Purpose of the Analysis

The purpose of this analysis is to assess the performance of a group of green energy stocks for the years 2017 and 2018, with initial focus on one company, DAQO New Energy Corporation. The client initially invested solely and heavily in this company, and now wishes to evaluate if there are other, more productive options. The analysis thus focused on DAQO both on its own and as it compares with the other stocks, and then opened up to review all other stocks’ performance.

Data File

The data file comprises these elements: Ticker (the identifying exchange symbol), date, opening value, high value, low value, close (ing) value, adjusted Close (ing) value, and volume exchanged for the date. The analysis considered total daily volume and rate of return. In the cross-year analysis, the following trends emerged:

By reviewing the performance as a group over a multi-year period, the analysis can reveal any trends and help investors make informed decisions about their investment strategy.

Overall between 2017 and 2018:

* Stock returns declined as a group nearly 76 percentage
* Average returns for 2017 were 67.3%
* Average returns for 2018 declined to -8.5%
* Trading volume increased about 4%,

DQ’s Performance

* DQ had the lowest volume trade of all stocks in 2017, but carried the highest percent return (199.4%)
* DQ’s rate of return fell to -45% in 2018
* DQ’s volume trading was -85% of the mean in 2017;
* In 2018, DQ increased trade volume to 61% of the mean
* For 2018, DQ 4th scored in the quartile for volume trade and rate of return, at

Higher Performing Stocks

* Of the remaining socks, two stood out: ENPH and RUN both increased trading volume and returns over the time period
* 2017, both traded very close to the mean of 263,886,592
* 2018, both traded in excess of 50% of the mean
* Both had positive rates of return in 2017 and 2018; ENPH’s return decreased somewhat in 2018; while RUN’s increased solidly.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **All Stocks 2017** | |  |  | **All Stocks 2018** |  |  |  |
|  |  |  |  |  |  |  |  |
| **Ticker** | **Total Daily Volume** | **Return** | **Ticker** | **Total Daily Volume** | **Return** | **Volume Difference** | **Return Difference** |
| AY | 136,070,900 | 8.9% | AY | 83,079,900 | -7.3% | -52,991,000 | -16.2% |
| CSIQ | 310,592,800 | 33.1% | CSIQ | 200,879,900 | -16.3% | -109,712,900 | -49.4% |
| DQ | 35,796,200 | 199.4% | DQ | 107,873,900 | -62.6% | 72,077,700 | -262.0% |
| ENPH | 221,772,100 | 129.5% | ENPH | 607,473,500 | 81.9% | 385,701,400 | -47.6% |
| FSLR | 684,181,400 | 101.3% | FSLR | 478,113,900 | -39.7% | -206,067,500 | -141.0% |
| HASI | 80,949,300 | 25.8% | HASI | 104,340,600 | -20.7% | 23,391,300 | -46.5% |
| JKS | 191,632,200 | 53.9% | JKS | 158,309,000 | -60.5% | -33,323,200 | -114.4% |
| RUN | 267,681,300 | 5.5% | RUN | 502,757,100 | 84.0% | 235,075,800 | 78.4% |
| SEDG | 206,885,200 | 184.5% | SEDG | 237,212,300 | -7.8% | 30,327,100 | -192.2% |
| SPWR | 782,187,000 | 23.1% | SPWR | 538,024,300 | -44.6% | -244,162,700 | -67.7% |
| TERP | 139,402,800 | -7.2% | TERP | 151,434,700 | -5.0% | 12,031,900 | 2.2% |
| VSLR | 109,487,900 | 50.0% | VSLR | 136,539,100 | -3.5% | 27,051,200 | -53.5% |
|  | **3,166,639,100** | **67.3%** |  | **3,306,038,200** | **-8.5%** | **139,399,100** | **-75.8%** |

Refactored Script

The project resulted in a workbook that can be used on other stock analyses. The original script called for looping through the data set, which included over 3,000 lines, multiple times to collect the data points and calculate the output. Refactoring the script provided cleaner, tighter code and reduced processing time by about a second. The greatest advantage in this instance would be the readability and elegance of the code, which would allow easier changes to the program in future. For data sets of significant size, the reduction in processing time could be significant.