GOLD PRICES ANALYSIS REPORT

- RASHI JAIN
ID: 11920010
CBA, WINTER, 2020

ANALYSIS REPORT

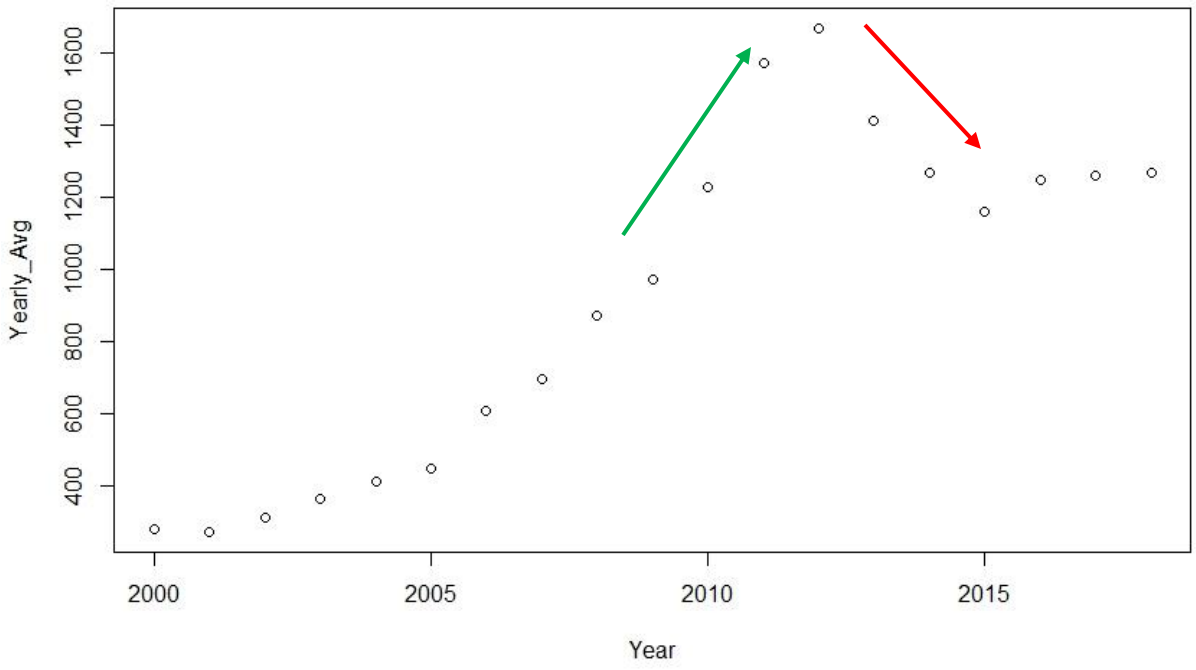
There are several factors that can affect gold prices at macroeconomic level.

The gold prices are generally inversely related to US dollar value. When its weak people prefer to invest in gold rather.
Another important reason is monetary policy of nations, which can influence the interest rates which when adjusted against inflation may be nominal gain but money loss leading the investor to take up gold. Inverse is seen when interest rates are high.

Similarly, real estate can be a driving factor for low/high returns affecting gold purchasing choice of investor.
Supply and demand is also a factor. Increased demand, for e.g., in Asian markets may lead to rise in prices. Similarly decrease in gold production may also lead to this.
One of the main influencers in gold prices is uncertainty in market over events like war, natural calamities, uprisings, etc. in which a general investor prefers to play safe and rather than relying on govt. and economy for investment, bets on gold as a safe haven

After plotting a graph between Yearly Average of the Gold_Data and years, it can be figured out-

- Price faced a sudden change from 2010 and 2011 is the year in which prices are at peak. This can be seen as green line in the graph
- From 2013, gold price faced a downfall. This is shown as red line



Reasons for sharp rise in prices in 2010-11:

These can be attributed to following Geo-political events.

- Collapse of US dollar, with soaring deficits and bad fiscal policy.
- Increase in indebtness of US and its allies.
- The real interest rates (inflation -adjusted) started to become negative.
- Unrest in middle east, debt crisis in Greece, Spain, etc. led to uncertainty in market.
- Tsunami and Fukushima nuclear crisis in Japan added more to the misery of global economy.
- Rise of the Asian powers like India, China.
- Increased the buying capacity for normal Asian consumer.

But eventually after a couple of years, the prices again began to collapse.

Reasons for decline of gold prices post 2013-14:

- Increase in business activity growth in US Purchasing Managers Index.
- Strengthening US dollar due to positive macroeconomic activity.
- Worry over increased interest rates by US Fed.
- Easing geopolitical tensions in middle east. Stabilization in Ukraine etc.
- Easing tensions with the oil producers in Iran and others at that time.

APPENDIX

Attached is the code that can also be found in the Assignment1_Rashi.R file

```
library(readxl)
library(tidyverse)

gold_data <-read_excel("C:\\Users\\rashjain\\Documents\\Gold_Historical_Prices.xlsx")
summary(gold_data)

#Checking NA's in all Columns'
for (col in colnames(gold_data)){
  print(sum(is.na(gold_data[[col]])))
}

#Since there are no empty cell in the columns so we can proceed without dropping NA's

gold_data_temp <- 0
Yearly_Avg <- vector()
Lower_CI <- vector()
Upper_CI <- vector()
Year <- vector()
j <- 1

#Loop between years 2000-2018
for (i in 2000:2018)
{
   Year[j] = paste(i,sep="")
   gold_data_temp <- subset(gold_data, Date >= paste(i,"-01-01",sep="") & Date <= paste(i,"-12-
31",sep=""))

   #finding the yearly avg
   Yearly_Avg[j] = mean(gold_data_temp$Price)

   #finding the SD, Upper CI limit and lower CI limit
   SD = sd(gold_data_temp$Price)
   n = nrow(gold_data_temp)
   Lower_CI[j] = Yearly_Avg[j]-(1.96*(SD/sqrt(n)))
   Upper_CI[j] = Yearly_Avg[j]+(1.96*(SD/sqrt(n)))
   j <- j+1
}

print(Year)
```

```
print(Yearly_Avg)
print(Lower_CI)
print(Upper_CI)

Gold_Price_Avg <- cbind(Year,Yearly_Avg,Lower_CI,Upper_CI )
View(Gold_Price_Avg)

#Plotting the graph between years and yearly_average
plot(Year, Yearly_Avg )

#writing to csv file
write.csv(Gold_Price_Avg, file = "Gold_Prices_Summary.csv")
```