

Projecting the Price of Gold Over the Next Year

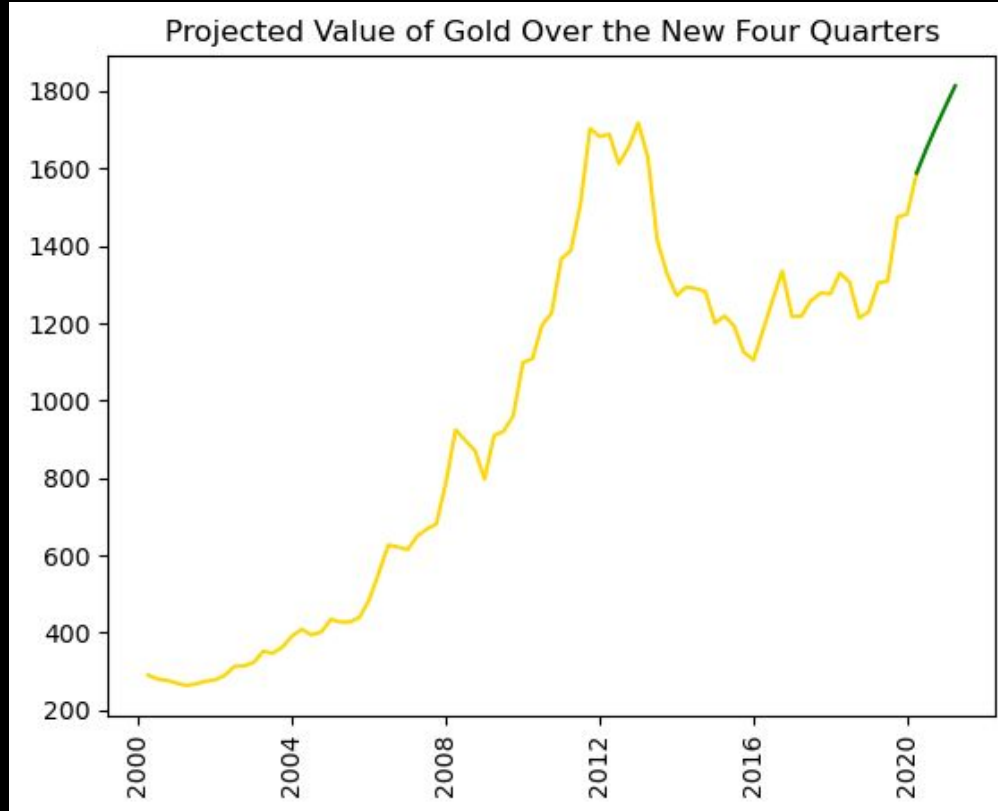
Darryl Patteson

Buy or Sell?

Is it a good time to buy gold?



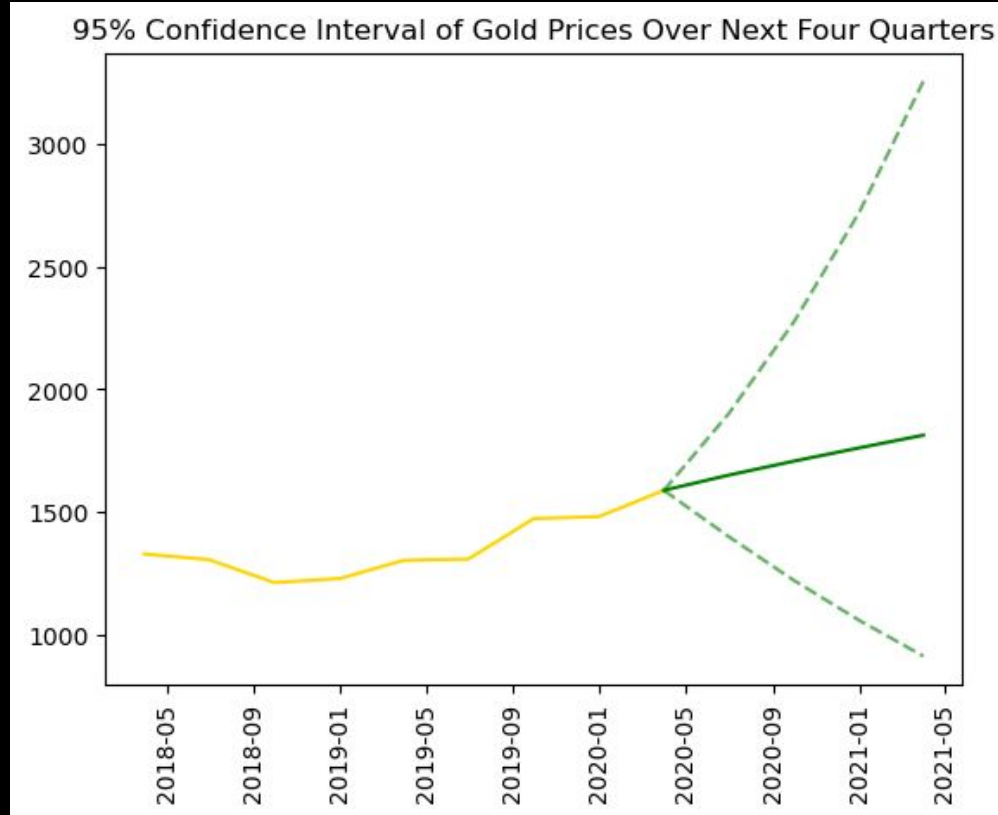
Model Results (Yes, Yes it is)



Model Results (Numbers)

Model	Predicted % Growth in Price	New Price Prediction
2020-03-31 (Last Data Point)	—	\$1588.25
2020-06-30	3.89%	\$1650.00
2020-09-30	3.47%	\$1707.26
2020-12-31	3.16%	\$1761.21
2021-03-31	2.93%	\$1812.84

Don't Grab Your Wallet Yet



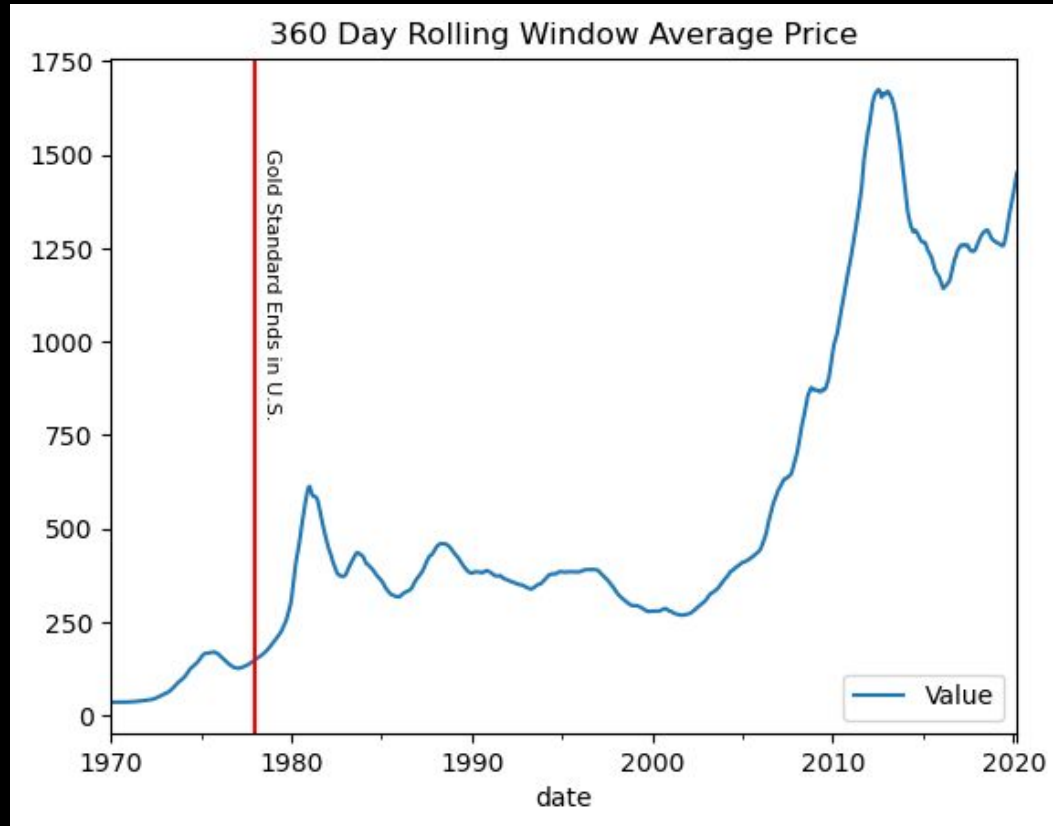
Confidence Interval Values

Model	Predicted Percent (Lower End)	Predicted Percent (Higher End)	Lower End Price Predicted	Higher End Price Predicted
2020-03-31 (Last Data Point)	—	—	\$1588.25	\$1588.25
2020-06-30	-11.84%	19.61%	\$1400.25	\$1899.76
2020-09-30	-12.75%	19.69%	\$1221.65	\$2273.90
2020-12-31	-13.33%	19.65%	\$1058.79	\$2720.76
2021-03-31	-13.70%	19.57%	\$913.70	\$3253.12

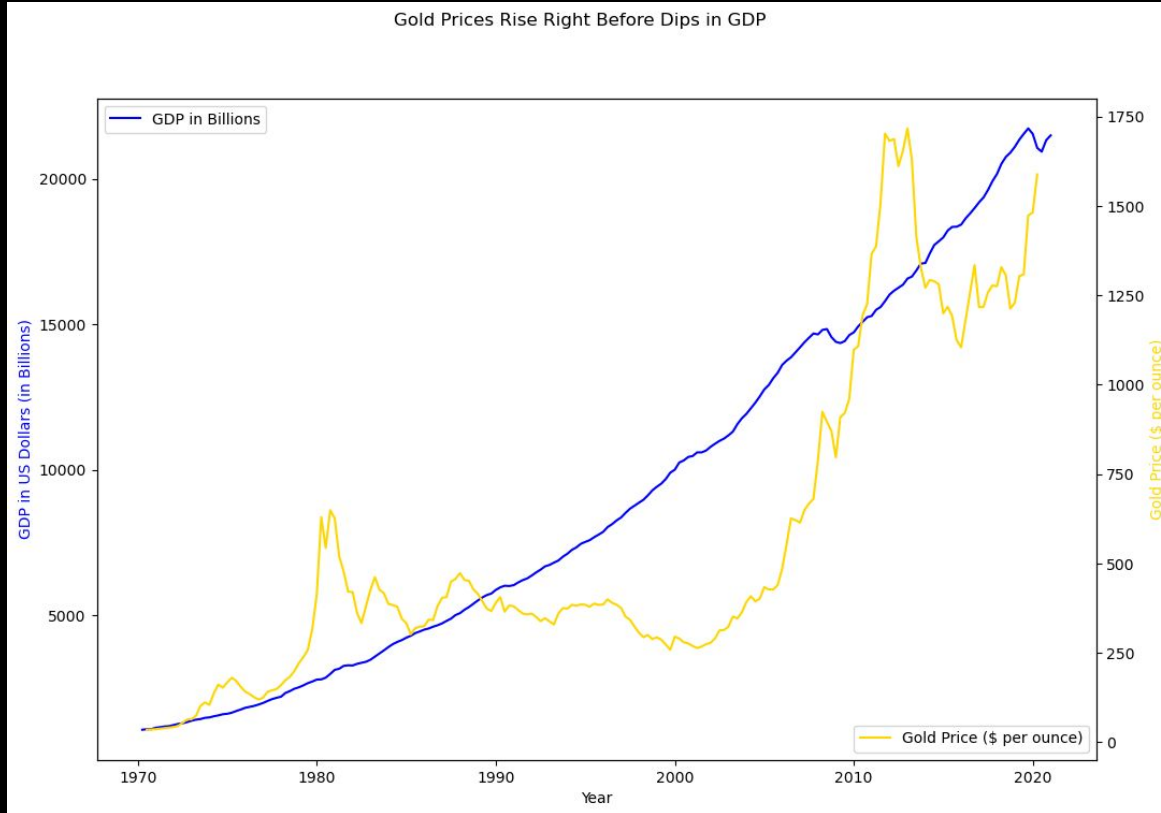
So, What Data Do We Have?

- The price information for gold since 1970
- Some data was quarterly all the way to daily
 - Data was processed to be quarterly data based on the mean of the values from that quarter
 - This quarterly data was used to build models for computing efficiency

A Quick History of Gold Prices



GDP & Gold (& Why That Matters)



Model Generation

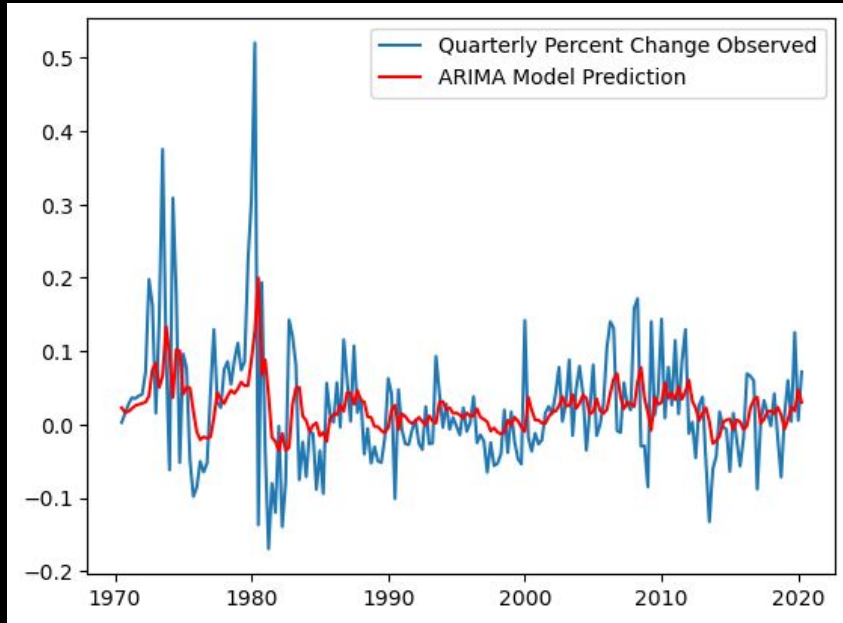
- Knowing all these things, it was time to model
- Percent change at the quarterly level was used to make data stationary
- Three models were developed and tested:
 - ARIMA
 - SES
 - Polynomial (4th Degree)

Model Performance

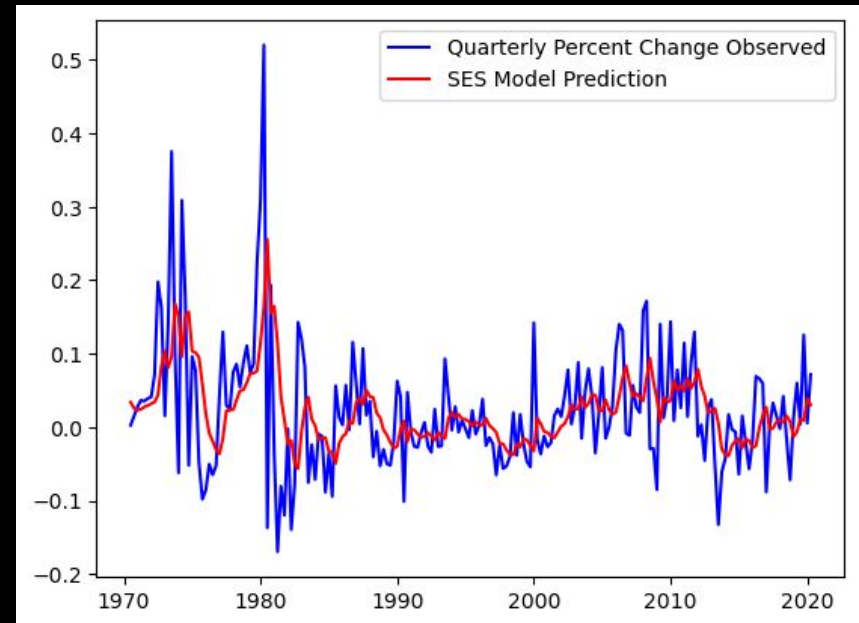
Model	Mean Squared Error
ARIMA (1, 0, 1)	0.00307
Simple Exponential Smoothing	0.00699
Polynomial 4th Degree	68591670

Model Selection: ARIMA vs. SES

ARIMA

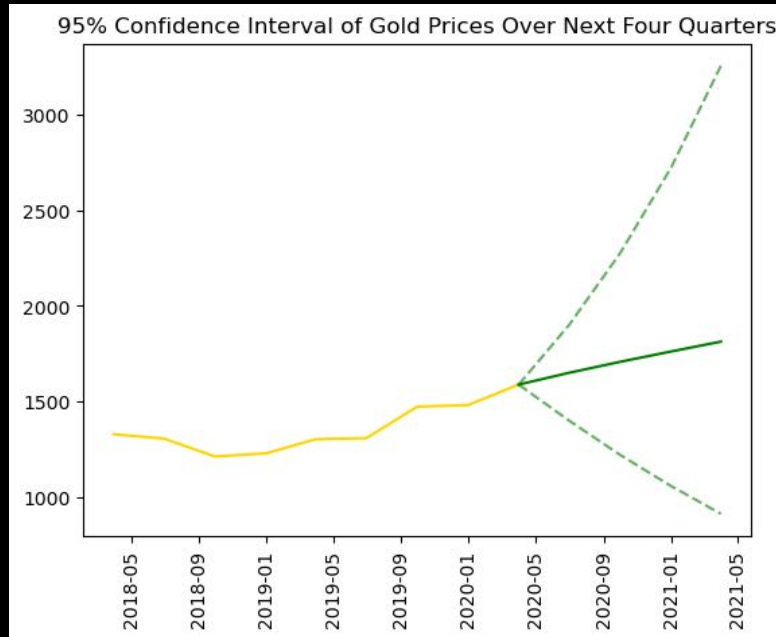


SES



Uses of the Model

- The model was used to develop the projections and confidence interval seen earlier



Buy or Sell?

Is it time to buy gold or sell gold?



A Unique Time

- With the global pandemic bound to have detrimental effects on the GDP, gold is a very smart buy right now
- We're in the middle of a third event that spikes gold sales since 2000, but there's no reason to believe that this trend won't repeat (and is repeating given that prices are already going up)!
- It is not without risk, but all signs point to this being a great time to **buy gold!**