

Stocking Presidents

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Motivation + Summary

Hypothesis – If the president influences the stock market, we would expect that the frequency of positive or negative close days, measured from election day to inauguration and total term of each President, would be greater than the market historical average from January 3, 2000 to September 27, 2019.

Null Hypothesis – If the president does not influence the stock market, we would expect that the frequency of positive or negative close days, measured from election day to inauguration and total term of each President, would be equal to the market historical average from January 3, 2000 to September 27, 2019.

Understanding the problem

Question 1

Does the President have an impact on the stock market?

Question 2

Is there a difference between the frequency of positive or negative days when comparing presidents?

Question 3

What are the changes to the Dow Jones Industrial Average from election to inauguration day and within a president's term?

Data Exploration + Clean up



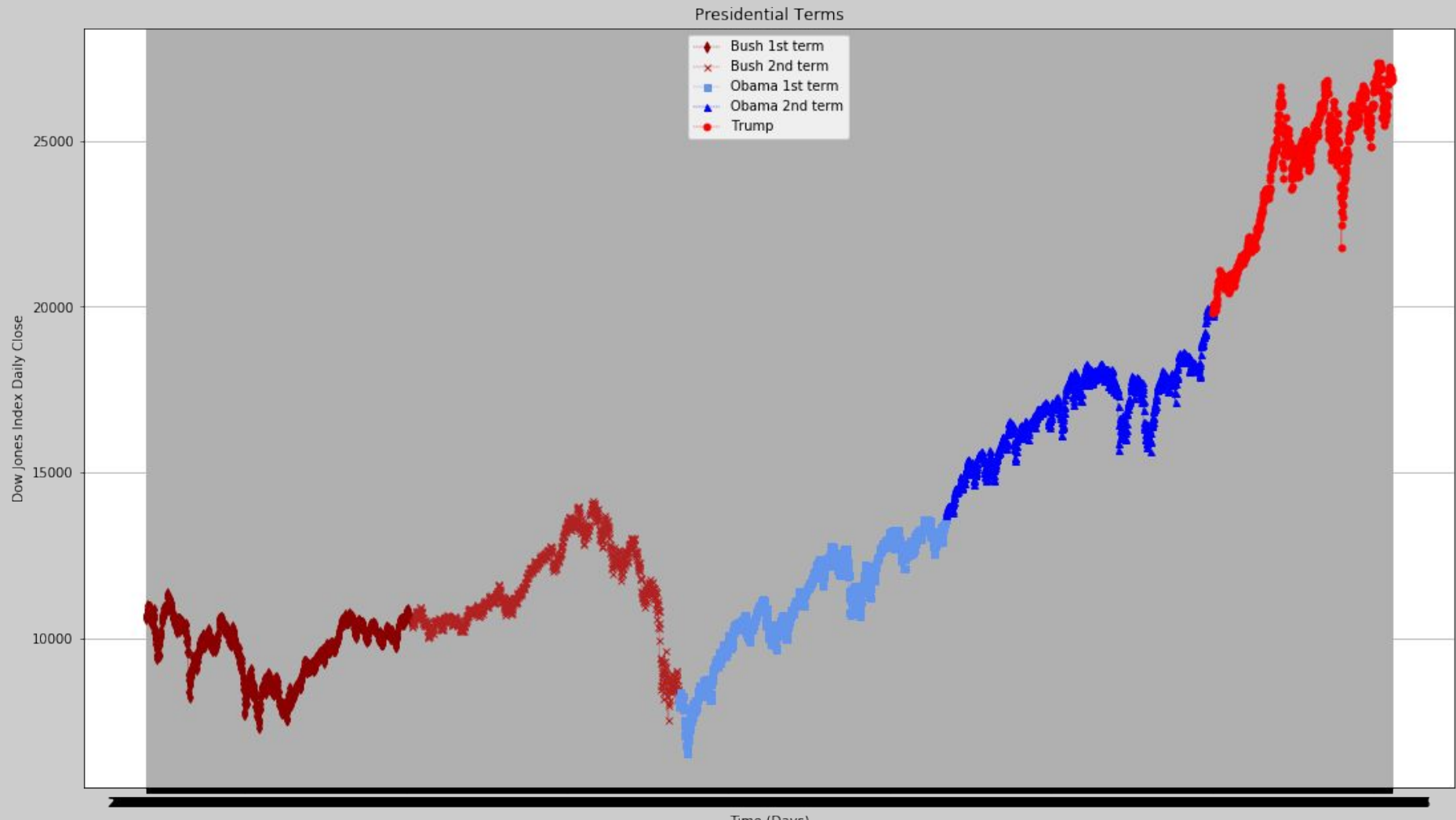
Data Exploration + Clean up

- API
- Timestamp
- Insights
 - +, - Meaning?
 - Mean
 - Wald-Wolfowitz runs test
- Data Inversion

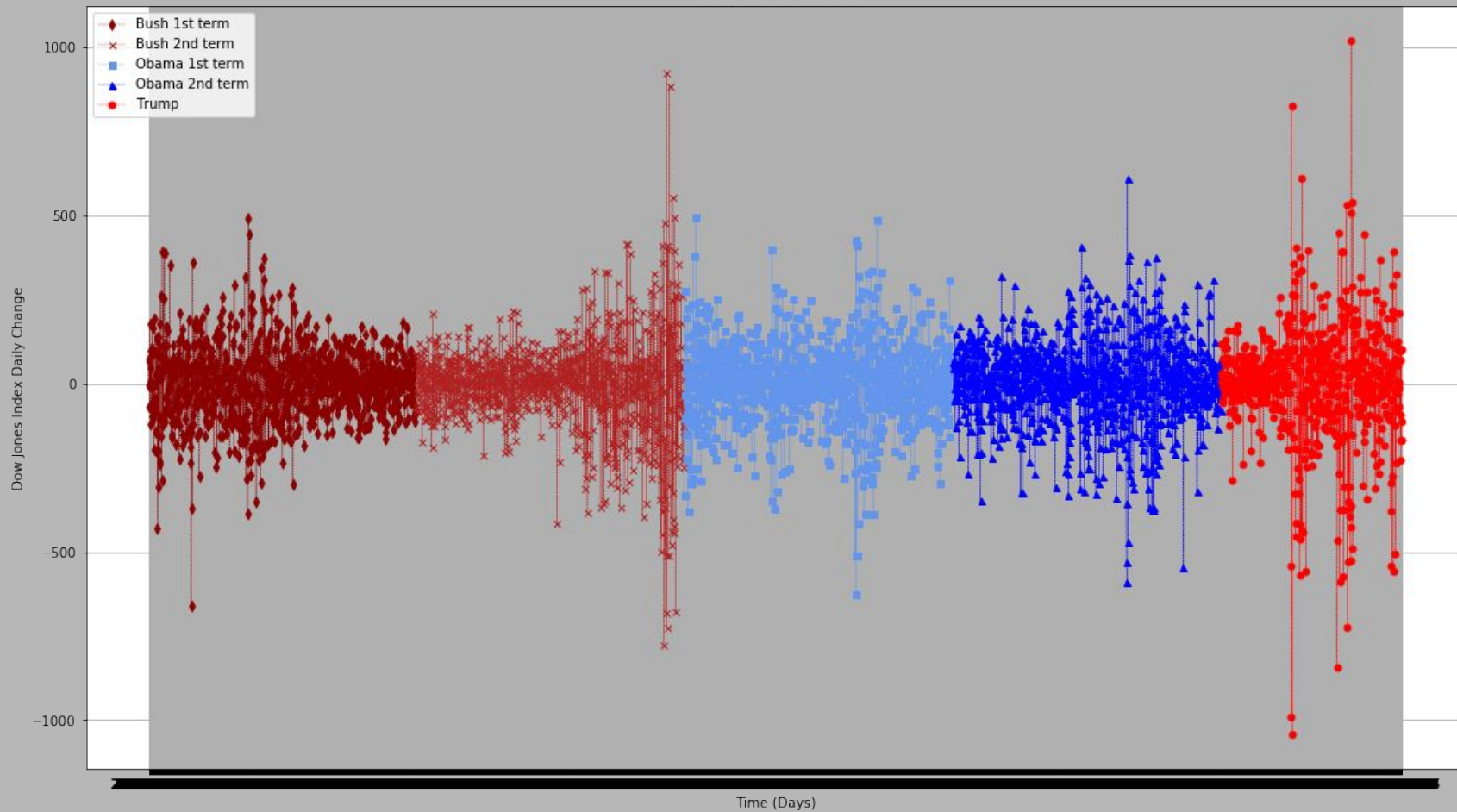
Data Analysis

Question 3

What are the changes to the Dow Jones Industrial Average from election to inauguration day and within a president's term?

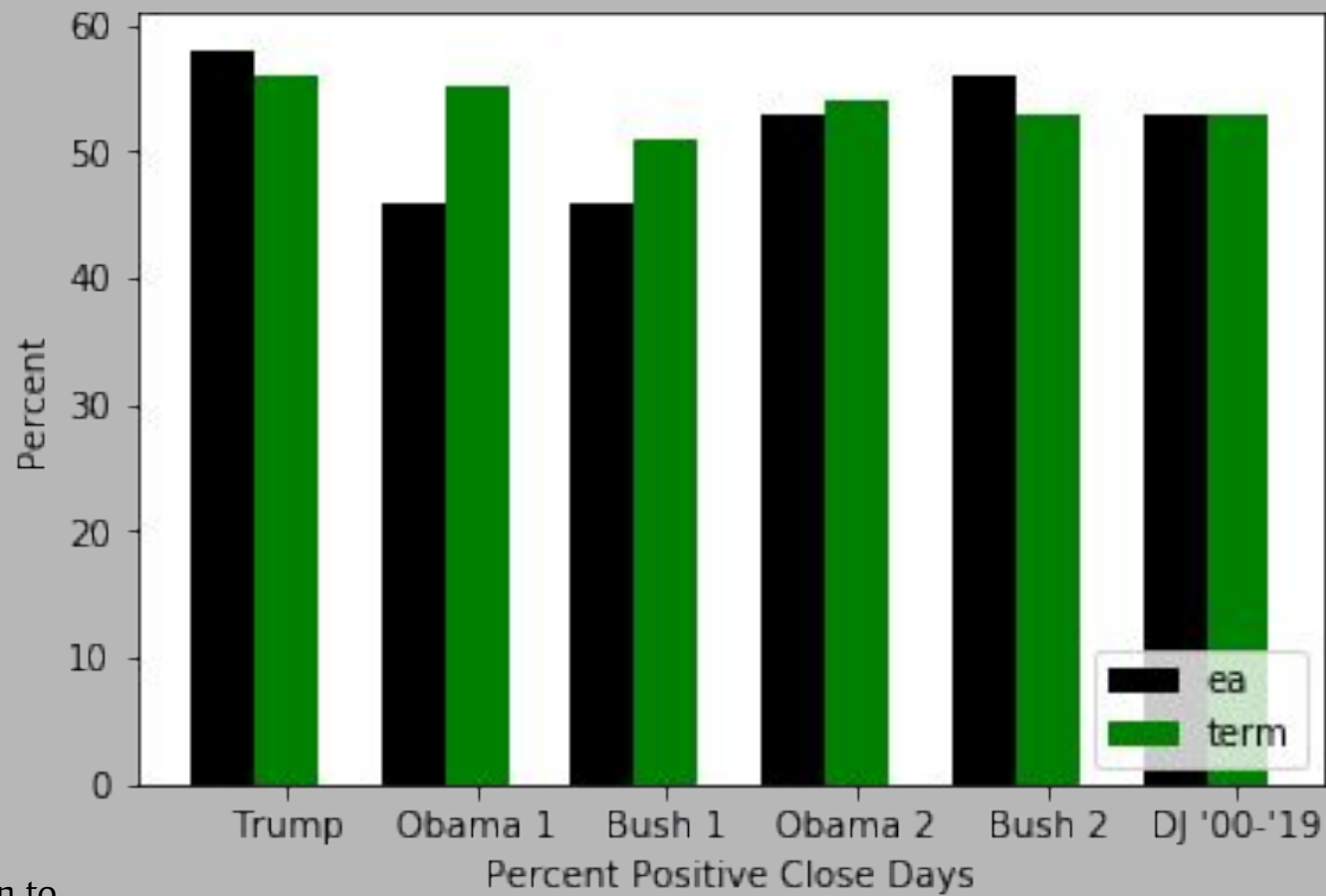


Presidential Terms



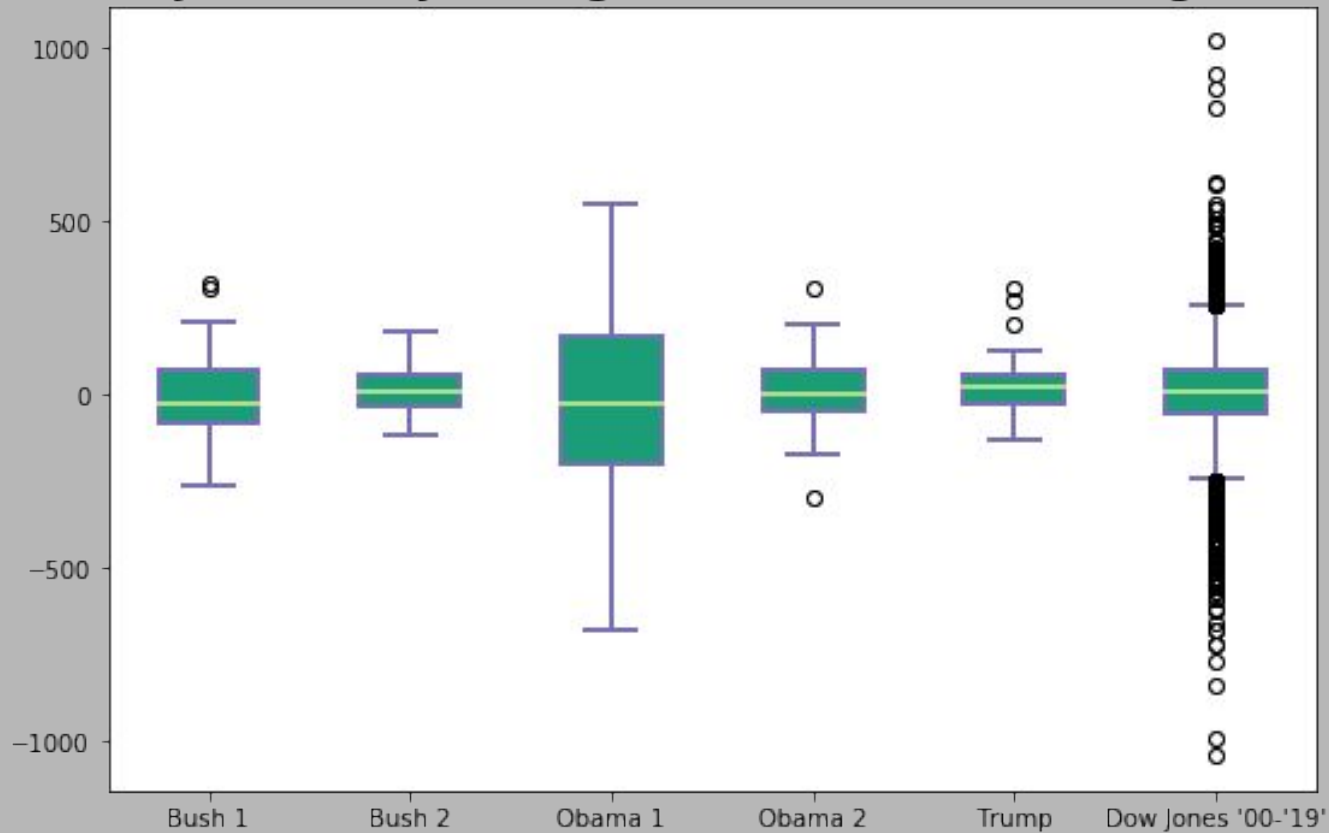
Question 2

Is there a difference between the frequency of positive or negative days when comparing presidents?

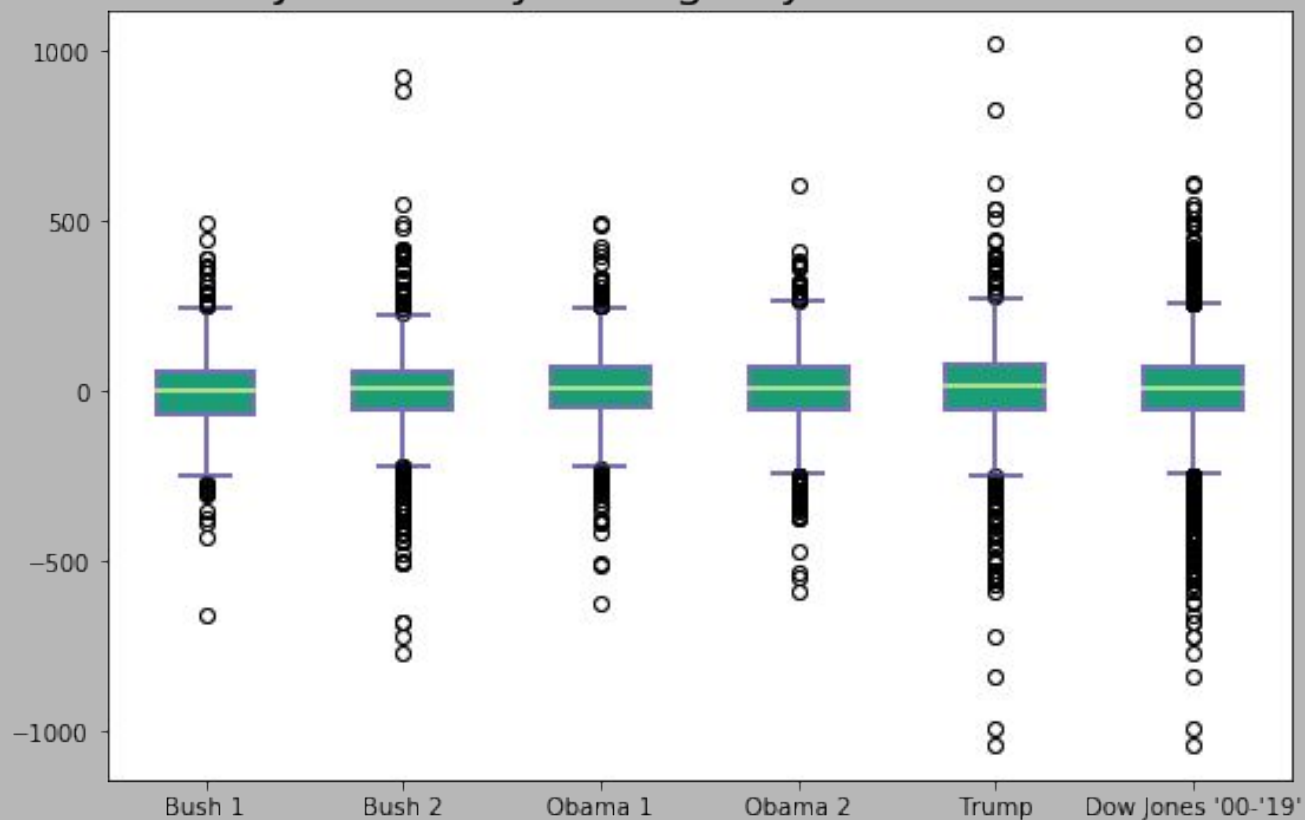


ea = Election to
Inauguration

Dow Jones Daily Change from Election to Inauguration



Dow Jones Daily Change by Presidential Term



Wald-Wolfowitz runs test

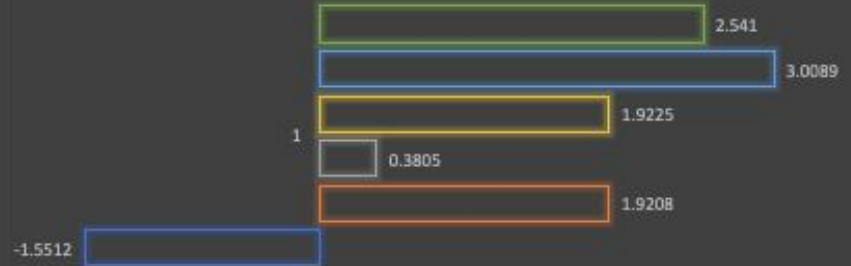
Election To Inauguration Z

Dow Bush 1 Bush 2 Obama 1 Obama 2 Trump



Full Term Z

Dow Bush 1 Bush 2 Obama 1 Obama 2 Trump



Question 1

Does the President have an impact on the stock market?

Discussion

Volatility

- Uncertainty between election and inauguration

Presidential Term

- Overall, minimal differences by term or Presidents

Failed to Reject the Null Hypothesis

- Forces other than the President have a greater effect on the stock market.

References

Alpha Vantage (n.d.) <https://www.alphavantage.co/>

Dow Jones Historical Chart (20 year). <https://www.macrotrends.net/1319/dow-jones-100-year-historical-chart>

100 years DJ Industrial Average Chart (n.d).

<https://tradingninvestment.com/100-years-dow-jones-industrial-average-djia-events-history-chart/>

Real Statistics Runs Distribution (Wald-Wolfowitz Runs Test)

<http://www.real-statistics.com/non-parametric-tests/one-sample-runs-test/runs-distribution/>