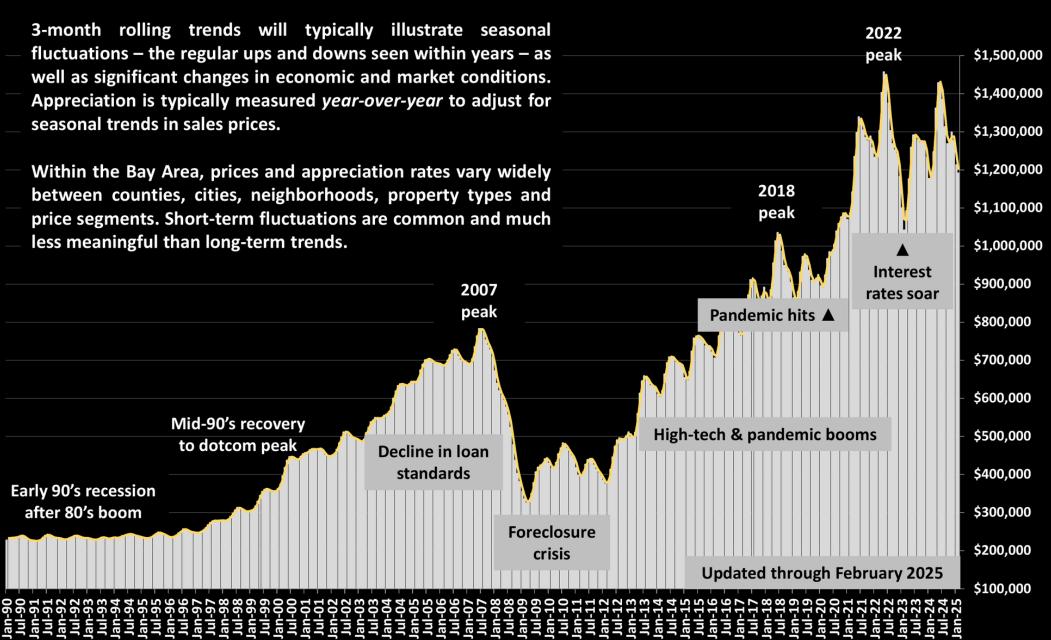
3-month rolling trends will typically illustrate seasonal fluctuations - the regular ups and downs seen within years - as well as significant changes in economic and market conditions. Appreciation is typically measured year-over-year to adjust for seasonal trends in sales prices.

Within the Bay Area, prices and appreciation rates vary widely between counties, cities, neighborhoods, property types and price segments. Short-term fluctuations are common and much less meaningful than long-term trends.

Mid-90's recovery

to dotcom peak

Early 90's recession after 80's boom

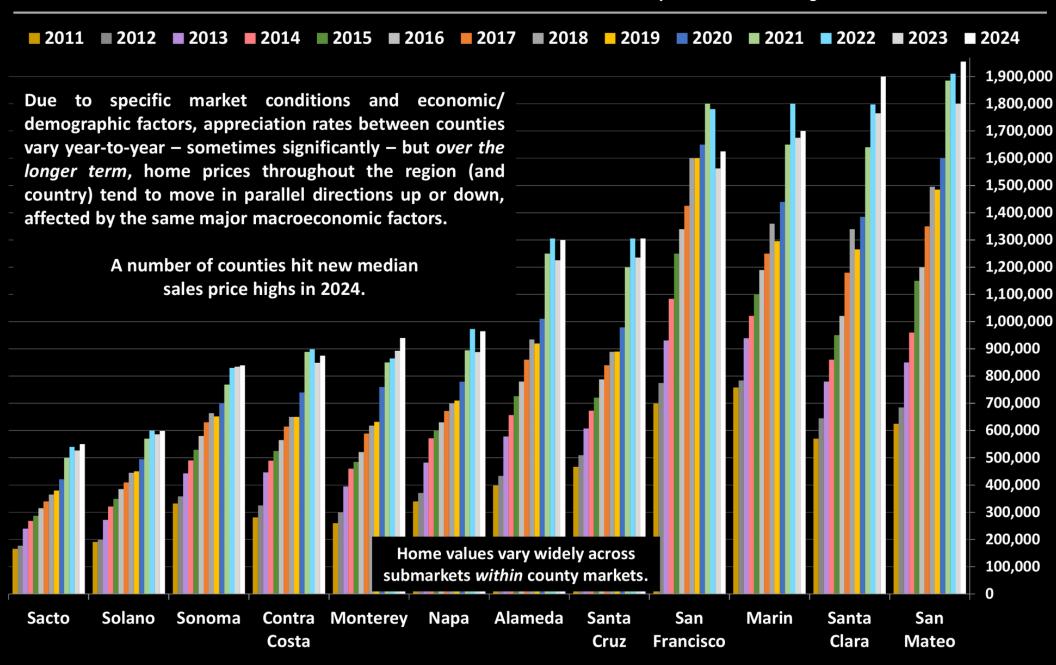


Each point reflects a 3 month rolling average of monthly median sales prices for existing houses, 9 Bay Area Counties, per CA Assoc. of Realtors. 2-period moving trend line. Analysis may contain errors and subject to revision. All numbers approximate, and may change with late-reported sales.



Annual Median House Sales Prices by Bay Area County + Sacramento, 2011 – 2024*

Median sales price is that price at which half the sales occurred for more and half for less. It can be affected by factors besides changes in fair market value.

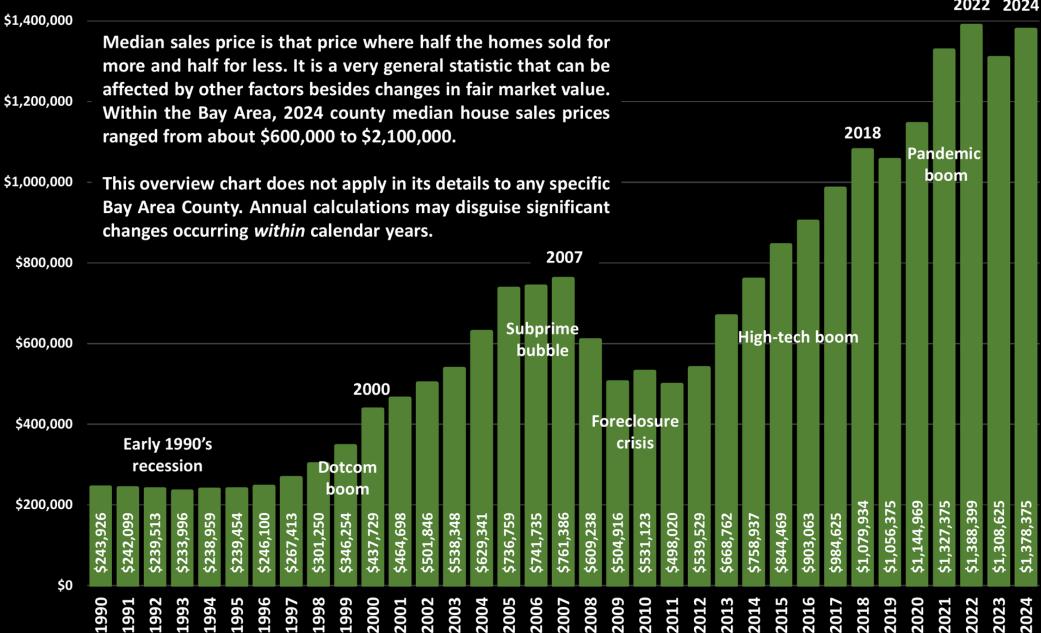


*Sales reported to MLS, per the CA Association of Realtors, or NorCal MLS Alliance, per Infosparks. Data from sources deemed reliable but may contain errors and subject to revision. All numbers approximate. Different data sources sometimes calculate median house sales prices using varying methodologies.



Bay Area Median Home Price Trends

Avg. Annual Median HOUSE Sales Prices, 1990 – Present*



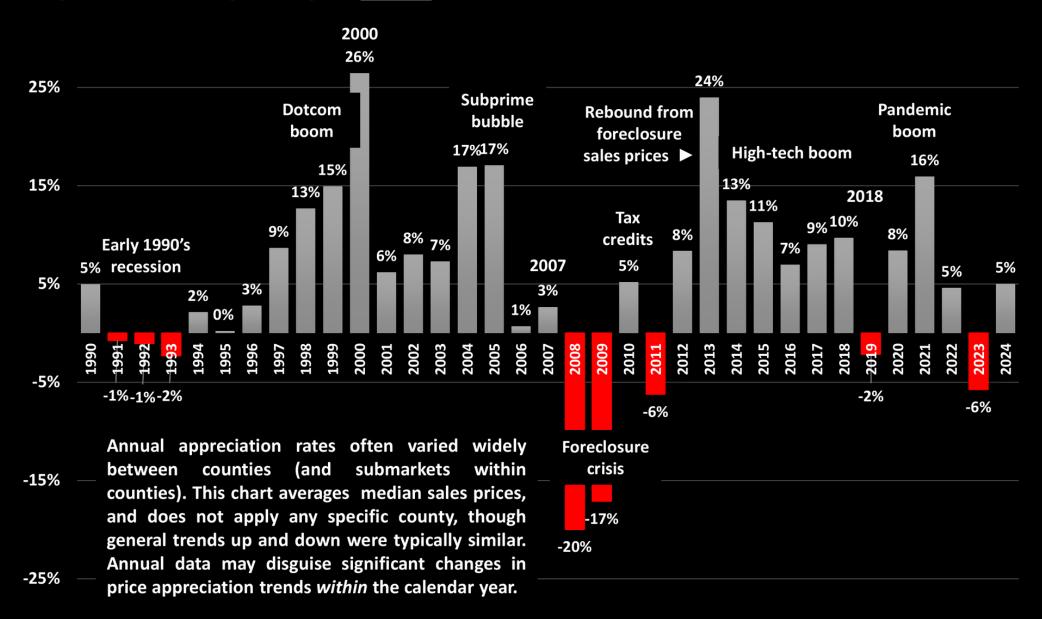
^{*}Sales reported to MLS: Average of annual median house sales prices for 8 Bay Area Counties, per CA Association of Realtors historical survey. All numbers approximate, may contain errors and subject to revision.



2022 2024

Bay Area Year-over-Year Appreciation Rates since 1990

Avg. Y-o-Y Percentage Change in <u>Annual</u> Median HOUSE Sales Price*



*Sales reported to MLS: <u>Average</u> of annual year-over-year median house sales prices for 8 Bay Area Counties, per CA Association of Realtors historical survey. All numbers approximate – multi-county appreciation can be calculated in different ways – may contain errors and subject to revision. Past performance is not a guarantee of future results.



After the Early 1990's Recession: Recovery & Dotcom Boom

1st chart following: From 1990 – following the late 1980's stock market peak, the S&L/junk bond crisis, and 1989 earthquake – through the recession to the mid-1990's, Bay Area real estate markets generally remained weak, with prices typically declining 5% to 11% within the period.

2nd chart: In the middle of the decade, markets began to recover, with home prices subsequently accelerating rapidly during the dotcom boom. Once the dotcom boom got going, San Francisco and Santa Clara Counties, the centers of the phenomenon, saw the highest appreciation rates. Adjacent counties saw lower, though still substantial increases, with rates in the next circle of counties stepping down further. The Bay Area generally saw appreciation percentages peak dramatically in year 2000, the height of the dotcom bubble. National home-price appreciation during this period was considerably lower than in the Bay Area.

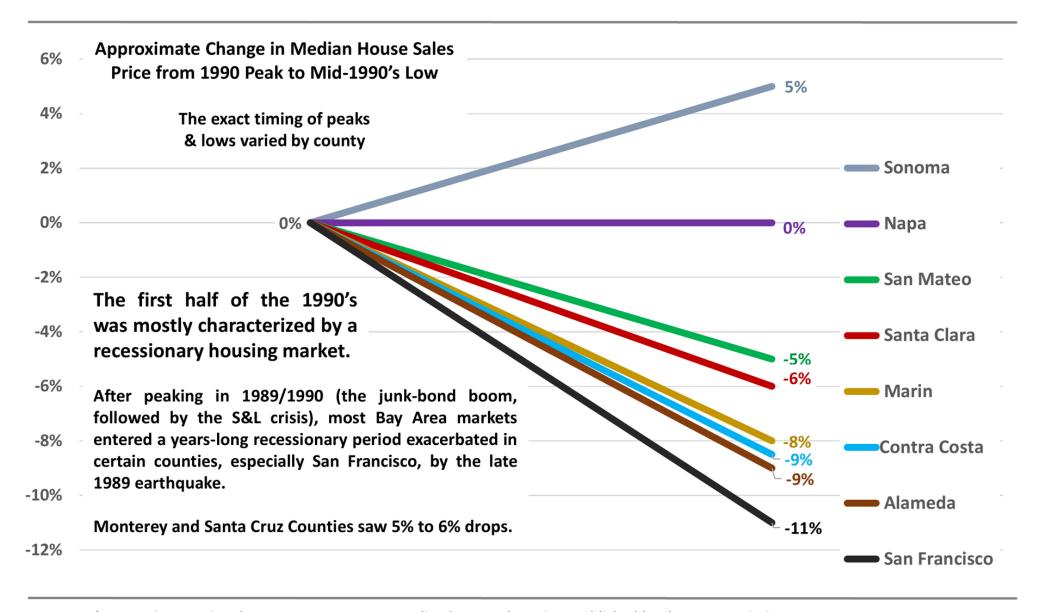
3rd chart: When dotcom hysteria collapsed and the Nasdaq crashed, only the inner Bay Area Counties – SF, San Mateo and Santa Clara, and those adjacent to them – saw significant (though relatively short-lived) median price declines, while outer counties were generally unaffected. According to the Case-Shiller Home Price Index for the multi-county San Francisco Metro Area, the dotcom collapse affected high-price home markets the most (-11%), low-priced homes not at all (+5%), and the mid-price segment somewhere in between (-5%). More affluent homeowners – also tending to be concentrated in inner Bay Area Counties – were most affected: Higher-price home markets are typically much more sensitive to negative changes or uncertainty in financial markets. After 9/11, the Fed intervened to lower interest rates and support the economy, and the downturn passed, gradually transitioning into the subprime bubble.

Real estate markets can be affected, sometimes very suddenly and dramatically, by a wide variety of often volatile economic, social, political and even environmental factors.



1990 to 1994/95 Home Price Changes

Market Peak/Bay Area Earthquake to Mid-Nineties Low, Selected Counties*

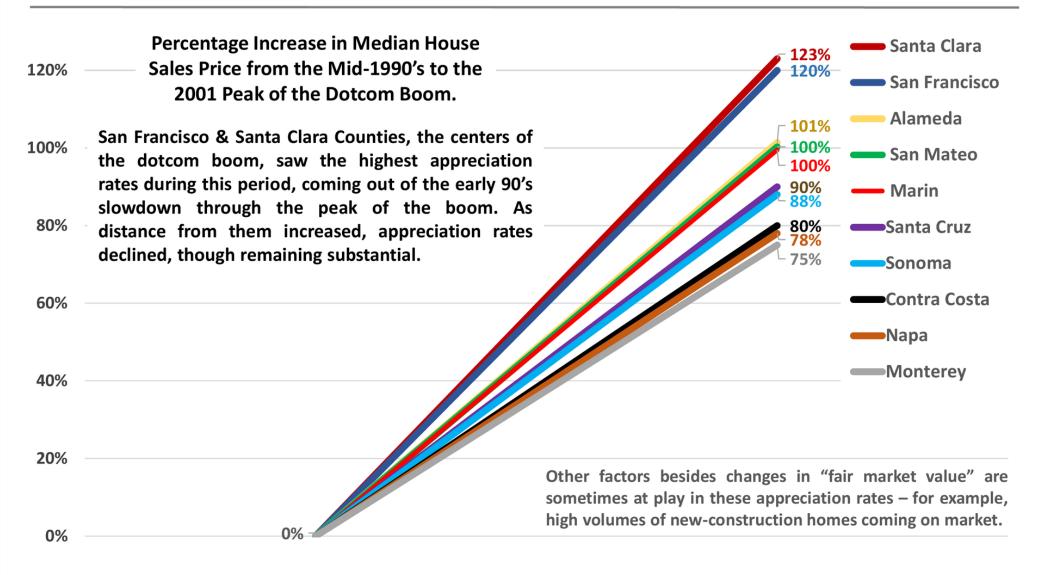


^{*} Approximate price change percentages per median house sales prices published by the CA Association of Realtors or NorCal MLS Alliance, or using Federal Reserve Bank appreciation calculations. Data from sources deemed reliable, but may contain errors and subject to revision. Percentages are very approximate, good-faith estimates. Median sales prices can be affected by other factors besides changes in fair market value, for example, by high volumes of new-construction homes coming on market.



Mid-1990's Recovery & Dotcom Boom

Home-Price Appreciation, Selected Counties through Early 2001

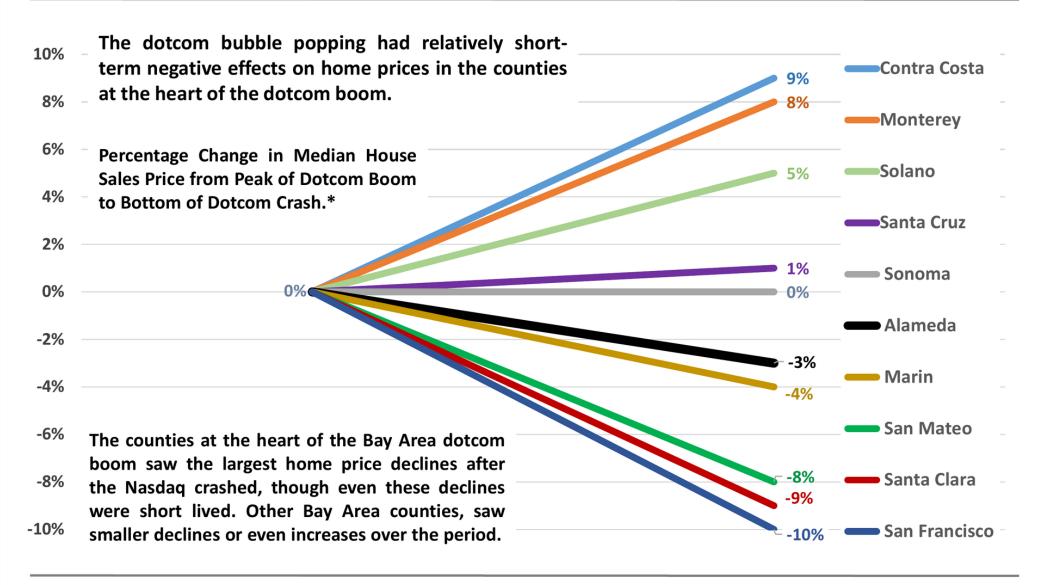


^{*}Bay Area County appreciation rates per median house sales prices published by the CA Association of Realtors, NorCal Regional MLS, or per Federal Reserve Bank calculations. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages to be considered very approximate good-faith estimates.



Dotcom Peak to Nasdaq Crash & 9/11

Percentage Median Price Changes, Early 2001 to Early 2002*



^{*}County appreciation rates per 4 to 6-month rolling median house sales prices published by the CA Association of Realtors. Price segment changes per the CoreLogic S&P Case-Shiller Home Price Index, which uses its own proprietary algorithm, not median sales prices. Comparing data from the two sources is not exactly apples to apples, but still broadly indicative of market differences. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages to be considered very approximate, good-faith estimates.



The Subprime Bubble

The subprime bubble and crash was an anomalous situation caused by loose monetary policy, predatory lending practices, the abandonment of underwriting standards, dishonest financial engineering on Wall Street, bond-rating fraud, and irrational exuberance in financial markets. This led tens of millions of borrowers to take on purchase and refinance loans unaffordable from the moment deceptive "teaser rates" expired. (We believe giving vast numbers of loans to unqualified borrowers, then using these junk loans to create the "A" rated securities which almost caused a worldwide great depression to be anomalous. Perhaps we're being naive.) When the music stopped, a crash in financial markets, and a tsunami of foreclosure and short sales created a fast, deep spiral of home-price declines.

The crisis resulted in large numbers of homes being sold for well below fair market value, which distorts the meaningfulness of median sales price changes during this period. Enormous median price declines occurred, sometimes exceeding 45% (see following charts). "Distressed" homes sold during the great recession at unnaturally depressed prices: These transactions typically entailed sellers, often banks, desperate to sell, and often entailed more hassle, time, uncertainty and risk for buyers. And the homes were often in significantly poorer condition than the norm.

Part of the definition for "fair market value" is that the *seller* is not in a situation of being forced to sell quickly. Sellers of foreclosures & short sales – whether homeowners or banks – were usually in urgent distress: This undermined fair market value and provided excellent deals for buyers and hedge funds.

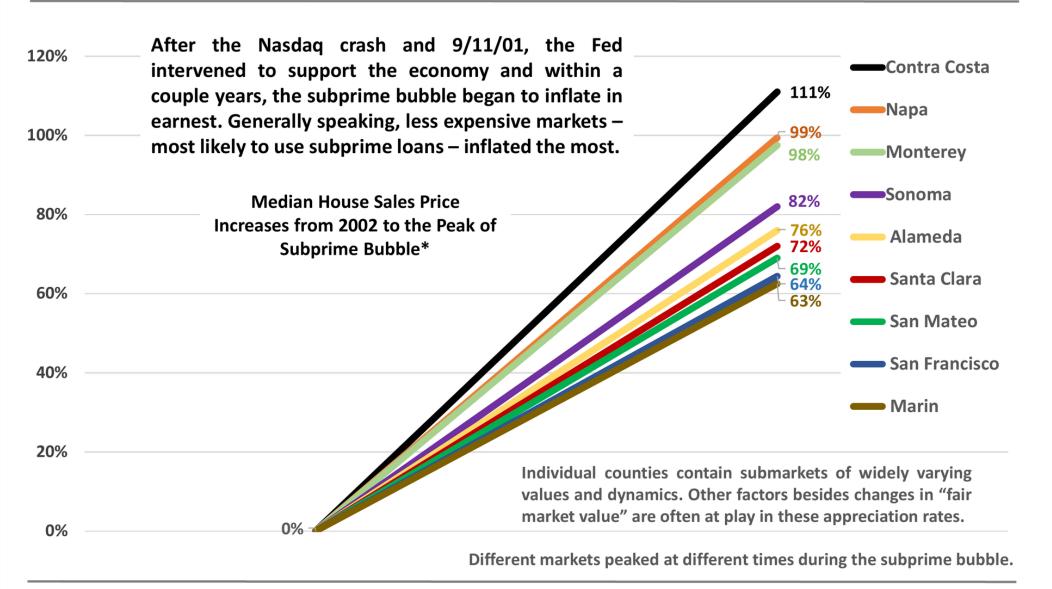
Less expensive, less affluent, less financially sophisticated markets were hammered worst by predatory lending and subprime loans, seeing huge bubbles and crashes. The most expensive/affluent markets saw much smaller bubbles, and smaller, but still significant price declines, probably caused more by the financial markets crash than by a relatively low number of distressed-home sales. Effects varied greatly by community within counties, generally correlating to cost/affluence: Prices in less expensive markets often dropped twice as much as in more affluent communities within the same county.

The next 2 charts look at this period first by price segment, then at the size of subprime-bubble price declines by county.



The Subprime Bubble

Home-Price Appreciation, Selected Counties, 2002 to 2006/2007



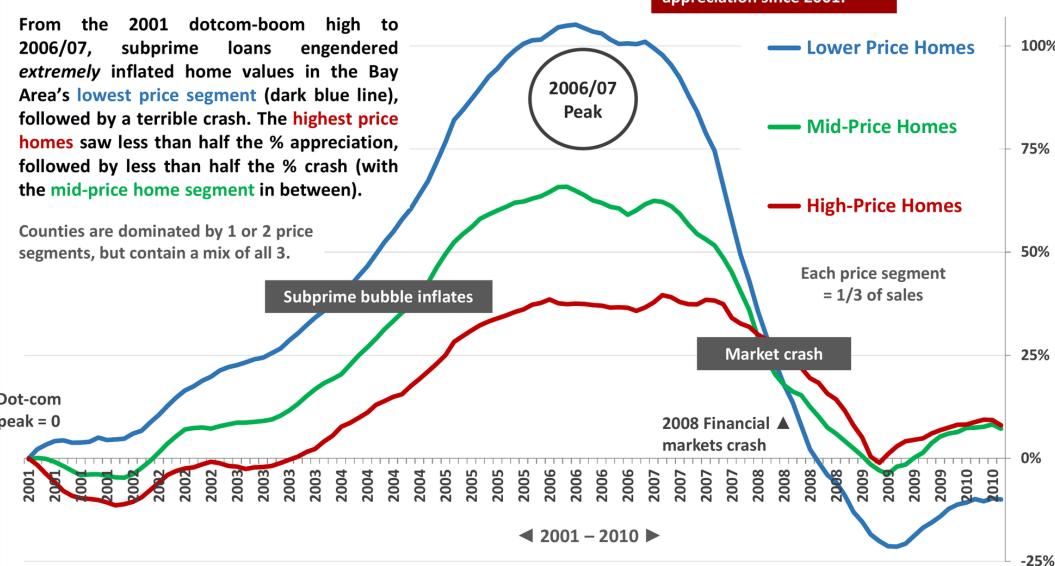
^{*}Bay Area County appreciation rates per 6-month rolling median house sales prices published by the CA Association of Realtors or NorCal Regional MLS. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages to be considered very approximate good-faith estimates: More indicators than precise measurements.



Subprime Bubble & Crash by Price Segment

San Francisco Bay Area Home-Price Changes *

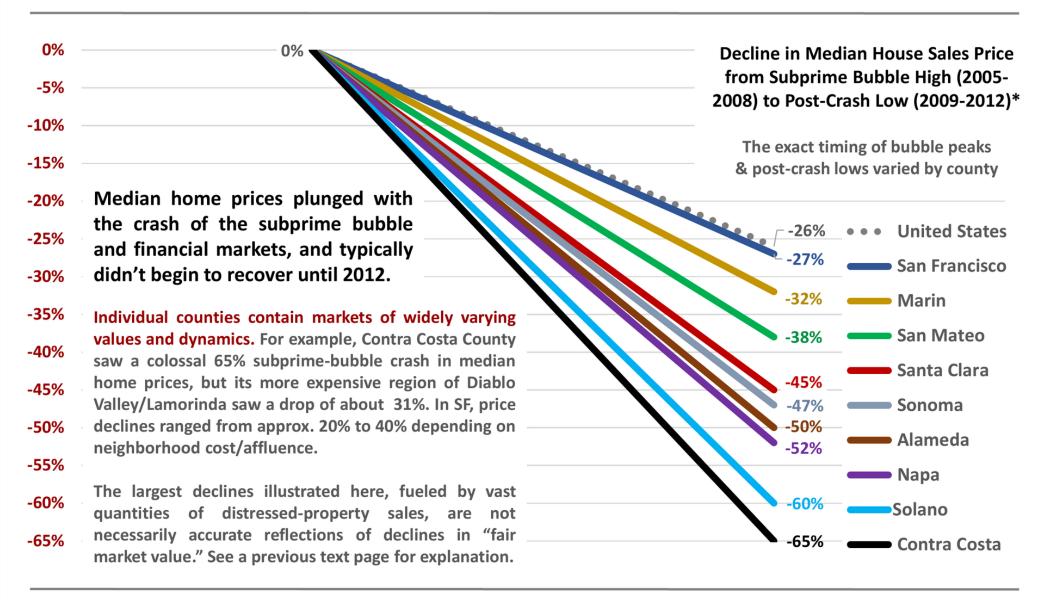
Based on 2001 dotcom peak reading of zero. 105% = 105% appreciation since 2001.*



^{*}Based on the CoreLogic S&P Case-Shiller Home Price Index for 5-county San Francisco Metro Statistical Area, though we believe the illustrated dynamics apply well to the entire Bay Area. C-S uses its own algorithm, not median sales prices, to calculate appreciation: https://www.spglobal.com/spdji/en/indices/indicators/sp-corelogic-case-shiller-san-francisco-home-price-nsa-index/#overview. Each price segment reflects 1/3 of home sales. Data from sources deemed reliable, but may contain errors and subject to revision. All numbers are approximate.

Subprime Bubble Crash by County

Home Price Declines, Subprime Bubble Peak to Post-Crash Low*



^{*}Bay Area County price change rates per 6-month rolling median house sales prices published by the CA Association of Realtors, or NorCal Regional MLS. National rate is per the CoreLogic S&P Case-Shiller Home Price Index, using its own proprietary algorithm (not median sales prices). Comparing data from the two sources is not exactly apples to apples, but broadly indicative of market changes. Data from sources deemed reliable, but may contain errors and subject to revision. Percentages to be considered approximate good-faith estimates.

Recovery from the Subprime/Financial Markets Crash

Generally speaking, Bay Area real estate markets began their sustained recovery from the effects of the subprime-loan bubble/financial market crash/distressed-property crisis in 2012. An unusual mix of factors subsequently came into play behind the highest rates of appreciation:

- 1) Whether the county was one of the three at the very heart of the high-tech, venture capital/start-up and IPO booms: San Francisco, San Mateo & Santa Clara
- 2) Whether the county was *adjacent* to (or across a bridge from) the 3 central counties, but offered significantly more affordable home prices: Alameda was the prime example
- 3) Whether the county was rebounding from a distinctly outsized crash following the subprime bubble, when their overall markets were utterly dominated by foreclosure & short sales: For example, Contra Costa (especially north county markets); Napa; Alameda (especially Oakland); Solano; Sonoma

Post 2012, the Bay Area became the center of another huge boom in high-tech, with a historic increase in new businesses, start-ups, venture capital and jobs (approximately 700,000) – many of them very well paid. An enormous increase in affluence occurred, and the population soared without a corresponding increase in new home construction, which put tremendous upward pressure on home prices.

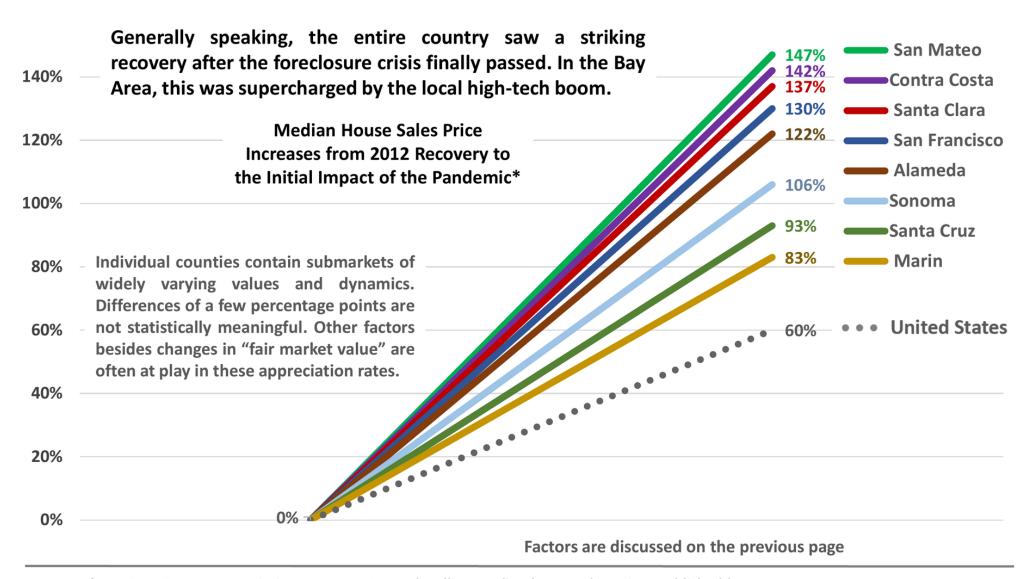
The next chart illustrates approximate home-price appreciation rates from 2012 to Spring 2020, when the pandemic struck – which unexpectedly supercharged the upcycle for another 2 years.

Note that broader upcycles often include market fluctuations and shorter-term slowdowns – not illustrated in this report – before the market recovers and moves forward again. This occurred in midlate 2015 (Chinese stock market crash, oil price crash, U.S. stock market volatility), and mid-late 2018 (rising interest rates, declining stock markets). The Fed intervened in 2019, and then again massively in 2020/2021 to reduce interest rates and fuel the economy – adding perhaps too much fuel for too long.



Rebound from the Subprime Crash & High-Tech Boom

Home-Price Appreciation, Selected Counties, 2012 to Spring 2020 (Pandemic)*



^{*}Bay Area County appreciation rates per 6-month rolling median house sales prices published by the CA Association of Realtors or the NorCal Regional MLS. National and metro-area condo rates are per the CoreLogic S&P Case-Shiller Home Price Index, using its own proprietary algorithm (not median sales prices). Data from sources deemed reliable, but may contain errors and subject to revision. All percentages to be considered approximate good-faith estimates.

The Pandemic Market

Since the pandemic struck in Spring 2020, Bay Area real estate markets have been affected by many diverse and shifting factors, some of them unique to the period. These include population-density and contagion issues; shelter-in-place and its varying effects on urban, suburban and rural environments; work-from-home upending the relationship between home location and workplace; trillions of dollars of free money issuing from state and federal governments; the Fed interventions causing the historic plunge in interest rates (through 2021); a renewed, pandemic boom in high-tech; an astounding surge in stock markets and household wealth (through 2021); the rollout of vaccines; infection rate surges; as well as other ecological, political, economic and social factors (fires, taxes, unemployment, family care, etc.).

These factors, as they applied in their various combinations to millions of households, prompted big changes in county-to-county migration; the comparative appeal of urban, suburban and rural locations; the desirability of different property types (houses, condos, apartments) and amenities (pools; yards, gardens and decks; home and lot size); a heightened attention to housing affordability between regions (now that many could work from anywhere); and surging luxury home and second-home sales. Waterfront homes, in particular, became highly sought after. Some changes have ebbed and flowed over the period.

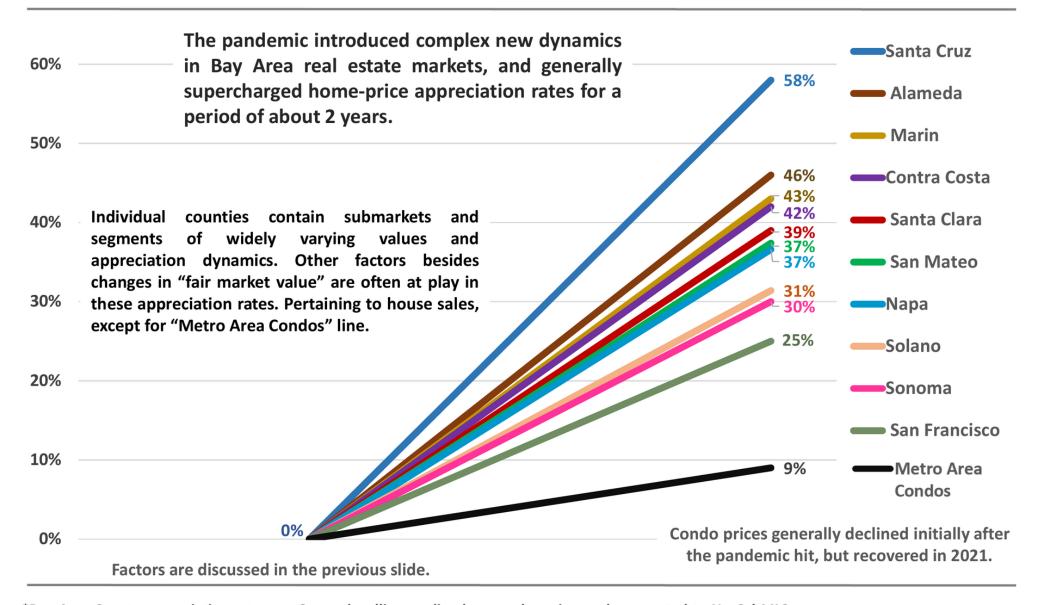
All this brought about striking changes in market dynamics and appreciation rates. Some of the larger trends were significant population movements from expensive, urban markets to suburban and rural areas. In the immediate aftermath of the pandemic, this migration precipitated a distinct weakening of rental and condo markets (which subsequently saw recoveries in 2021/2022). Some counties saw disproportionate increases in sales of larger, more expensive homes, a big factor in boosting median sales prices: This affects apples-to-apples comparisons of appreciation rates between counties.

The following chart illustrates approximate home-price appreciation rates from Spring 2020 to Spring 2022, i.e. to the peak of the pandemic boom. (A market correction began in late spring/early summer 2022.)

Real estate markets can be affected, sometimes very suddenly and dramatically, by a wide variety of often volatile economic, social, political, and even environmental factors.

The Pandemic Boom

Spring 2020 to Spring 2022 Appreciation Rates*



^{*}Bay Area County appreciation rates per 3-month rolling median house sales prices, sales reported to NorCal MLS Alliance, per Infosparks. SF metro-area condo rate is per CoreLogic S&P Case-Shiller Home Price Index, using its proprietary algorithm. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages are very approximate, good-faith estimates, and how they apply to any particular property is unknown.



Prices Hit New Highs in Spring 2022, But After Major Economic Changes, a Market Correction Occurred.

A Year Later, Another Recovery Began.

Bay Area pandemic-boom home markets through spring 2022 saw home-price gains to dramatic new highs. However, inflationary pressures then soared, interest rates doubled, stock markets experienced high volatility with significant declines, and consumer confidence plunged. The effects of these changes began filtering through to the market in late spring/early summer 2022 – as seen in steep declines in demand and sales volumes; and substantial increases in days-on-market and price reductions.

Buyer demand and market activity hit its post-correction low point at the end of 2022. Year-over-year median sales price declines generally hit their largest percentage drops in spring 2023, one year after the peak of the pandemic boom.

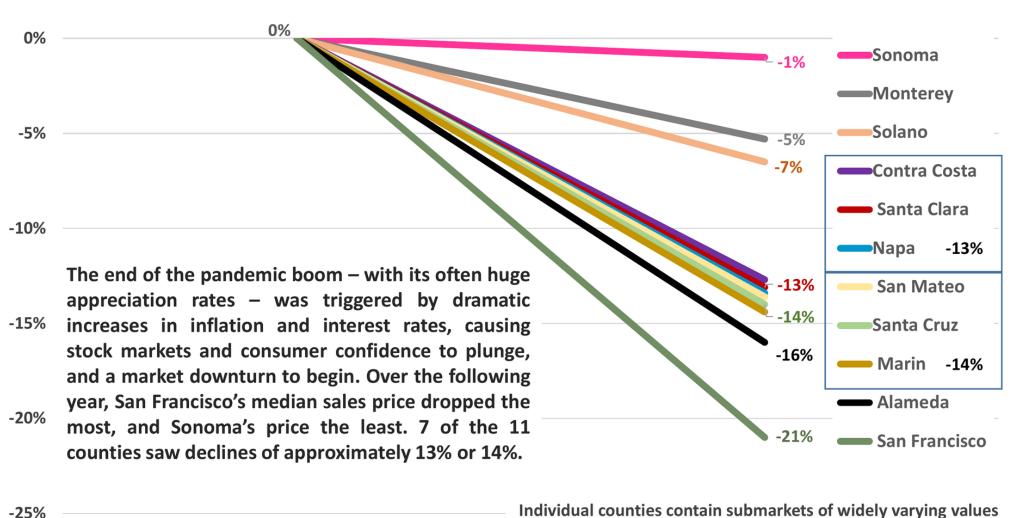
Then in the 4th quarter of 2023 – with positive changes in interest rates, stock markets and consumer confidence – repressed demand bounced back again to begin another recovery through spring 2024.

Real estate markets can be affected positively or negatively – sometimes very suddenly and dramatically – by a wide variety of often volatile economic, social, political and environmental factors.



Changing Economic Conditions Trigger a Market Correction

Spring 2022 to Spring 2023 Median House Sales Price Declines*



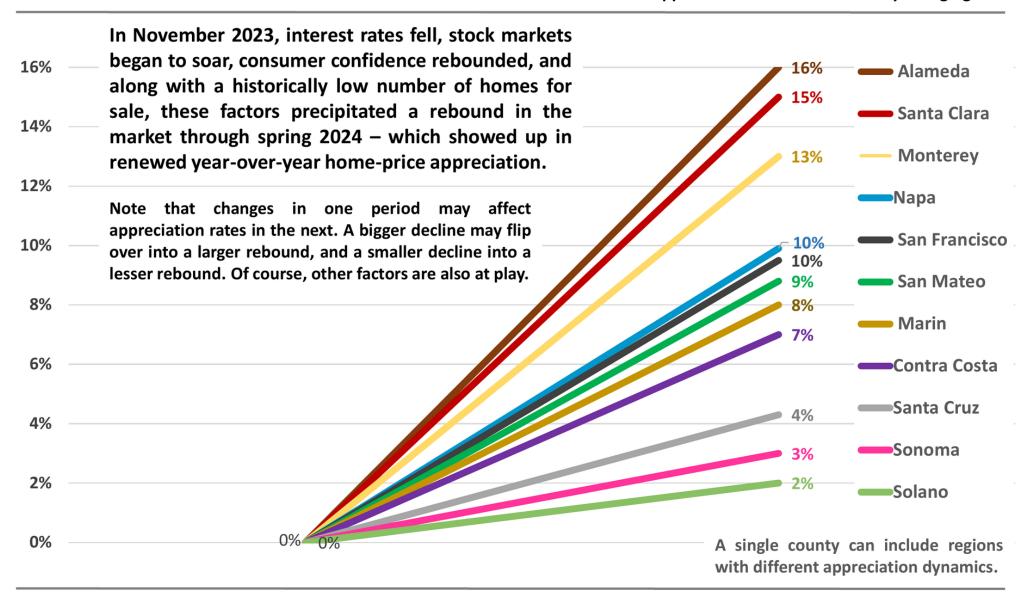
Individual counties contain submarkets of widely varying values and market dynamics. This analysis pertains to house sales.

^{*}Bay Area County appreciation rates per 3-month-rolling median house sales prices, sales reported to NorCal MLS Alliance, per Infosparks. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages are very approximate, goodfaith estimates, and how they apply to any particular property is unknown.

Another Recovery Begins

Spring 2023 to Spring 2024*

Appreciation rates are constantly changing.

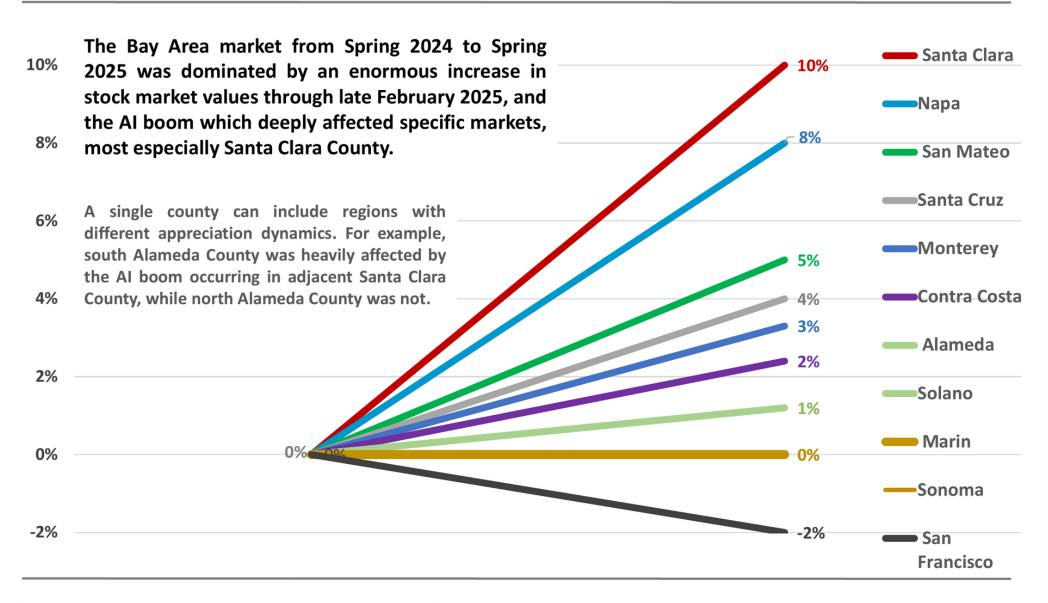


^{*}Bay Area County appreciation rates per 3-month-rolling median house sales prices, sales reported to NorCal MLS Alliance, per Infosparks. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages are very approximate, good-faith estimates, and how they apply to any particular property is unknown. Other factors besides changes in "fair market value" are often at play in these appreciation rates.



Spring 2024 to Spring 2025*

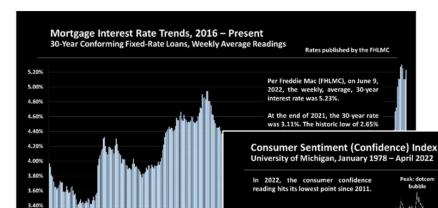
Appreciation rates are constantly changing.



^{*}Bay Area County appreciation rates per 3-month-rolling median house sales prices, sales reported to NorCal MLS Alliance, per Infosparks. Data from sources deemed reliable, but may contain errors and subject to revision. All percentages are very approximate, good-faith estimates, and how they apply to any particular property is unknown. Other factors besides changes in "fair market value" are often at play in these appreciation rates.



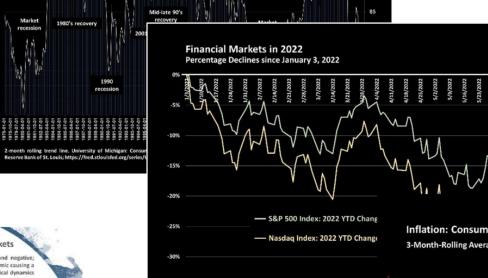
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2018

Interest rates may fluctuate suddenly and dramatically, and changes. Data from sources deemed reliable but not guarantee home loans should consult with a qualified mortgage profession

Click Here for Review of Selected Macroeconomic Trends



Last reading as of 6/13/22 AM. Data per MarketWatch.com, daily closing pric reading. Data from source deemed reliable, but may contain errors and subje

ial markets change constantly and all numbers should be considered as

As published by the Federal Reserve Bank of St. Louis

105

100

Factors in Bay Area Real Estate Markets

3.20%

2.809

Jan. 2016

Many of these factors' effects can swing both positive and negative; sometimes effects are deeply counter-intuitive (e.g. a pandemic causing a fierce housing boom). Economic, political, social and ecological dynamics constantly change and interact in difficult-to-predict ways. Market-changing developments can percolate gradually, or arise quickly and unexpectedly. The limpact of specific factors can vary by market segment.

Local economic conditions: High-tech booms, employment, housing affordability & development, venture capital & foreign investment, pro/anti-business sentiment, etc.

Interest rates Stock markets Inflation Consumer confidence

Household wealth; personal, corporate, govt. debt levels by the Fed): post 9/11/2001, post 9/2008, post 3/2020

Natural disasters such as COVID, 1989 earthquake, 2017-21 fires, drought

Domestic & foreign migration; federal immigration policy; demographic changes

Tax law e.g. real estate tax benefits & Rental market credits, 2017 SALT-deduction limitation dynamics disparities

International economic/political events, e.g. large oil price swings, military/economic conflict, foreign economic crises, 9/11, 2015 Chinese stock market crash

Local, state & national Social and quality of life issues: Crime, homelessness.

politics cost of living, economic inequality, partisan politics, etc.

Financial industry manipulation, fraud, engineering, recklessness, e.g., junk bonds, S&L collapse, predatory lending, abandonment of risk mgmt. & underwriting standards, CDOs & rating-agency deceit, insider trading, over-leveraged investing; irrational exuberance

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Inflation: Consumer Price Index, 1982 – 2022*
3-Month-Rolling Average, Year-over-Year % Change

May 2022

May 2022

May 2022

*3-month rolling average of Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPAUCSL), retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.astiouisfed.org/series/CPAUCSL, June 2022. Data from U.S. Bureau of Labor Statistics.
All Items (FPAUCSL), retrieved index of a baseful of services paid by urban consumers. This

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particular index includes roughly 88 percent of the total population. Data from sources deemed

reliable, but may contain errors and subject to revision. All numbers approximate.

Compass Bay Area market reports: https://www.bayareamarketreports.com/

Context, methodology & caveats: Median sales prices are not perfect reflections of changes in fair market values: Indeed, they are relatively blunt measurements, which can be affected by a variety of factors – including seasonality, natural disasters, and large fluctuations in luxury home, new-construction home and distressed-property sales. Different analytics programs use varying methodologies, can define property types slightly differently, use different data sets, and generate somewhat varying conclusions as to price changes: Though trends are typically similar, judgment calls were made as to which data set best reflected appreciation in specific markets. Appreciation rates will vary based on the *exact period* they're measured from and to, and even a few months one way or the other can significantly alter calculations. Large anomalies in short-term data were adjusted when identified. The percentage increases and declines in the analyses herein should be considered *very* approximate good-faith estimates: Indicators of change, rather than exact measurements. They are provided only to illustrate the general scale of changes in different markets within different economic periods. Every home is a relatively unique basket of conditions and circumstances as situated in the exact period of time in which it is being sold. How this report applies to any particular property is unknown without a specific comparative market analysis.

This analysis generally uses data of county median house sales prices as published by the CA Association of Realtors, NorCal MLS Alliance, Infosparks and/or Broker Metrics, and or appreciation calculations by the S&P CoreLogic Case-Shiller Home Price Index data or the Federal Reserve Bank. *Home-price appreciation is calculated in varying ways by different programs*.

Median Sales Price is that price at which half the properties sold for more and half for less. It may be affected by seasonality, "unusual" events, or changes in inventory, new construction and buying trends, as well as by changes in fair market value. The median sales price for an area will typically conceal an enormous variety of sales prices within communities and in the underlying individual sales. Case-Shiller, the Federal Reserve Bank and Zillow, use proprietary algorithms to calculate values.

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