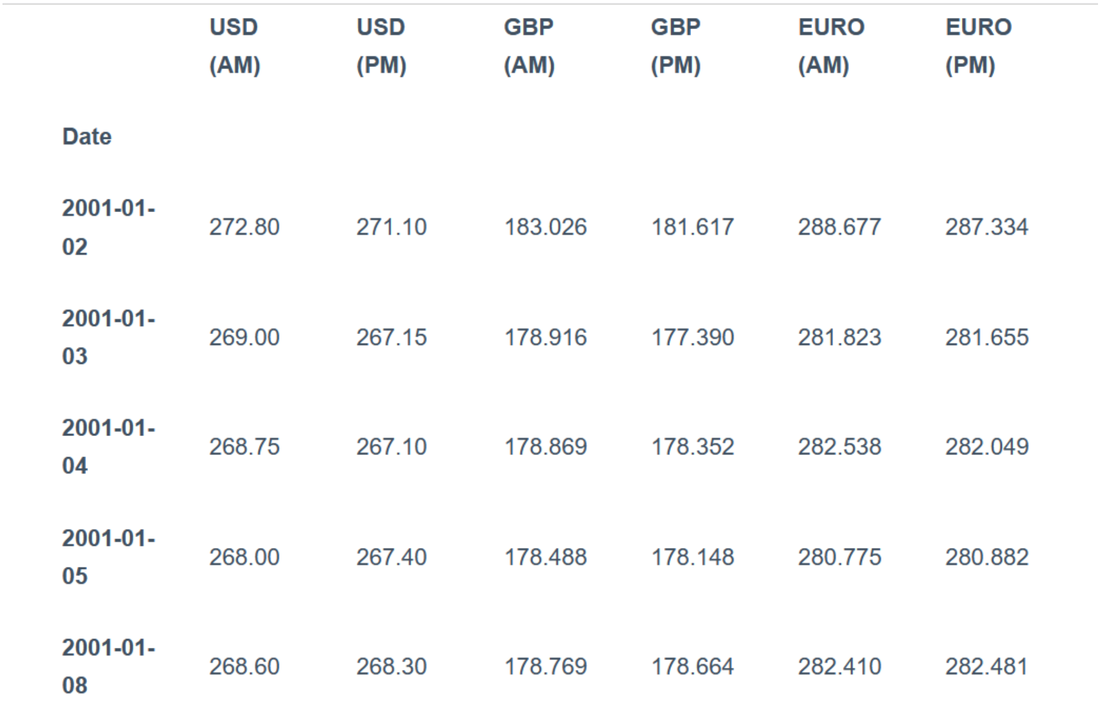
- Import Python libraries and dataset:

```
import pandas as pd
import numpy as np
%matplotlib inline
import warnings
warnings.filterwarnings('ignore')
from sklearn.linear_model import LinearRegression
df = pd.read_csv("gold_price.csv", parse_dates=True, index_col='Date')
df.head()
```



	USD (AM)	USD (PM)	GBP (AM)	GBP (PM)	EURO (AM)	EURO (PM)
Date						
2001-01-02	272.80	271.10	183.026	181.617	288.677	287.334
2001-01-03	269.00	267.15	178.916	177.390	281.823	281.655
2001-01-04	268.75	267.10	178.869	178.352	282.538	282.049
2001-01-05	268.00	267.40	178.488	178.148	280.775	280.882
2001-01-08	268.60	268.30	178.769	178.664	282.410	282.481

- Data preparation

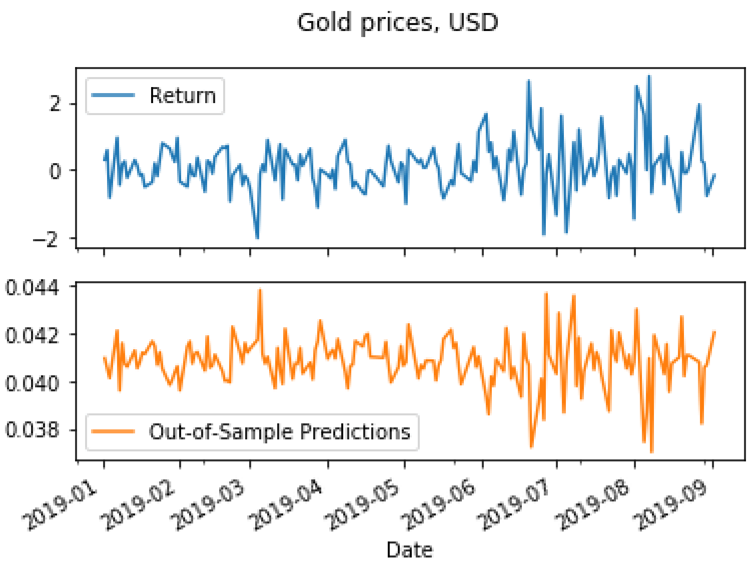
```
df['Return'] = df['USD (PM)'].pct_change() * 100
df['Lagged_Return'] = df.Return.shift()
df = df.dropna()
train = df['2001':'2018']
test = df['2019']
# Create train and test sets for dependent and independent variables
X_train = train["Lagged_Return"].to_frame()
y_train = train["Return"]
X_test = test["Lagged_Return"].to_frame()
y_test = test["Return"]
```

- Using Linear Regression Model

```
model = LinearRegression()
model.fit(X_train, y_train)
predictions = model.predict(X_test)
```

- Plot the results

```
import matplotlib.pyplot as plt
out_of_sample_results = y_test.to_frame()
# Add a column of "out-of-sample" predictions to that dataframe:
out_of_sample_results["Out-of-Sample Predictions"] = model.predict(X_test)
out_of_sample_results.plot(subplots=True, title='Gold prices, USD')
plt.show()
```


Gold prices, USD
Return
Out-of-Sample Predictions
Date