

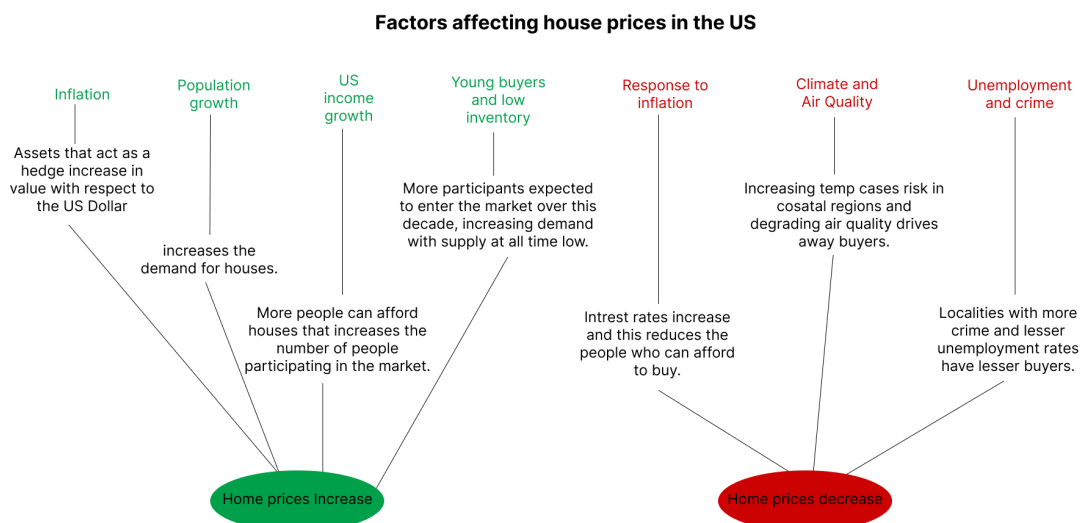
# Major factors that will determine the factors that could influence residential home prices across the United States over the next 10 years.

## Introduction

Real estate accounts for a significant part of most American family's wealth. A survey by the Consumer Finances by the Federal Reserve showed that 64.9% of American families owned a house in 2019. This shows the size and scale of the real estate market, this makes it very attractive and lucrative for many investors. This is also a market that is affected by a lot of factors and it is hard to predict and forecast how the market will behave in the future. It is important for companies like Home.LLC to understand the factors that affect this market to make intelligent decisions.

In this report I have found 7 factors that could affect the market -

1. Inflation
2. Actions of the Fed in response to inflation
3. U.S. income growth vs U.S. house prices
4. Young buyers and inventory at all time low
5. Population growth
6. Climate and Air Quality
7. Unemployment and crime



# Factors in Detail

## 1. Inflation

The U.S. Housing market has been regarded by investors as an inflation hedge, this is evident when looking at the increase in prices during the 1970s (high inflation period). Right after Richard Nixon announced that the US Dollar will no longer be backed by Gold, the annual inflation numbers skyrocketed (see fig below).

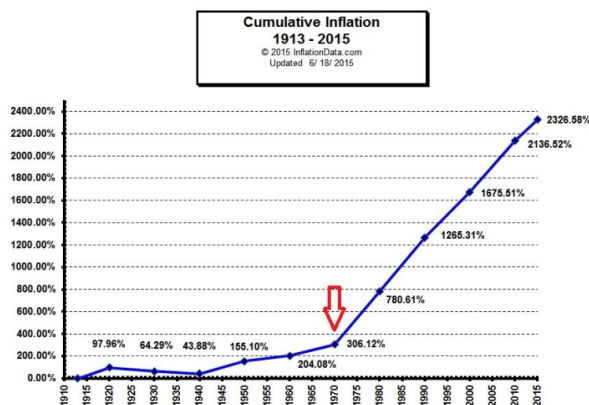
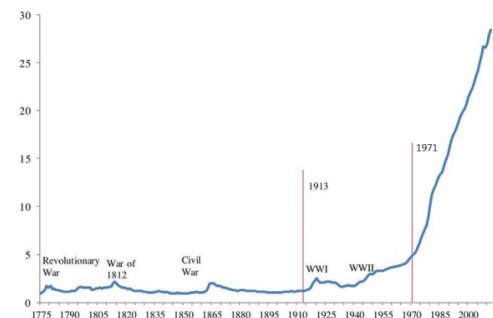


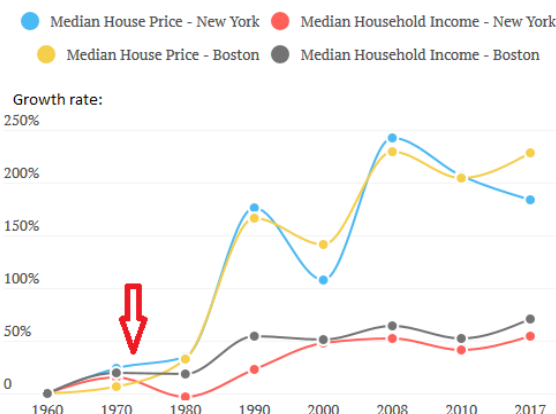
Figure 1. Consumer Price Index, United States, 1775-2012 (level, 1775=1)



Sources: Bureau of Labor Statistics, Historical Statistics of the United States, and Reinhart and Rogoff (2009).

During that 10 year window the CPI index soared 106%, while the median Home price in the US jumped 167% compared to a 14% increase in the S&P 500 index. The price increase was not uniform across all the states and cities as shown in the chart below, New York and Boston did better than the median.

### New York & Boston



We are in a similar economic situation where the inflation numbers have been on the rise due to various factors including supply chain disruption because of the pandemic, money printing and other factors. The CPI print every quarter is worse than the

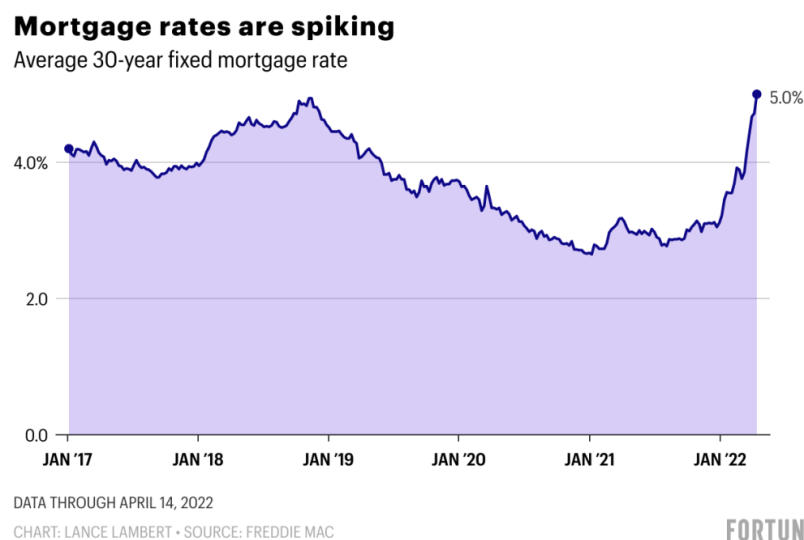
previous as seen from the chart below, with the last CPI print posting an annual inflation of 8.5%.

Historically the housing markets have performed very well during inflationary periods so we can expect it to do well over the next few years.



## 2. Actions of the Federal reserve to curb inflation

One of the tried and tested methods for taming inflation is to raise interest rates till we see a reduced demand. Over the past four months, the average 30-year fixed mortgage rate has spiked from 3.11% to 5%.

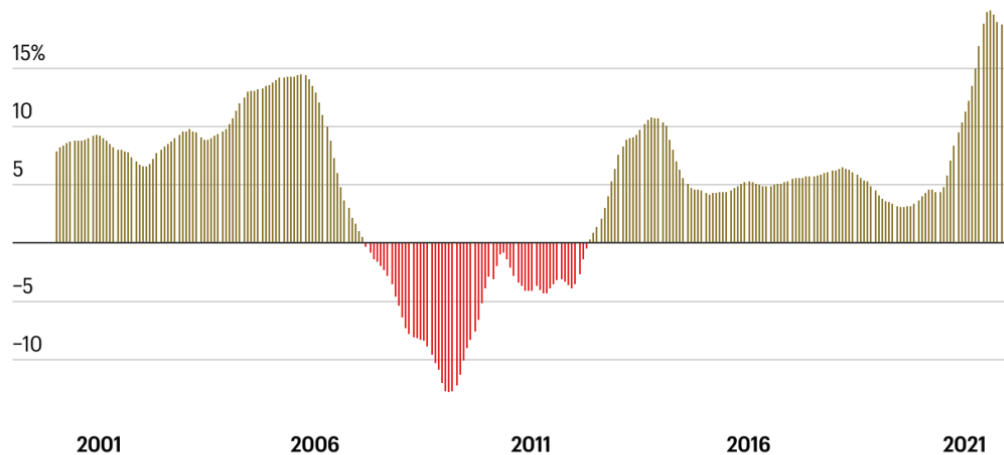


Which means that people need to pay more interest per month on their mortgages which will discourage people from taking them in

the first place. This coupled with the increase in the US home prices (32.7%) over the last 2 years due to the pandemic (see fig below) could lead to a decrease in demand causing the fall in the prices of homes. High mortgage rates could also discourage investors who account for a large portion of the market from participating.

### U.S. home price growth

Year-over-year change in the S&P CoreLogic Case-Shiller Home Price Index



DATA THROUGH JAN. 2022

CHART: LANCE LAMBERT • SOURCE: S&P DOW JONES INDICES LLC

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The Federal Reserve Bank of Dallas published a research paper titled "Real-time market monitoring finds signs of a brewing U.S. housing bubble".

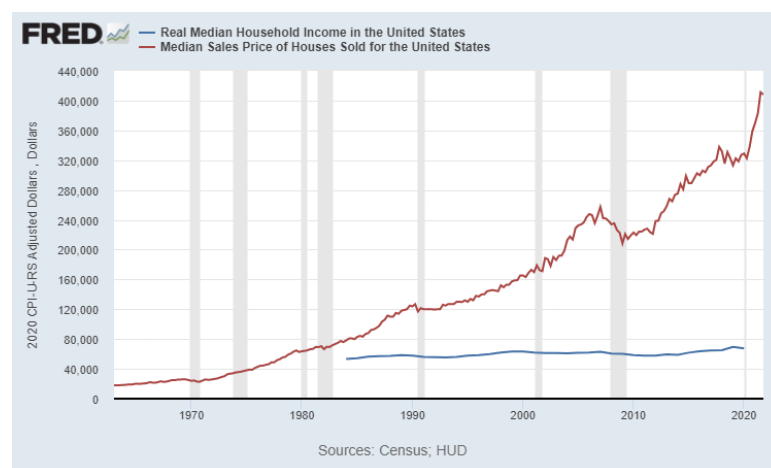
*"Our evidence points to abnormal U.S. housing market behaviour for the first time since the boom of the early 2000s. Reasons for concern are clear in certain economic indicators...house prices appear increasingly out of step with fundamentals.*

*Based on present evidence, there is no expectation that fallout from a housing correction would be comparable to the 2007–09 global financial crisis in terms of magnitude or macroeconomic gravity. Among other things, household balance sheets appear in better shape, and excessive borrowing doesn't appear to be fueling the housing market boom,"* wrote the Dallas Fed researchers.

The effects of this can be seen now, according to Redfin, which reported that 12% of home sellers on its site decrease their home listing price and they also reported a 3% decrease in requests for home tours.

### 3. US income growth vs US home prices

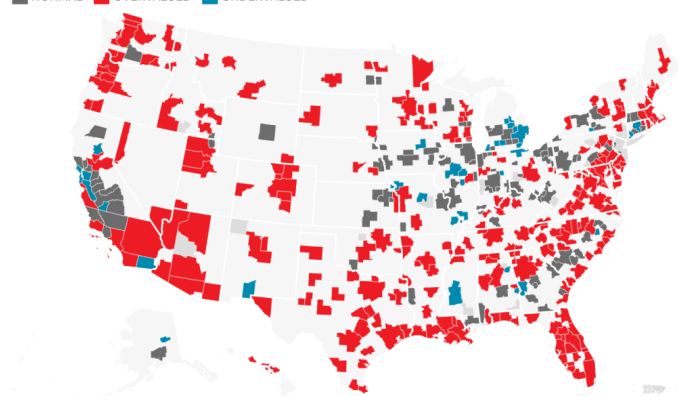
The home prices increased by more than 5 times faster than the growth in the income for US households. This disparity could make homes just too expensive for people to buy and own causing a decrease in the demand. The graph below shows just how divergent the two are.



This is more evident when CoreLogic studied if local income levels could support home prices and found out that 65% of the regional housing markets to be overvalued, 26% to be normal and just 9% to be undervalued.

#### How CoreLogic rates America's largest housing markets

■ NORMAL ■ OVERVALUED ■ UNDERVALUED



MAP: LANCE LAMBERT • SOURCE: CORELOGIC

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*"With robust home price growth since the onset of the pandemic, many markets could now [be] considered overvalued,*

*particularly when comparing the price growth to the rate of local income growth," Selma Hepp, deputy chief economist at CoreLogic, told Fortune.*

#### 4. Young buyers and all time low inventory

As of 2020, 32.4% of the US population is under the age of 25 years.

Location	Children 0-18	Adults 19-25	Adults 26-34	Adults 35-54	Adults 55-64
United States	23.4%	9.0%	12.6%	25.1%	12.8%
Alabama	23.8%	8.7%	11.2%	26.0%	12.6%
Alaska	26.0%	9.0%	13.6%	24.9%	11.8%
Arizona	23.2%	10.1%	11.7%	23.8%	12.0%
Arkansas	24.7%	9.4%	10.9%	23.6%	13.2%
California	23.4%	9.6%	13.4%	25.9%	12.3%
Colorado	22.5%	9.7%	13.8%	26.5%	12.7%

This one factor that could lead to the increase in prices over the next decade as when this mass of the population enters the housing market, there simply aren't enough homes on the market according to Zillow.

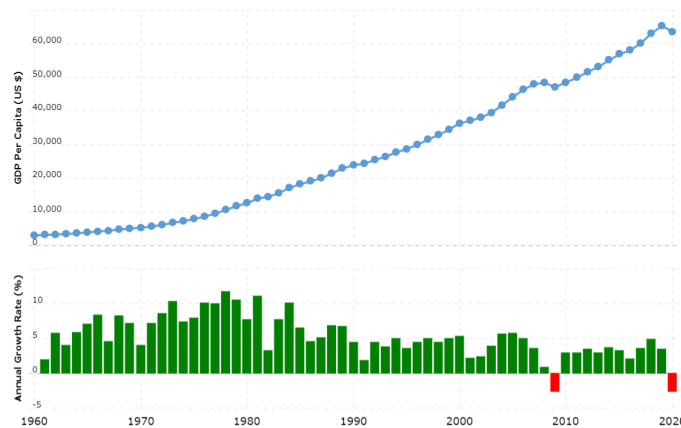
The inventory of homes for sale dropped 53% between April 2020 and April 2021 and new listings for homes were down 3% and the overall number of active listings were down 26% for the week ending Feb. 12, compared to the same period last year, according to data from realtor.com.

This is the case for low supply and very high demand that could potentially drive the prices way up.

#### 5. Population Growth

Population and wages are important demand factors for the housing market and both are projected to increase in this decade. An analysis by Freddie Mac suggests that a 1% increase in population increases house prices by 0.03%. Conversely, a 1% increase in per capita housing stock reduces house prices by 0.83%. Per capita income has the most impact on house prices,

with a 1% increase in per capita incomes leading to a 1.5% increase in house prices.



As seen from the graph above, the per capita income of households is on the rise and the forecasts for this decade show that this trend is going to continue.

## 6. Climate and Air Quality

According to a 2018 research by the Union of Concerned Scientists, more than 300,000 coastal dwellings will be frequently flooded by 2045. Coastal properties near sea level will be especially vulnerable. Because of the ongoing fear of floods, the housing markets in such locations will suffer.

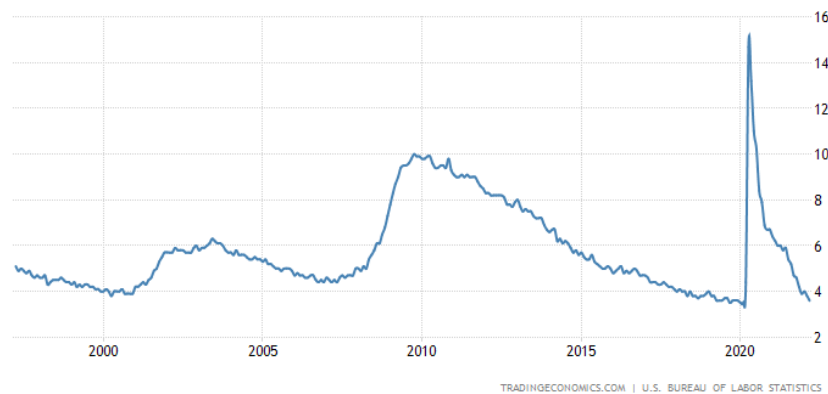
In addition to lower sales prices, fewer homes are being sold in high-risk coastal locations. It should come as no surprise that people do not want to live in locations where extreme weather and wildfires are a threat. Even if living near the woods or the seaside is a wonderful benefit, no one wants their property to be threatened by a fire or flood.

As fewer properties are being acquired in these locations, individuals looking to sell may have a more difficult time. The drop in sales prices and home sales could be a housing market indication for coastal home sales in the future.

## 7. Effects of Unemployment and crime on the Housing market

The authors of the paper titled “Market Thickness and the Impact of Unemployment on Housing Market Outcomes ” designed a search-and-matching model in this research to investigate how changes in the unemployment rate affect housing market transactions in the presence of the thick-market effect. According to the model, a thicker market has better average matching quality between customers and sellers.

A greater unemployment rate makes it difficult for households to enter the property market as buyers. This is because of two things, one is that it is extremely difficult for unemployed people to secure mortgage loans and the other is that lending becomes tighter in a climate of increased unemployment risk because of increasing job uncertainty, higher unemployment rates diminish the likelihood of present homeowners moving. This will result in the decline in both the house prices and the sales volume.



The unemployment rate in the US has been decreasing for over 2 decades now. The unemployment rate is now less than 3.6% in the US and even less in some states like California and New York. This according to the study mentioned above should play a role, however small, in the increasing prices of homes in the US over the next decade.

80% of extant studies find that crime has a negative effect on property value makes it safe to conclude that crime matters to people and that they are willing to pay a higher housing price in order to avoid it.

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