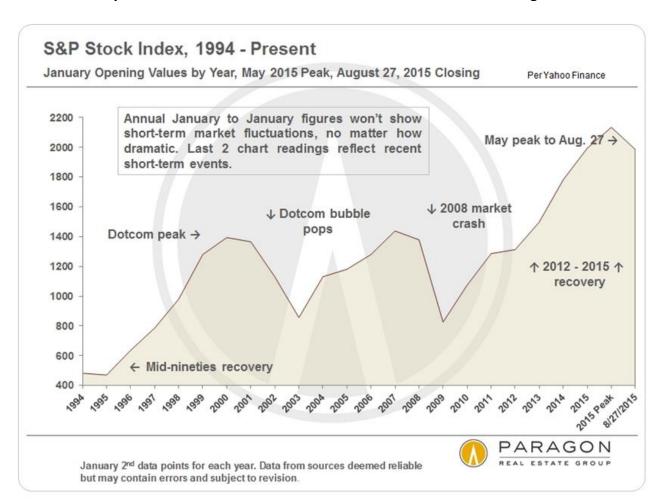


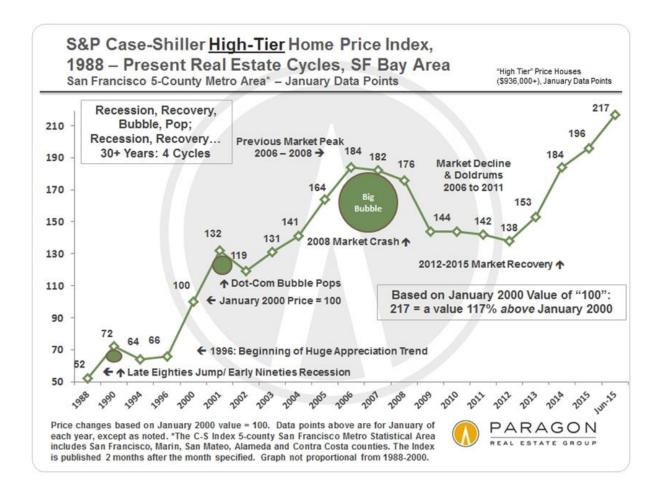
# The San Francisco Real Estate Market: To Crash or Not to Crash?

August 28, 2015, Paragon Real Estate Group

In the past 50 years, San Francisco's housing market has only "crashed" in conjunction with major *national* economic events and recessions, and has never occurred in isolation. [See Case-Shiller Index and S&P 500 charts below.] The U.S. economy is certainly challenged by a number of economic, political, demographic and even environmental threats, but we see no significant, near-term indications of a market crash or major recession. Without that happening, we do not expect a *local* market crash.

#### Bay Area Home Price Movements vs. National Stock Market Changes

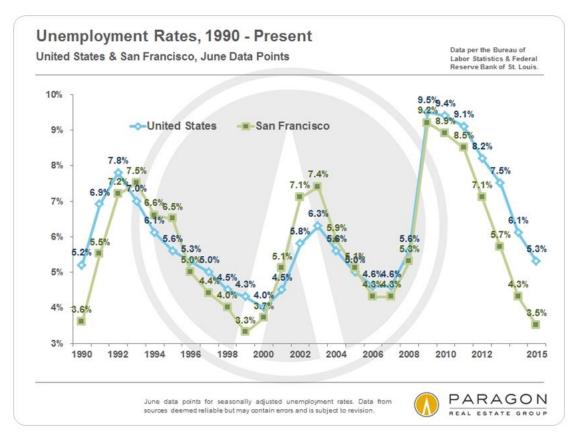


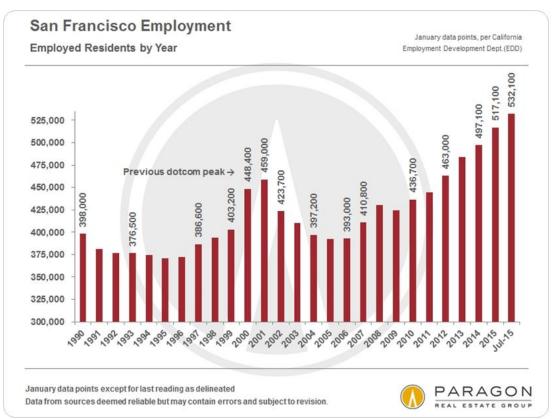


The Bay Area is now the undisputed center of perhaps the world's most dynamic economic segment, driving enormous technological changes in commerce, communications, finance and medicine. As part of this, the Bay Area has recently become an employment creating machine. However, our housing supply is deeply inadequate to increases in population. This high demand/low supply housing dynamic does not appear likely to flip in the near future, and is a central driver of housing price increases.

#### **U.S. & San Francisco Unemployment Trends**

Perhaps nothing underlies a healthy economy than employment. San Francisco and U.S. unemployment rates track each other relatively closely and also correlate to financial market cycles. San Francisco and Bay Area employment has been growing in leaps and bounds — hundreds of thousands of new, high-paying, high-intelligence jobs — significantly increasing population pressures on housing.

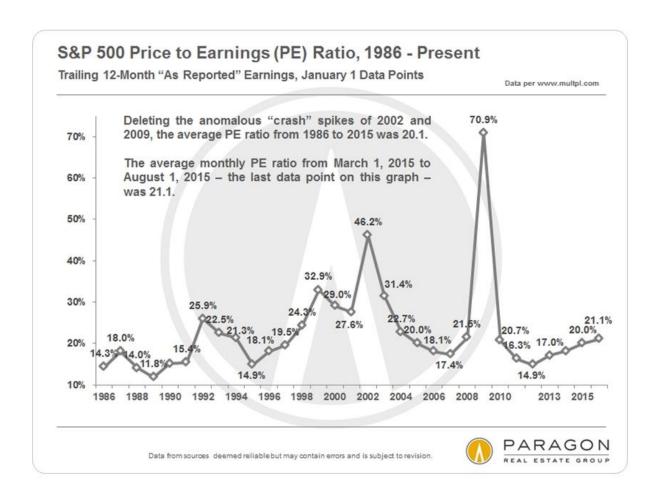




According to the Knight Frank 2015 Wealth Report, San Francisco's home prices still don't compare with luxury housing costs of cities in its top 10 list, such as Hong Kong, London, Singapore, New York and Geneva: Indeed, it's less than half of some of them. Many hundreds of billions — and possibly trillions — of dollars in new wealth have been created in the Bay Area in recent years. For good or ill, we believe it's possible that San Francisco's economic status in the world may be fundamentally changing, and leading it into the company of such exclusive metropolitan areas.

### Historical Price to Earnings Ratios for the S&P 500

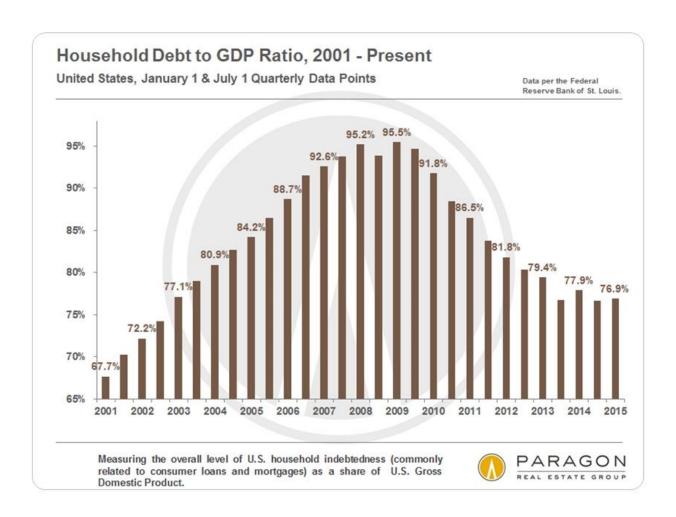
One of the basic measures of the financial reasonableness of stock prices is the price to earnings (PE) ratio. Deleting the big, anomalous spikes of 2002 and 2009, the average PE ratio since 1986 for the S&P 500 was 20.1. For the general period of the Index's 2015 peak, March through July, its PE ratio was a little over 21: A bit higher than the 30-year average, but certainly not a flashing-red indicator of an egregiously overvalued stock market on the cusp of crashing. It has since declined somewhat with the recent market volatility.



### Household Debt, Mortgage Debt Ratios & Mortgage Interest Rates

Probably the biggest factor in the 2008 financial markets crash was too much debt – throughout the system. However, since then, the U.S. has significantly reduced household debt, as well as reducing the levels of leverage in our major financial institutions. This, of course, hugely reduces the risk of another 2008 market meltdown.

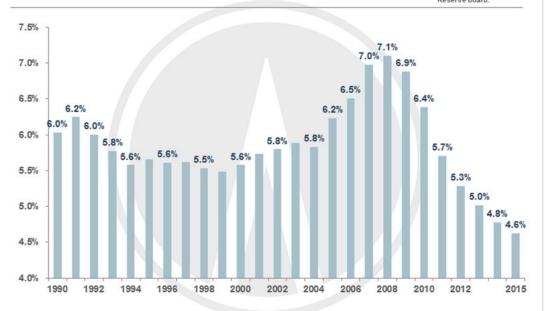
The first chart below shows the large reduction in U.S. household debt over the past 5 years. The second chart illustrates a particularly interesting point: The U.S. mortgage debt ratio is now at its lowest point in over 25 years. And the third chart tracks mortgage interest rates over time: Even if the Fed raises rates soon, they will undoubtedly still remain at levels that are historically extremely low. However, it is true that any increase will affect the ongoing cost of homeownership for new buyers.



## Mortgage Debt Service Ratio, 1990 - Present

United States, Q1 Data Points

Data per the Federal Reserve Board.



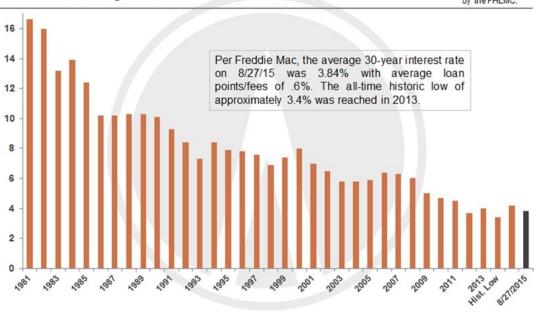
The mortgage debt service ratio is the ratio of quarterly required mortgage payments divided by total quarterly disposable income. Data from sources deemed reliable, but may contain errors and subject to revision.



## Average Annual Interest Rates

30-Year Conforming Loans

Rates published by the FHLMC.



The last reading is for the week specified. Note that 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.



As an aside: in our opinion, the wild Chinese stock market gyrations are not a threat to the U.S. or Bay Area economies. For the past year, these markets have been closer to Ponzi-like, casino schemes where "everyone is a winner all the time" than reputable financial markets. They are filled with companies with opaque finances, and driven by unsophisticated, mom and pop investors recklessly encouraged by the Chinese government. Foreign ownership and exposure is miniscule. After surging an absurd 130% over 10 months – during which it was clear the Chinese economy was *slowing* – the Shanghai composite index is still up 40% as of late August. As a point of comparison, the S&P 500 index increased 6.5% from August 2014 to its May 2015 peak, while the U.S. economy was clearly *improving*. It is now up about 22% *over the past 2 years*.

The U.S. economy clearly continues to strengthen: The second quarter GDP growth figure was recently revised to 3.7%, which, if not spectacular, does indicate solid improvement. Other national economic indicators like consumer confidence and housing starts are also showing improvement. Sometimes solid, steady improvement is the best kind.

However, economies and housing markets naturally experience fluctuations: Short-term ups and downs, and times of slowing or flattening out. Also, in the complex world we live in, political or economic crises of different magnitudes can arrive out of left field – such as 9/11, and the "fiscal cliff" and national debt-reauthorization fiascos in 2012 and 2013. Bay Area home prices may plateau or even decline to some degree in the near future as they did in 2014 after a torrid spring selling season (before blasting off again in early 2015).

We do not know when San Francisco housing prices will peak in the current economic cycle, but based on current trends, talk of bubbles and an imminent crash seems overblown. If you believe otherwise, you should, of course, act appropriately.

This analysis was created in good faith, but may contain errors and is subject to revision. Interested parties are advised to consult with their own qualified, financial advisers.

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