Story #2

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PROMPT:

In This story I will focus on the question

Has The FED fulfill the mandate given to by Congress in which the Fed has to control Inflation and maintain low unemployment..

Data SourcEs

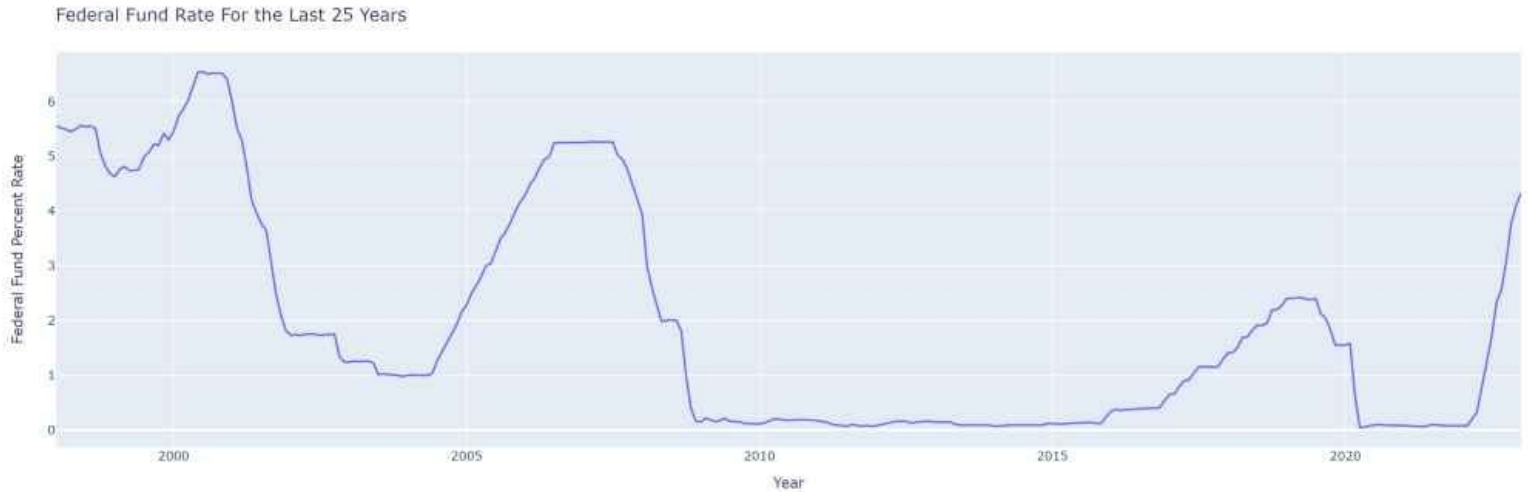
- In order to answer the question I’ve sourced the following data
- CPI-U data from 1998 to 2023 (seasonally adjusted)
- Unemployment Rate from 1998 to 2023
- The Federal Fund Rate from the Federal Reserve From 1998 to 2023

Domain Knowledge (An Understanding..)

-The CPI-U data shows the U.S city average CPI for all urban consumers for all items which was seasonally adjusted. The CPI is a measurement of the average change over time in the price paid for the consumer good and services for the last 25 years

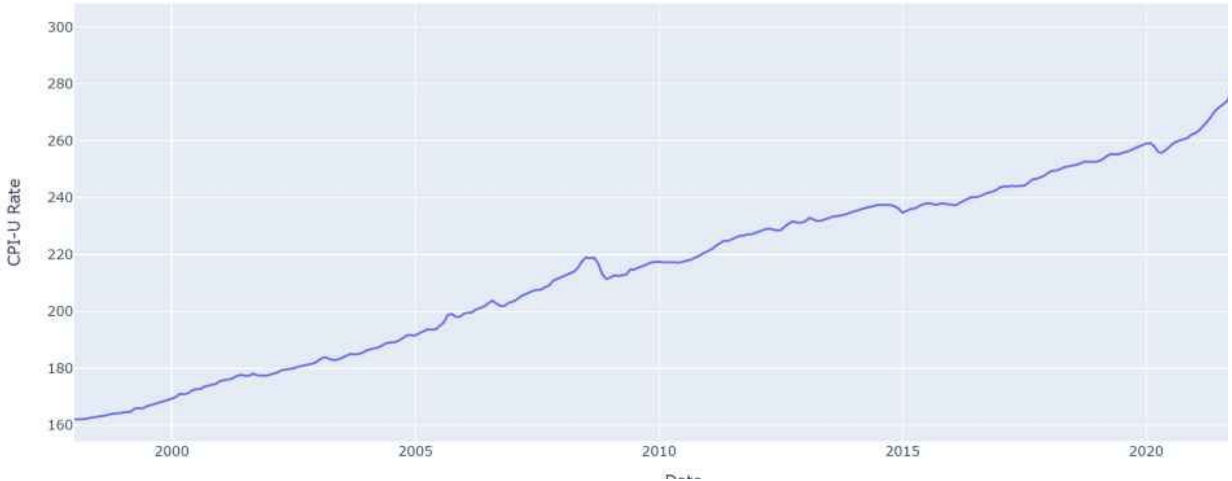
-The federal fund rates describes the interest rate that banks charge other banks for lending them cash on an overnight basis. Raising the federal fund rates makes it more expensive for individuals or organizations to borrow funds. Lowering the rates makes it easier for them to engage in borrowing

The unemployment rate is the percentage of the labor force without a job, when the economy is in poor shape and jobs are scarce, the unemployment is expected to rise and vice-versa. This includes all industries, occupations,sexes all out of the workforce currently.



-A line graph of the federal fund rate for the last 25 years

The federal fund rate had start strong but then fell off during 2002 and then rose slowly during 2007 and then dramatically fall again in 2008 which was the housing bubble crash and then it tanked for 6 years until it picked up in 2017 but the start of the pandemic it fell again and now rates are currently rising onwards

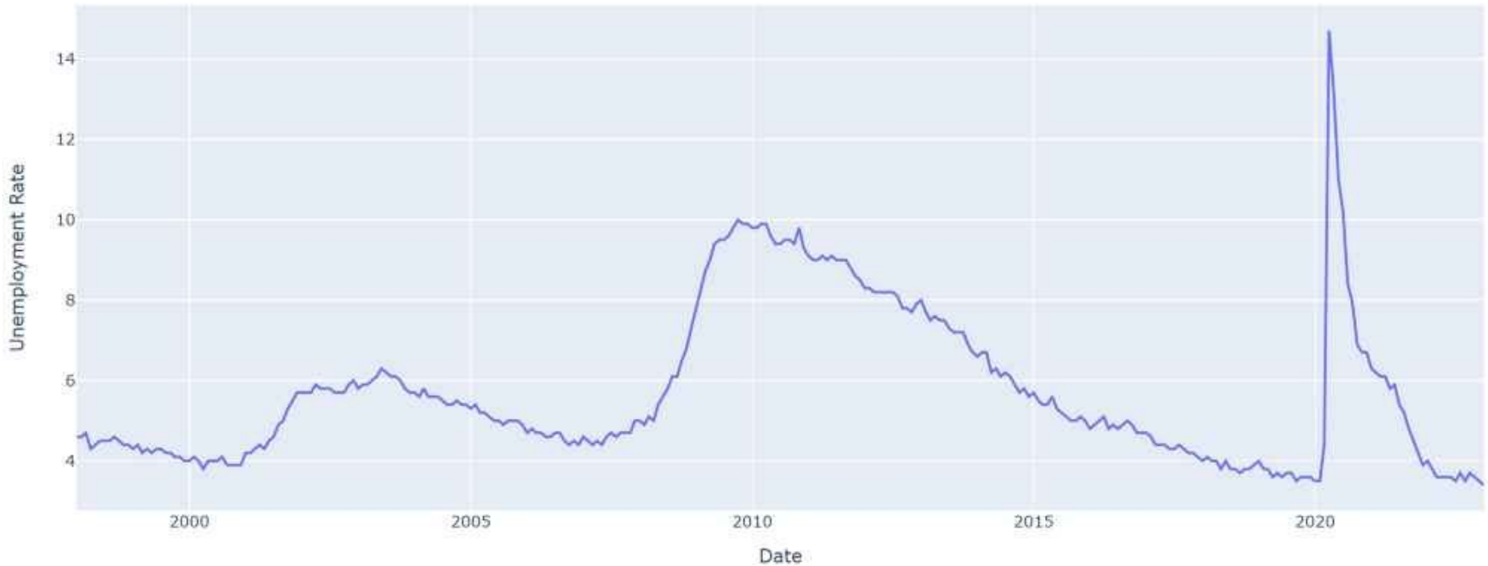


The CPI rate is a measure of inflation, we can see that the inflation rate had some few hiccups but inflation is steadily increasing.

Jan 01 1998 Inflation percentage was at 162

Jan 01 2023 Inflation percentage is at 300

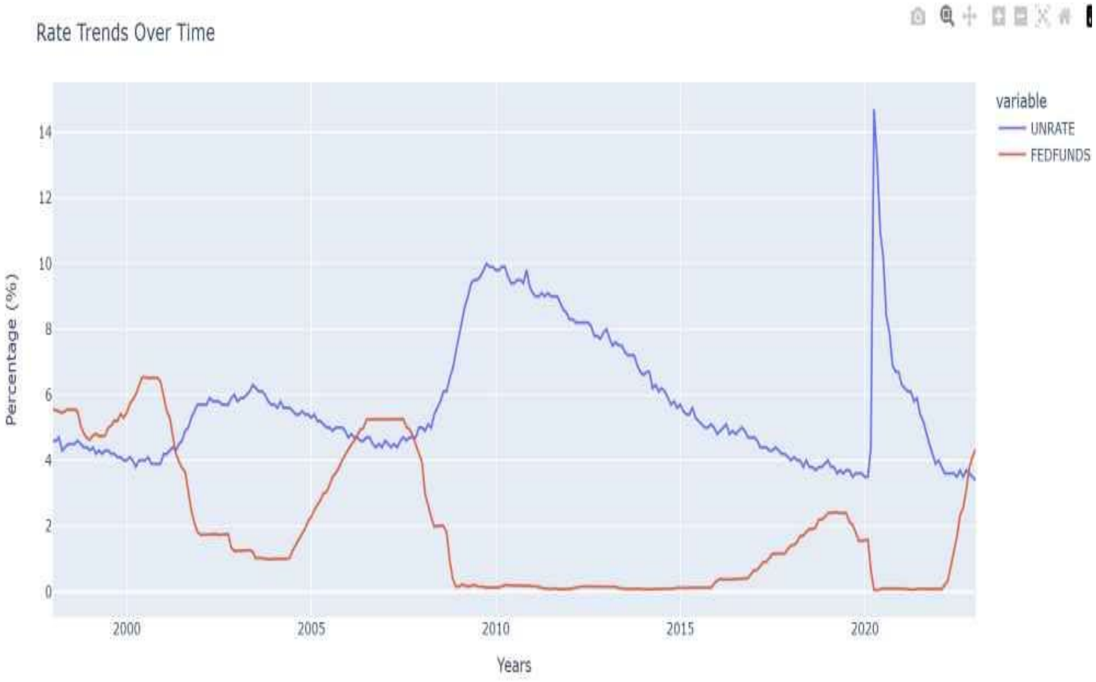
Percentage change from 1998 to 2023 is (300-162)/162 * 100 = 85% percent change in prices



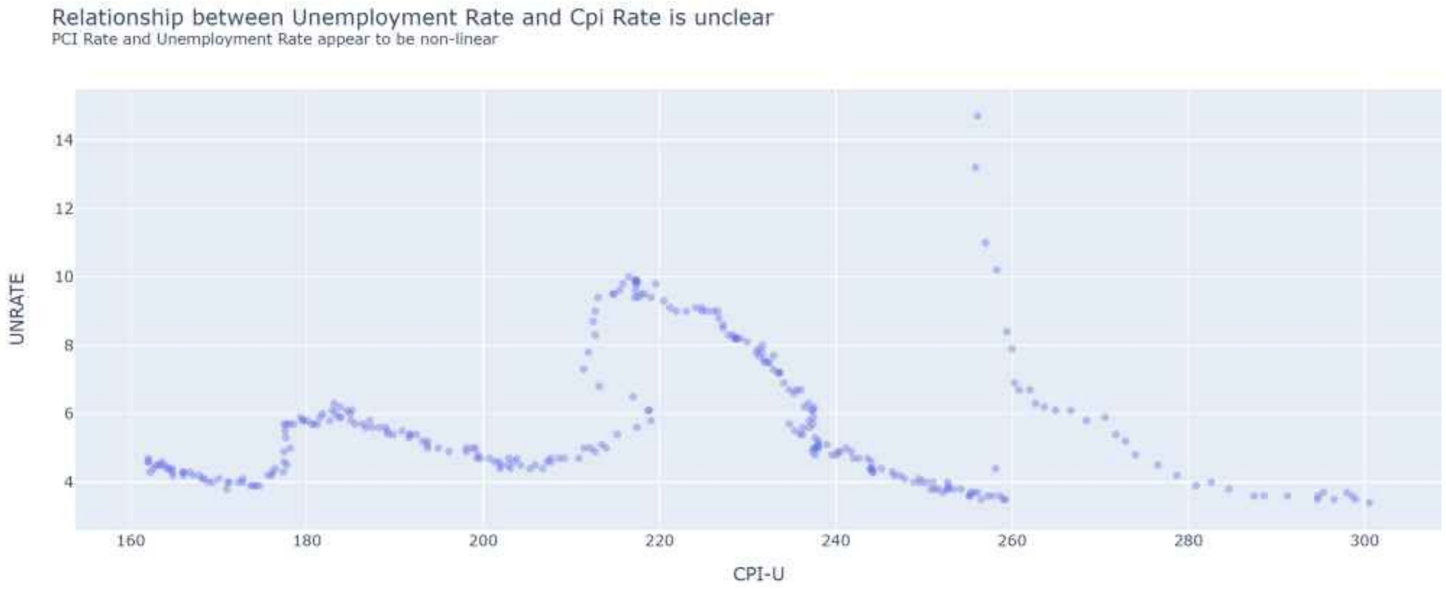
The unemployment rate of the last 25 years

We see the unemployment rate has been rising and falling we see sharp rises of unemployment during 2008 which had steadily shrunk over the year until 2020 when the pandemic had occurred,with the unemployment rate reaching a peak of 14%,until it gradually started to fall

Overlayed Plot of Unemployment and Fed Fund Rate



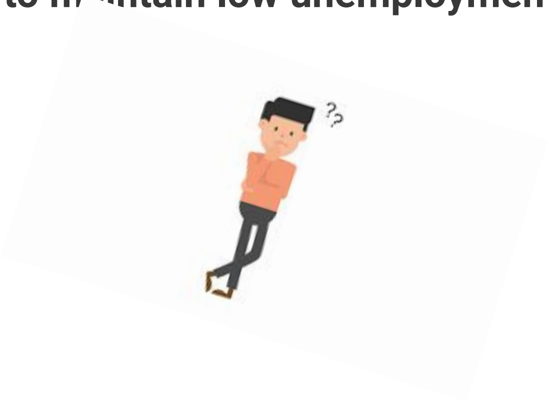
I've plotted the CPI Rate and The unemployment Rate on the same plot, it appears that the relationship between the two are negatively related. It seems that when the unemployment rate is decreasing the federal reserve decides to increase the fund rate to help reduce rising inflation and curb consumer spending to slow down the economy.On the other hand, when unemployment is increasing the federal fund rate is decreasing as shown during the 2008 housing crash and the pandemic in 2020 where unemployment levels were high and as a result, the federal reserve decided to significantly reduce interest rates in an attempt to stimulate the economy. In simpler terms, if unemployment rates are low increase the federal fund rate and when unemployment rates are high, decrease the federal fund rate.



I created a scatterplot to see the relationship between unemployment and cpi, the relationship seems non-linear but we can see that inflation is rising regardless of high or low unemployment rates

Has the fed been able to fulfill the mandate?

My answer **is it depends**.. from the overlaid line graphs and the scatterplot we can see that adjusting the federal fund rate has been able to influence the unemployment rate. We see that low unemployment rates lead to higher rates while high unemployment levels lead to lower rates. So the fed has been able to maintain low unemployment. However, we can see from the Cpi metric that for the last 25 years inflation has been steadily rising despite some few hiccups and no matter how much the federal fund rate is adjusted inflation keeps rising, so on that half the fed has failed. **The Fed has fulfilled half of the mandate they are able to maintain low unemployment but can not combat high inflation.**



Works Cited:

Here are the links from the data I have sourced..

This is the Cpi data I've found from Bureau of Labor Statistics.

“BLS Data Viewer.” U.S. Bureau of Labor Statistics, U.S. Bureau of Labor Statistics, [beta.bls.gov/dataViewer/view/timeseries/CUSR0000SA0](https://). Accessed 21 Sept. 2023.

This is the Unemployment Data I've found from the FRED website

“Unemployment Rate.” FRED, 1 Sept. 2023, [fred.stlouisfed.org/series/UNRATE#0](https://).

The Federal Fund Rate also from the Fred website

“Federal Funds Effective Rate.” FRED, 1 Sept. 2023, [fred.stlouisfed.org/series/FEDFUNDS](https://).