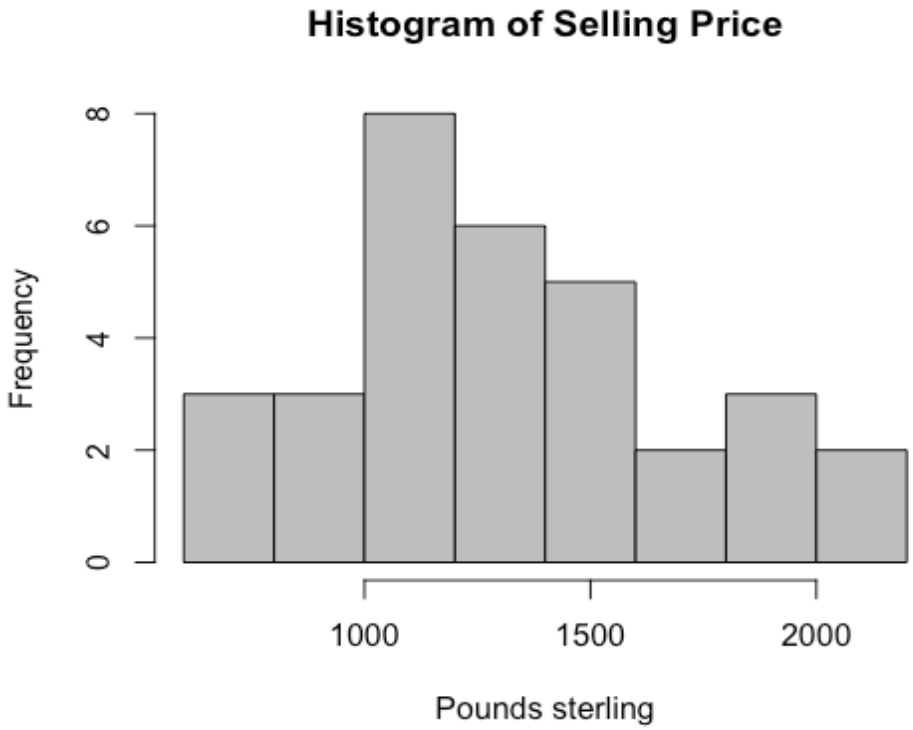
Plot of all variables in Histogram

- Histogram of selling price has a close to normal distribution.
- histogram of numbers of bidders shows a close normal distribution with a slightly right skewed distribution.
- histogram of age of the clock has a right skewed distribution, most of the data are in the range between 100 and 160 years old.



Purpose of Regression Analysis

To predict the selling price

- **Which has not occurred so far**
- **Which is difficult to measure in field situations**
- **Which should occur for a particular independent**
- **We want to predict the selling price which is the dependent variable**
- **We will use age of the clocks and number of bidders to predict the price**

Assumptions of Regression analysis must be met

1. **Dependent variable must be continuous**
    - **In this analysis price of clock is continuous**
2. **Durbin-Watson test to test for independence of observations**
    - **Result was 1.864**
    - **Range to meet assumption is 1.5 – 2.5**
    - **Assumption was met residuals are not autocorrelated**
3. **The independence variable and residuals are uncorrelated**
    - **Pearson's product moment correlations test**
4. **No perfect Multicollinearity**
5. **Normal Distribution**

Assumption graphs

- Below is a scatter plot using Regression standardized residual vs. regression standardized predicted value as a way to assess the homoscedasticity.
- In the top right, as the scatter plot follow a pattern the assumption is not met.
- The normality of the residuals is evaluated through the Normal QQ plot (top right), this follow a fair normal distribution with some deviation