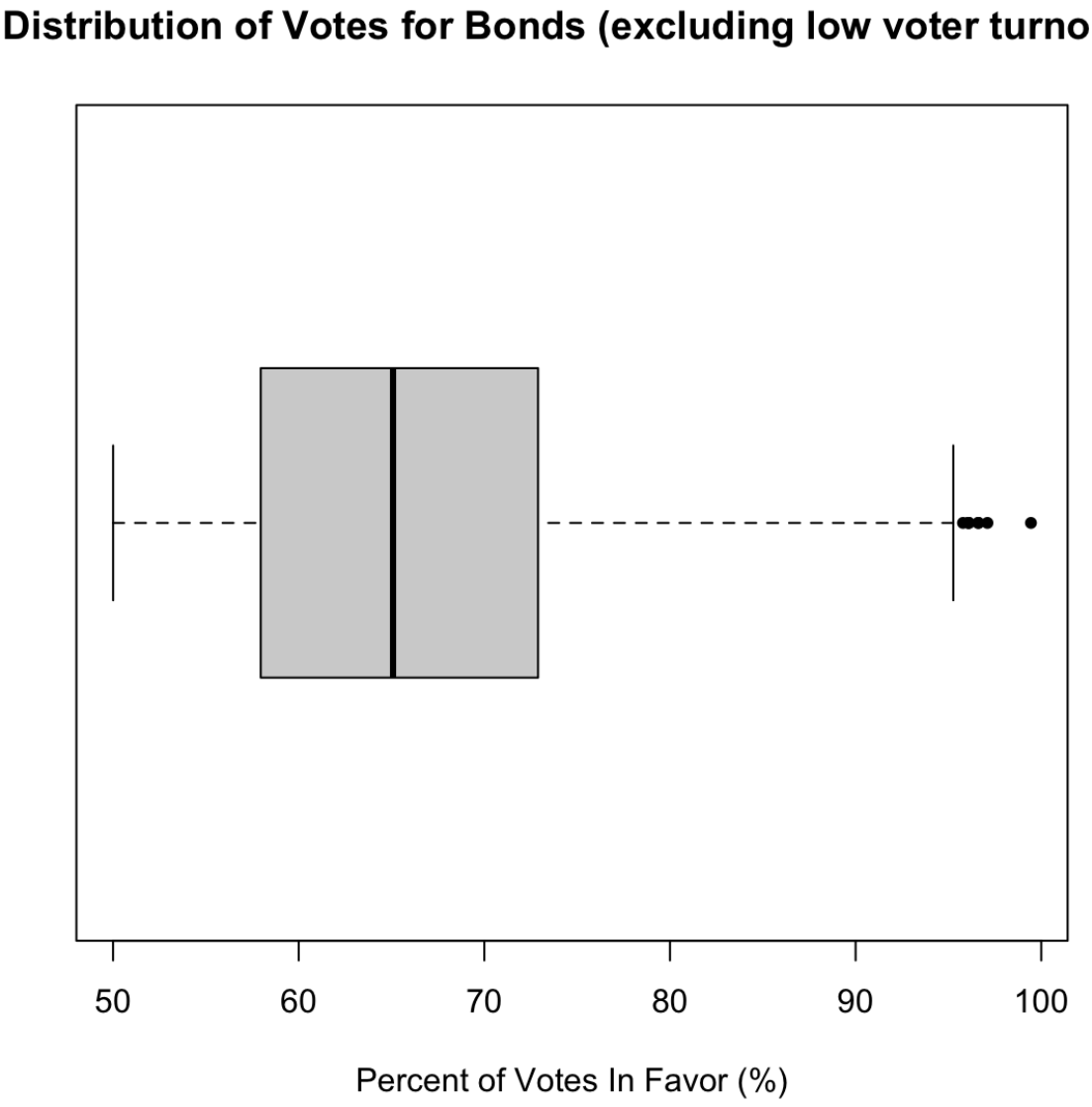
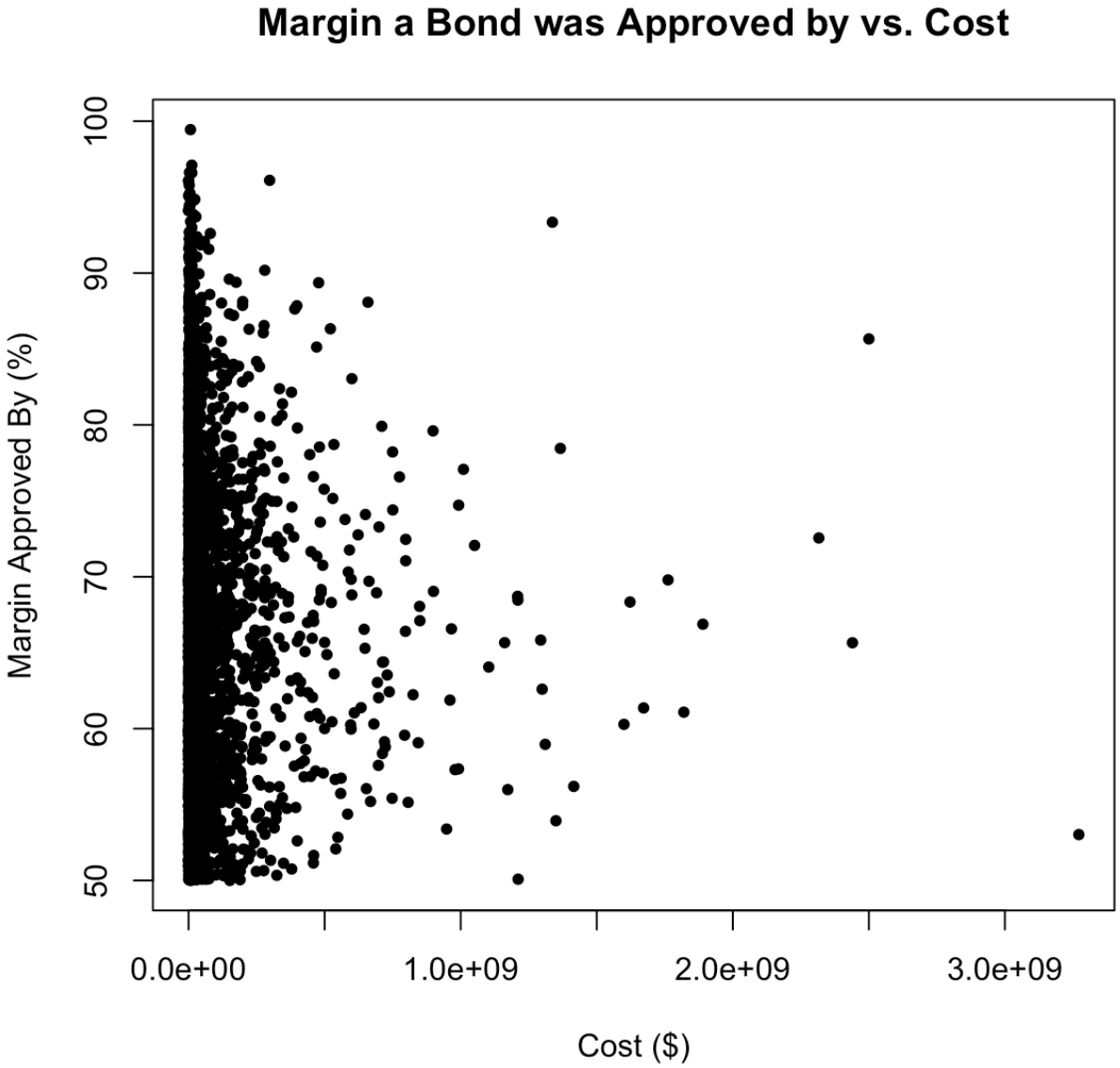
1. How many of these bonds were approved by voters, and how many were defeated? Are there any differences in the rates of approved bonds across the four different government types? Calculate the appropriate descriptive statistics to answer these questions.
    a. Approved: 7210 bonds
    b. Defeated: 1638 bonds
    c. There is a small difference in the rates of approved bonds across the four different government types
        i. They range between around 72% to 94%
            1. The percent of bond measures passed in the city level was 87.5495%
            2. The percent of bond measures passed in the ISD level was 72.4343%
            3. The percent of bond measures passed in the WD level was 94.5217%
            4. The percent of bond measures passed in the County level was 82.8%

2. Some of these bonds were on the ballot during presidential elections and therefore had very high voter turnout. Calculate a new variable in the dataframe called “Votes_Total” that is the sum of the votes “for” and “against” the bond measure. When and where did the bond measure with the highest voter turnout occur? What was it for?
    a. The bond measure with the highest voter turnout was at Harris county, during 11/8/22 for “Other” specifically “Road Utilities”.

3. Let’s look at the margins by which the carried bonds were approved, ignoring those with very low voter turnout. Create a subset of this dataset that contains the bond measures that were approved and had at least 100 total votes. Next, create a new variable within the subset data frame that gives the percentage of total votes that were for the bond measure and make a graph of the distribution of this new variable. Describe its distribution with the appropriate statistics.
    a. The standard deviation was 10.10567
    b. The min, 1st quartile, median, 3rd quartile, and max respectively
        i. 50.00404 57.95697 65.08279 72.89632 99.44444
    c. The interquartile range was 14.93935



4. Is the margin a bond was approved by related to its cost? Use your subset from #3 to create a graph to display this relationship. Then, answer this question, citing the appropriate descriptive statistic.
    a. No there is no relationship shown by the data/graph to support the statement that the margin a bond was approved by is related to its cost
    b. The correlation coefficient between the margin a bond was approved by and its cost is 0.0005, suggesting no correlation


Margin a Bond was Approved by vs. Cost
Margin Approved By (%)
100
90
80
70
60
50
0.0e+00
1.0e+09
2.0e+09
3.0e+09
Cost ($)