

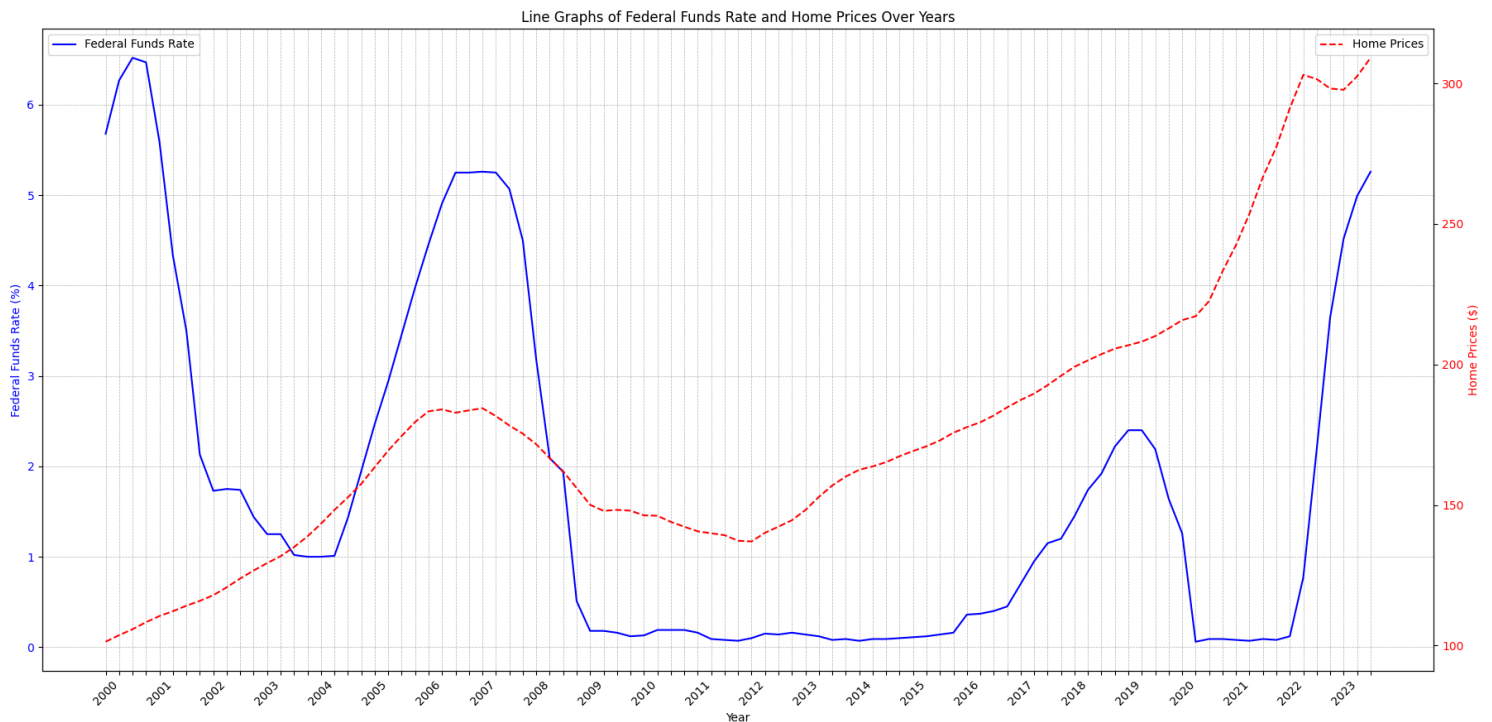
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I have studied and analyzed various factors that affect housing prices in the United States. I have collected data from first quarter of year 2000 till the third quarter of year 2023. I have analysed more than 23 years of information. I have used publicly available data and Python code to generate the shown graphs.

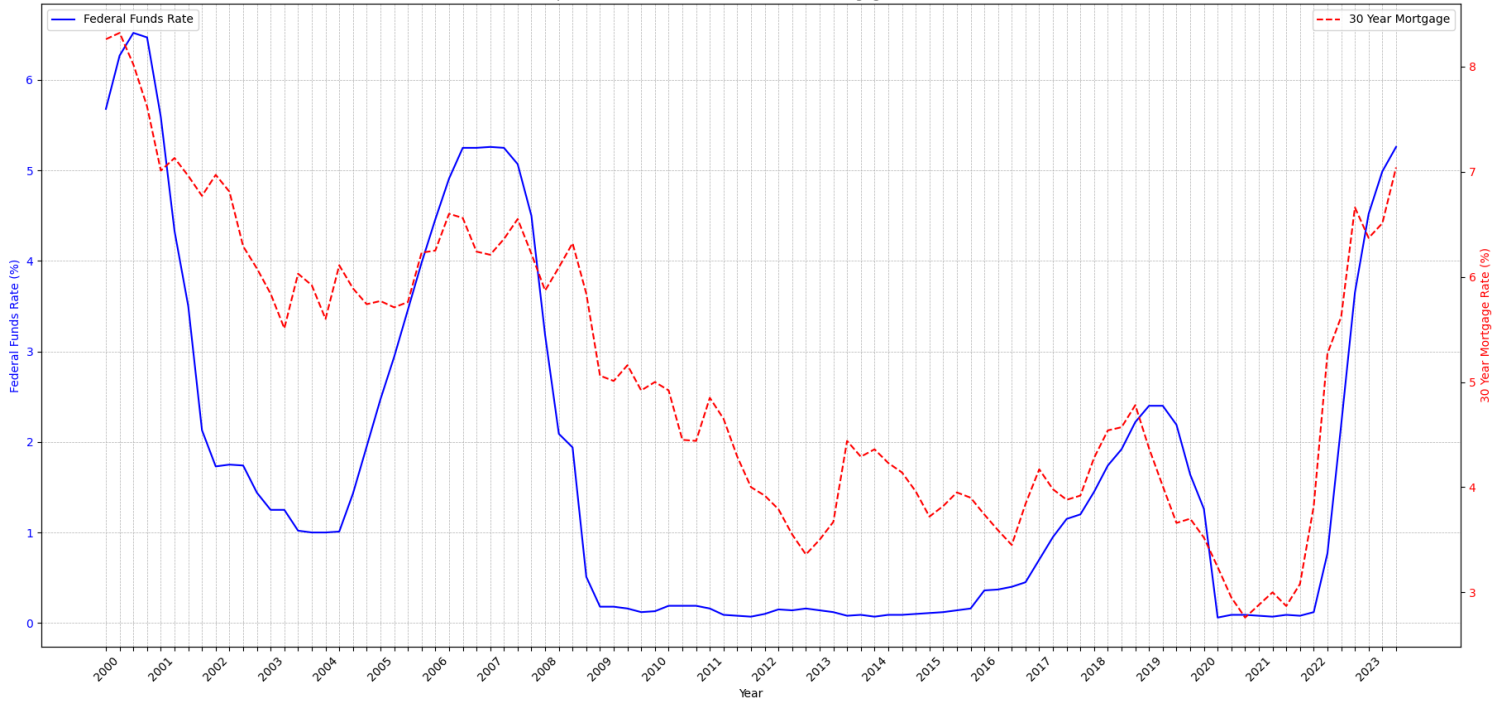
## Federal funds rate, 10-year Treasury yield, and 30-year mortgage:



In the United States, the federal funds rate is the interest rate at which depository institutions (banks and credit unions) lend reserve balances to other depository institutions overnight on an uncollateralized basis. Reserve balances are amounts held at the Federal Reserve. Institutions with surplus balances in their accounts lend those balances to institutions in need of larger balances. The federal funds rate is an important benchmark in financial markets and central to the conduct of monetary policy in the United States as it influences a wide range of market interest rates.

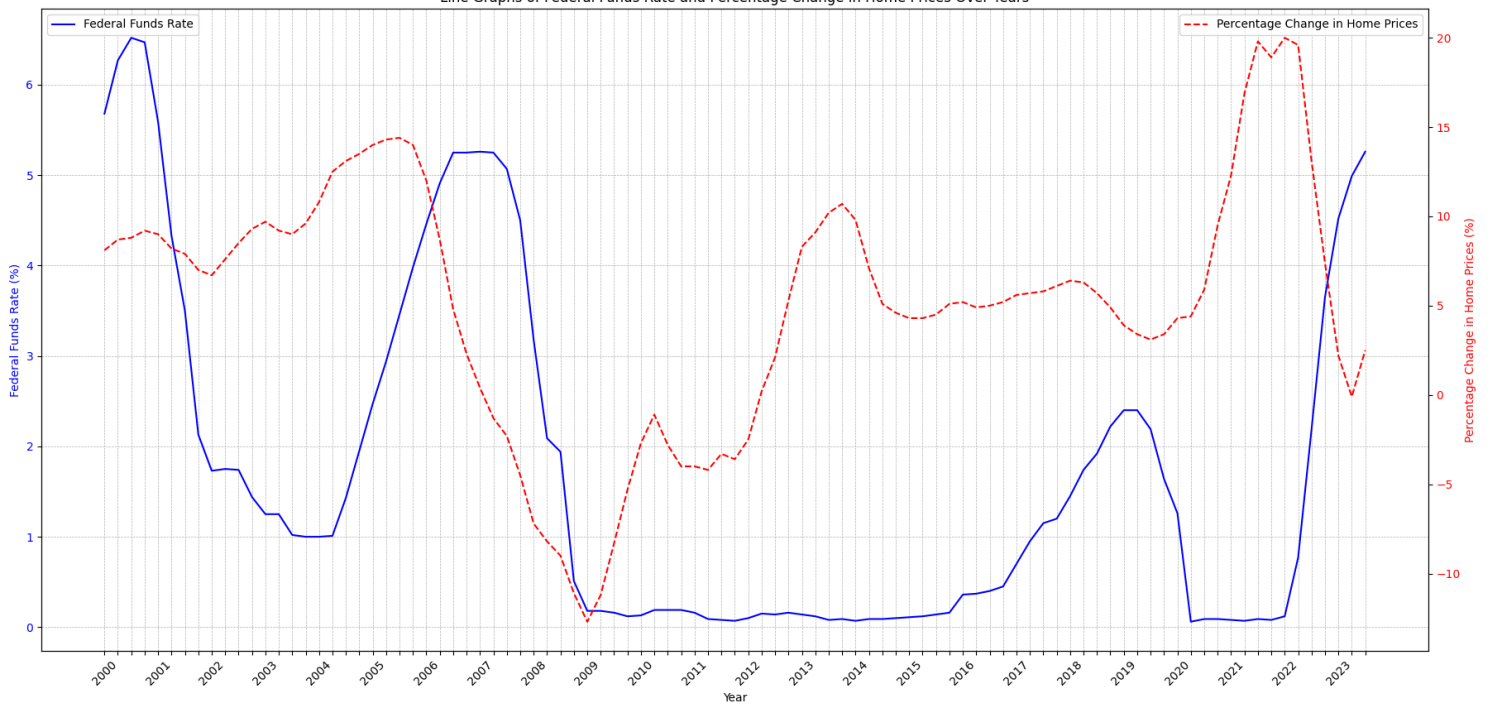
Low-interest rates can stimulate borrowing and increase demand for homes, potentially driving up prices. Conversely, rising interest rates can make mortgages more expensive, leading to reduced demand and potentially lowering prices.

Line Graphs of Federal Funds Rate and 30 Year Mortgage Rate Over Years

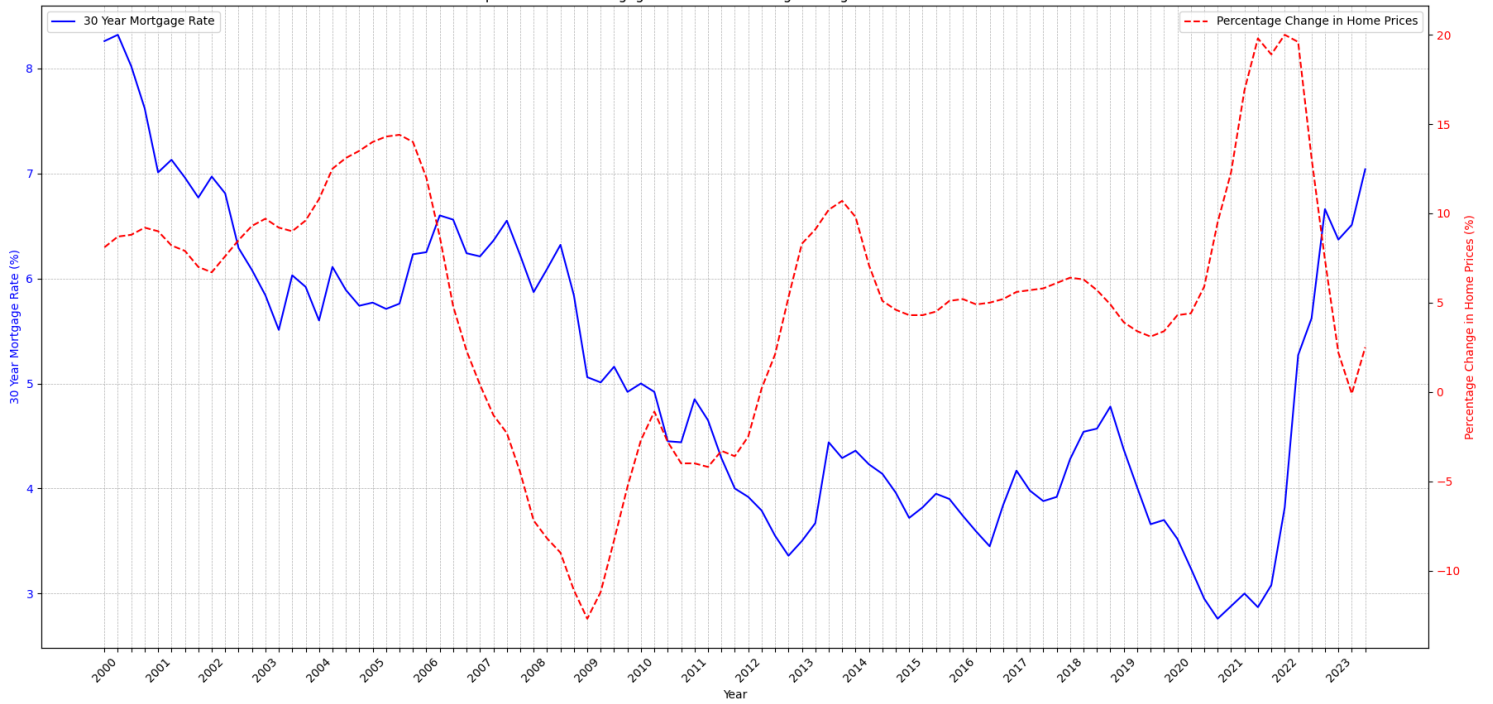


The federal funds rate affects borrowing costs, so a low federal funds rate decreases the cost of borrowing to buy homes, lowering mortgage rates.

Line Graphs of Federal Funds Rate and Percentage Change in Home Prices Over Years

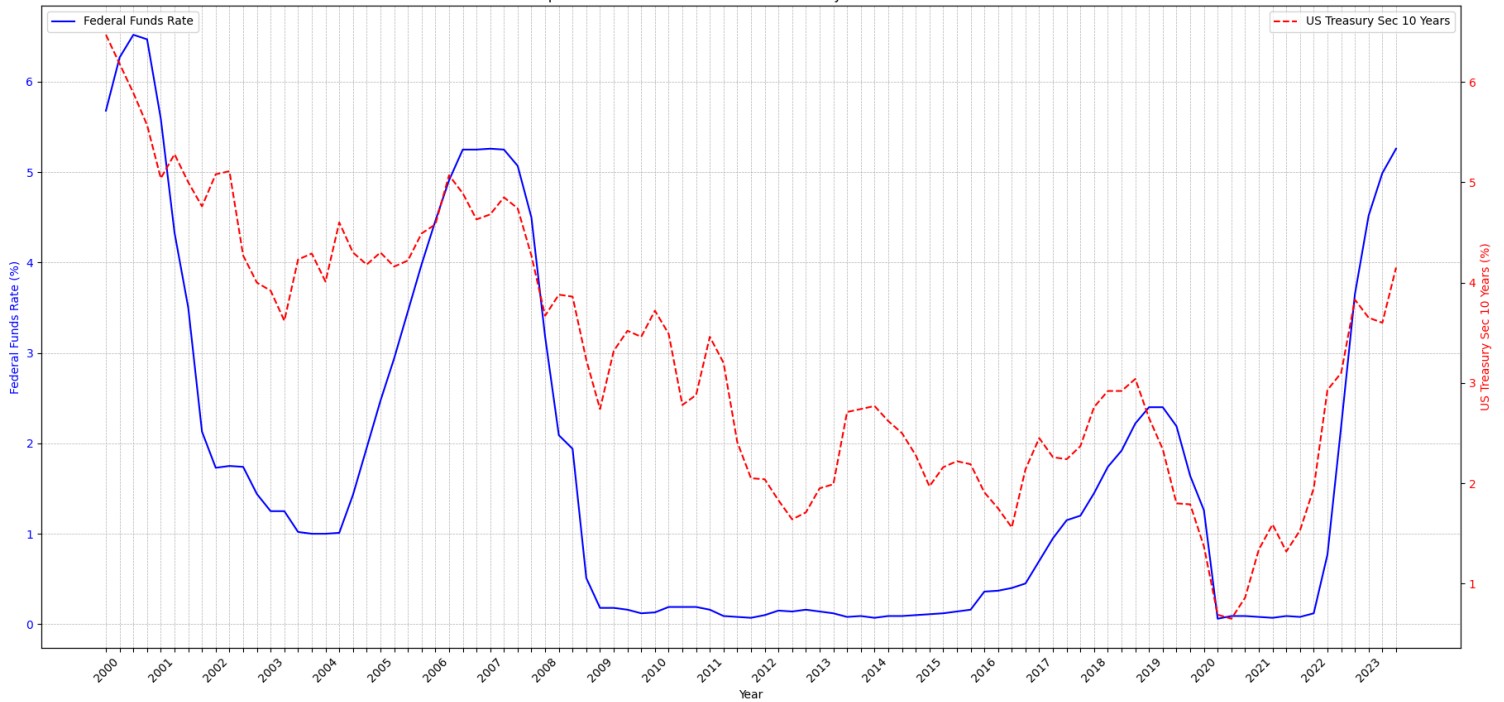


Line Graphs of 30 Year Mortgage Rate and Percentage Change in Home Prices Over Years

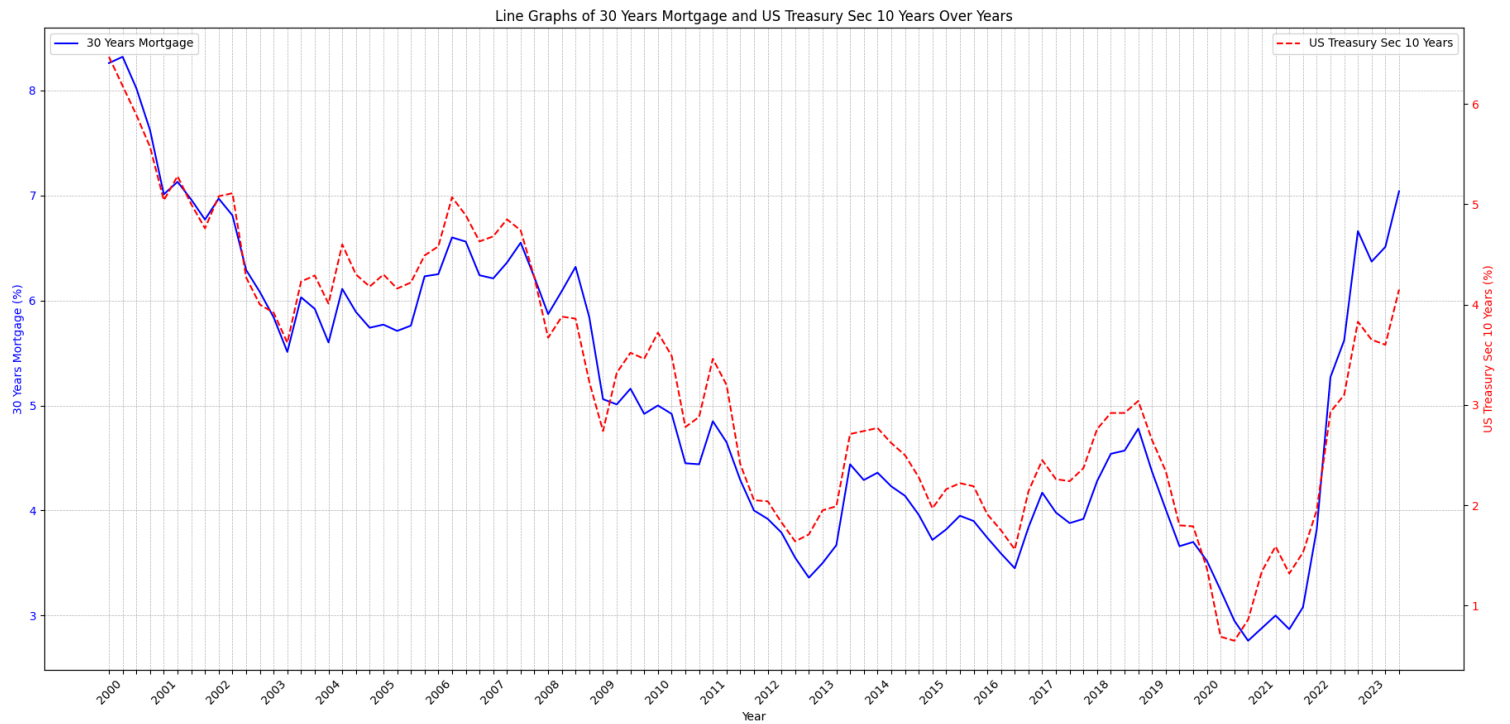


Low mortgage rates increase the prices of homes over time.

Line Graphs of Federal Funds Rate and US Treasury Sec 10 Years Over Years

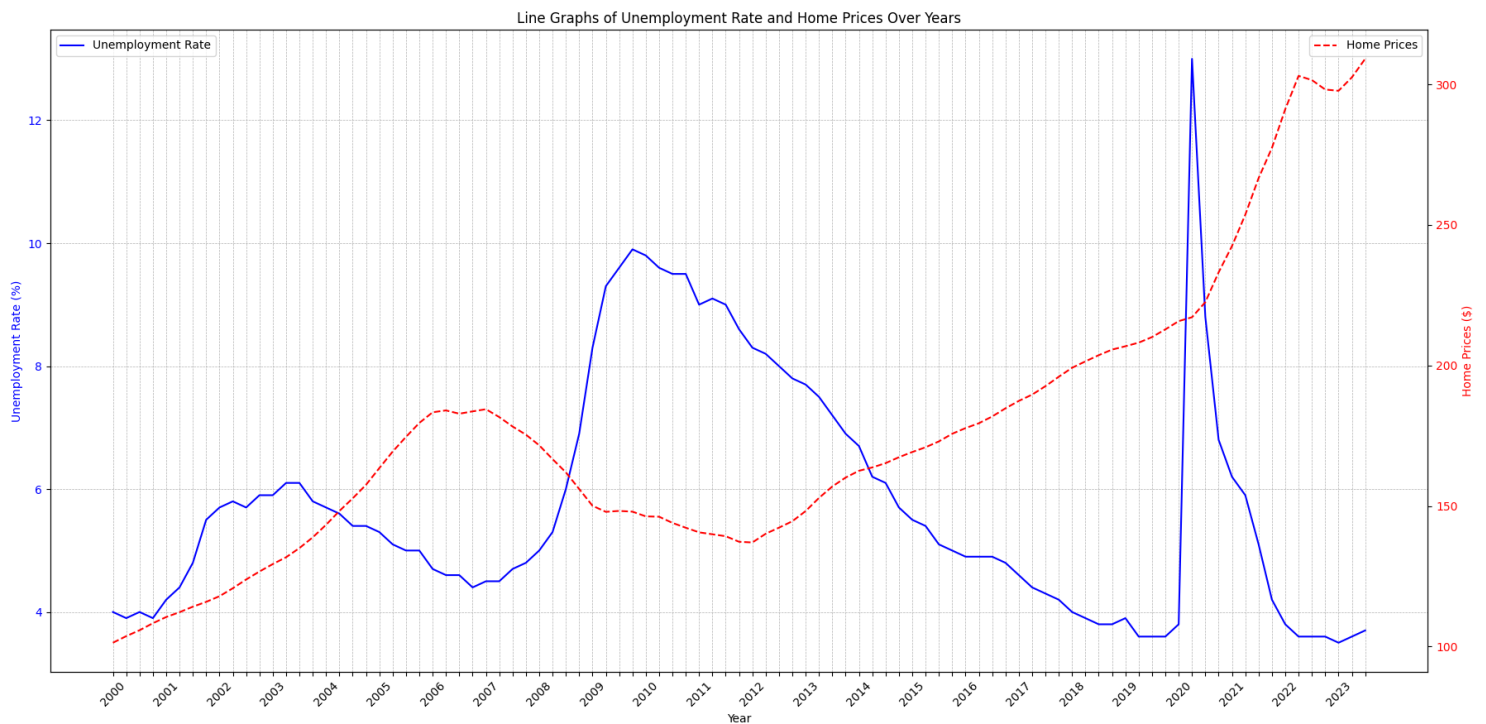


The federal funds rate affects 'U.S. Treasury securities with a 10-year maturity', and I calculated the correlation between them as 0.76.

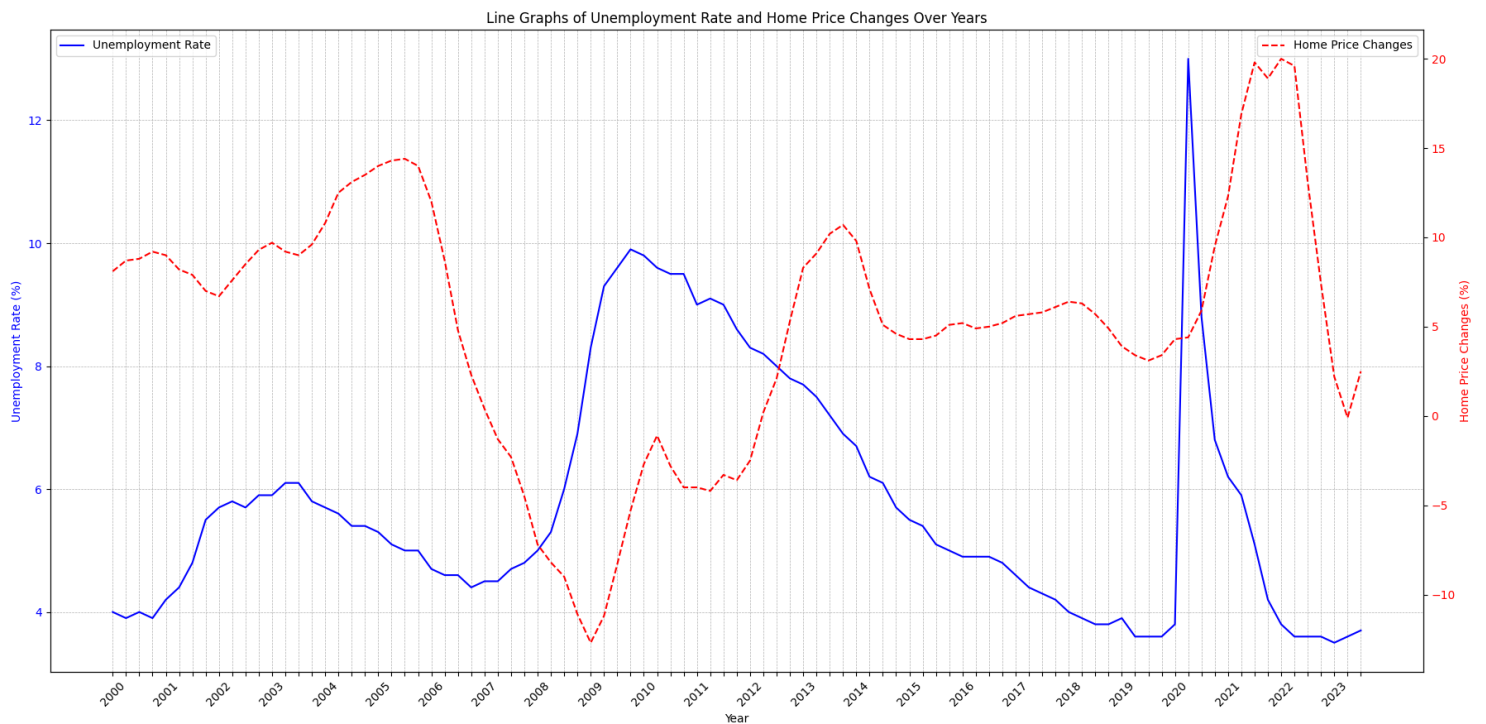


There's a very high correlation between 'U.S. Treasury securities with a 10-year maturity' and '30-year mortgage rates'. I calculated it as 0.968.

## Unemployment:

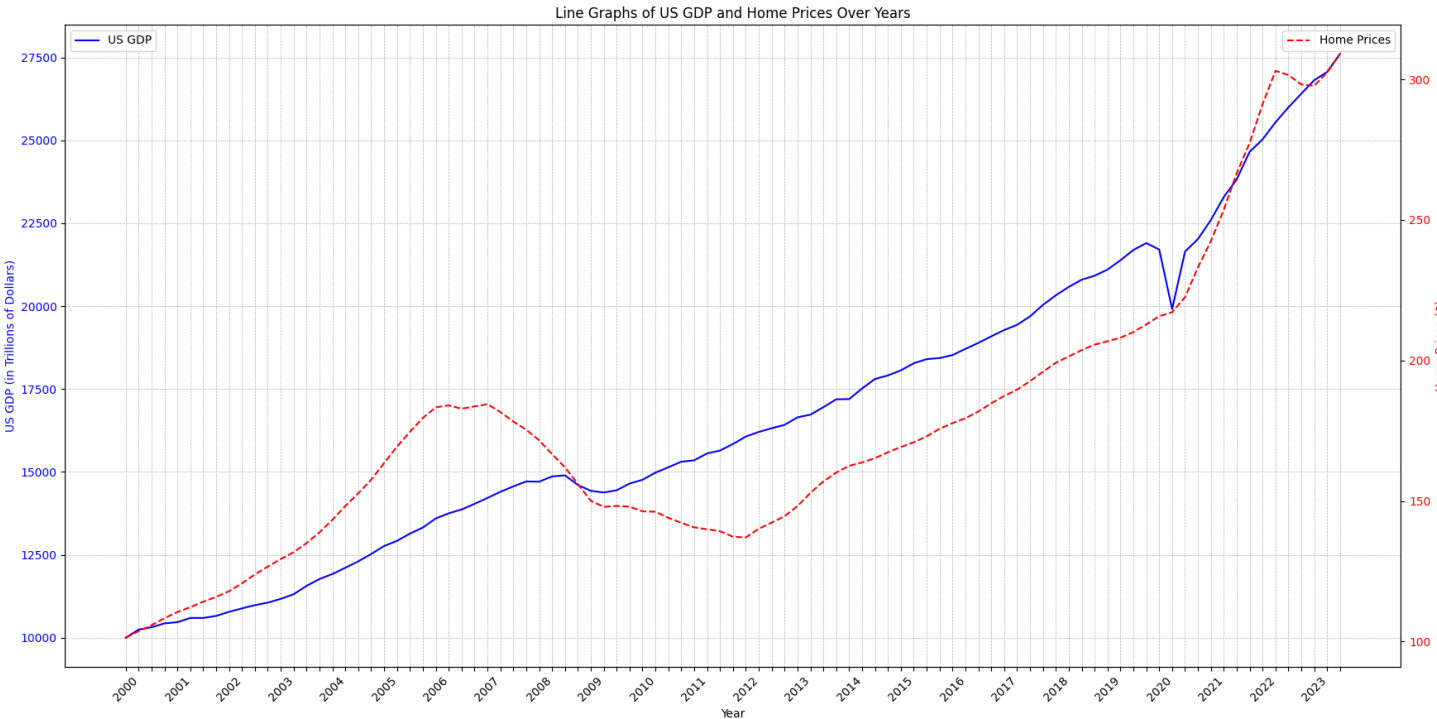


Looking at the graph, we can see that house prices increase faster when unemployment rates are low.



There's a significant inverse correlation between 'changes in house prices' and 'unemployment rates'. I estimate it at  $-0.433$ .

# US Economic Growth:



Economic expansion in the United States has increased the demand for housing over the years, and prices have also increased.