The price of gold is just like every other commodity, using demand and supply to find equilibrium price. However, it is not as simple as it sounds. That’s to find current price estimate of gold. There will always be some daily price variation from the estimate due to differing levels of political and economic stress in each country. However, the demand and supply curve can show us an interesting story. Gold has been on a downward trend since 2011 and many experts say it won’t stop while others say that 2018 will break that trend. But, who is right? My model will only be my estimate, not the truth, however it will give a clearer picture into the gold market, factors that sway monthly gold prices, and future predictions by looking at posted growth rates.

This project will outline the several key drivers of supply and demand and the data I will be using to calculate them. Supply is determined from four major sources: mine production, scrap, net producer hedging and net government reserve sales (purchases). Mine production remains the largest source of world gold supply at about 65-70%. Mine openings and closings have a great impact on what our future estimate of supply will be. From minerals.usgs.org, I have gold production numbers from various different countries from 2014-2016. Using this 3 year span of data and current/relevant news on gold production to estimate future gold production. Scrap gold is gold that consumers decided to sell or recycle and it constitutes about 25-30% of total supply every year. From Thomson Reuters, I have found a dataset that displays yearly gold scrap from every continent and I will be estimating future gold scrap by assuming the number is directly correlated to a percentage of previous year supply. Net producer hedging is the total hedge that producers take to protect the value of their gold and I found a dataset in Thomson Reuters that displays the total net producer hedging per continent, however, I will be assuming zero net producer hedging going forward because there is too much variability in that metric and it only comprises of less than 1% of total supply, so it will not have a large impact on our total supply forecasts. Finally, net government reserve sales (purchases) are transactions used by federal agencies to control the value of their currency. These can be counted for supply or demand based on the net number. From Gold.org, I have found a dataset that displays government reserve sales per country, however I will be forecasting future sales as an average as finding the data for every country is difficult and time consuming. Together, I have the tools to estimate the supply curve of gold and predict future gold prices.

On the demand side, for factors we have: jewelry, technology, bar/coin demand, and ETF investments. Jewelry demand has been on the decline for some time partially due to the cost, however this decline is dependent on the country we are looking at. So, I will looking into some key countries, finding their past jewelry demand and applying their respective growth/decline rates. For this, I found a dataset detailing the jewelry for the last 3 years from Thomson Reuters. For technology gold demand, I will be using a rate of -2% because of its slump the past 5 years, which I assume will continue as technology companies are beginning to phase out the use of gold in their products to cut costs. The numbers for gold in technology will be coming from Thomson Reuters. Bar/coin demand has remained steady the past 3 years and therefore I will not be using a growth rate for them, instead they will remain at the levels they were at in 2016. The data for them will be coming from Thomson Reuters. Finally, ETF investments are reserves that the ETF owns which are a viable option to tracking the gold index without owning the gold. ETFs are very volatile and behave according to the rest of the stock market since gold is an alternative investment to stocks and therefore negatively correlated. Assuming there will be no drastic economic events, I will be using a reversion to mean principle and averaging past changes in ETF holdings.

Overall, at the end of this analysis, we will have a clearer understanding of the sensitivity of each factor towards overall gold demand and supply, thus creating a demand/supply curve current finding equilibrium price and estimating the yet-to-be announced 2017 gold demand/supply/price and 2018 gold demand/supply/price.