**Elijah Daley**
**VBA Final Project**

## Project Write-Up

### Executive Summary

In order to make money on the side, and earn a better return on my money as opposed to using a savings account, I trade stocks. One thing that I have noticed over and over in the stock market is that investors tend to overreact. Whenever investors get overly excited or overly spooked by news or economic data it opens up the possibility that a stock's price will be traded above or below its true value. One example of this was the Gulf of Mexico oil spill. In a matter of days BP's stock price plummeted from around $60 a share to under $30 a share. The market essentially cut BP's market capitalization in half, a loss of roughly $100 billion dollars. This occurred in spite of the fact that experts were predicting the total liabilities of BP to be between $30 and $60 billion. Although this is an extreme example these situations occur frequently in the market. Unfortunately for standard investors these market overreactions are often exploited by institutional investors in after-hours or early morning trading. I wanted to create a tool that can be used to calculate the percentage change data for all stocks in a list, in this case all stocks on the NYSE or NASDAQ. The spreadsheet then identifies the five biggest gainers and losers for the day and outputs that data into a separate sheet for review.

### Creation Process

```
Sub cleanTickers()
Dim x As Integer
Dim y As Integer
Dim r As Integer

y = ActiveWorkbook.ActiveSheet.Cells.Range("A1040000").End(xlUp).Row
'Debug.Print y

For x = 2 To y
    r = Len(Cells(x, 1))
    r = r - 1
    Debug.Print "length = " & r
    Cells(x, 1) = Left(Cells(x, 1), r)

Next


End Sub
```

```
Sub deleteBad()
Dim x As Integer
Dim y As Integer

y = ActiveWorkbook.ActiveSheet.Cells.Range("A1040000").End(xlUp).Row

For x = y To 2 Step -1

    If InStr(1, Cells(x, 1), ".", vbTextCompare) Then
    Rows(x).Delete
    ElseIf InStr(1, Cells(x, 1), "-", vbTextCompare) Then Rows(x).Delete
    End If

Next

End Sub
```

My first task was to find a full listing of stocks on the NYSE and the NASDAQ. I determined to simply import the full list of stock tickers for both exchanges into my spreadsheet as opposed to writing code to download that each time. This was logical as the stocks listed on the NYSE and NASDAQ do not change with much frequency. The data I downloaded was not in a form that would allow me to use it in a web query thus my first task was writing code to clean up this data. After cleaning up the data I was left with two tabs, one for each exchange with roughly 2600 stock tickers each. I determined to leave the tabs separate as this allows me to only query either stocks on the NYSE or NASDAQ instead of having to do both each time. As it can take upwards of a half hour to query that much data I felt it was better to keep them separate. I also programmed my code to allow me to add stock tickers to the data or remove stock tickers and the code will recalculate the number of stocks listed each time it runs

B13 | Bluelinx Holdings Inc.

| | A | B |
|---|---|---|
| 1 | Symbol | Description |
| 2 | SWM | Schweitzer-Mauduit International Inc. |
| 3 | BTH | Blyth Inc. |
| 4 | GFC | Gerova Financial Group Ltd |
| 5 | VGR | Vector Group Ltd. |
| 6 | CMG | Chipotle Mexican Grill Inc. |
| 7 | BBX | BankAtlantic Bancorp Inc. |
| 8 | WHX | Whiting USA Trust I |
| 9 | BIG | Big Lots Inc. |
| 10 | ABM | ABM Industries Incorporated |
| 11 | KH | China Kanghui Holdings |
| 12 | DHX | Dice Holdings Inc. |
| 13 | BXC | Bluelinx Holdings Inc. |
| 14 | TOO | Teekay Offshore Partners L.P. |
| 15 | HRG | Harbinger Group Inc |
| 16 | MPX | Marine Products Corporation |
| 17 | RY | Royal Bank Of Canada |
| 18 | SUN | Sunoco Inc. |
| 19 | SRT | StarTek Inc. |
| 20 | GAS | Nicor Inc. |
| 21 | SBX | SeaBright Holdings Inc. |
| 22 | JTX | Jackson Hewitt Tax Services |
| 23 | FBP | First BanCorp. |
| 24 | TCL | Tata Communications Limited |
| 25 | BSBR | Banco Santander Brasil SA |
| 26 | VIT | Vanceinfo Technologies Inc |

NYSE | Nasdaq
Ready

Once my data was imported into the spreadsheet I then began to write my VBA code in order to query the data for each stock ticker. I determined that I wanted the opening price and current price for each stock and I used Yahoo! Finance to accomplish this. This was the first area where I encountered major problems. I initially wrote my code to just refresh a web query that would already exist in the tab labeled data. Unfortunately every time I ran the code it would freeze after querying only 50 or 60 stocks. After doing some research I learned that there is no timeout setting for a web query refresh in excel. This was obviously a problem as a bad stock ticker or a hiccup in the network would prevent my code from successfully executing. I thus decided to write my code so that for each stock ticker it deletes the data tab, creates a new data tab and creates a new web query. This proved to be a much more resilient way of writing my code as it quickly passed over any stock tickers that were invalid and did not successfully query.

```
For x = 2 To y
Application.ScreenUpdating = False

Application.DisplayAlerts = False
    On Error Resume Next
    Sheets("data").Delete
    Sheets.Add.Name = "Data"
    Sheets("data").Move after:=Sheets(Worksheets.Count)
    On Error GoTo 0
Application.DisplayAlerts = True

Sheets(home).Select
Cells(x, 1).Select

Selection.Copy
    Sheets("Data").Select
    Range("A1").Select
    ActiveSheet.Paste
    ticker = Range("a1").Value
    Range("A2").Select
    Application.CutCopyMode = False

    With ActiveSheet.QueryTables.Add(Connection:= _
        "URL;http://finance.yahoo.com/q?s=" & ticker, Destination:=Range("$A$2"))
        .Name = ticker
        .FieldNames = True
        .RowNumbers = False
        .FillAdjacentFormulas = False
        .PreserveFormatting = True
        .RefreshOnFileOpen = False
        .BackgroundQuery = True
        .RefreshStyle = xlInsertDeleteCells
        .SavePassword = False
        .SaveData = True
```

The results of this code segment are seen below:

| | A | B | C | D |
|---|---|---|---|---|
| 1 | **Symbol** | **Description** | **Last Trade** | **Previous Close** |
| 2 | SWM | Schweitzer-Mauduit International Inc. | 56.96 | 64.62 |
| 3 | BTH | Blyth Inc. | 40.19 | 45.48 |
| 4 | GFC | Gerova Financial Group Ltd | 20.26 | 21.86 |
| 5 | VGR | Vector Group Ltd. | 16.74 | 17.9 |
| 6 | CMG | Chipotle Mexican Grill Inc. | 235.95 | 250.96 |
| 7 | BBX | BankAtlantic Bancorp Inc. | 0.8 | 0.85 |
| 8 | WHX | Whiting USA Trust I | 20.35 | 21.52 |
| 9 | BIG | Big Lots Inc. | 29.5 | 31.09 |
| 10 | ABM | ABM Industries Incorporated | 22.32 | 23.51 |
| 11 | KH | China Kanghui Holdings | 21.68 | 22.79 |
| 12 | DHX | Dice Holdings Inc. | 10.96 | 11.5 |
| 13 | BXC | Bluelinx Holdings Inc. | 3.58 | 3.75 |
| 14 | TOO | Teekay Offshore Partners L.P. | 27.8 | 29.11 |
| 15 | HRG | Harbinger Group Inc | 4.75 | 4.97 |
| 16 | MPX | Marine Products Corporation | 6.29 | 6.58 |
| 17 | RY | Royal Bank Of Canada | 53.17 | 55.57 |
| 18 | SUN | Sunoco Inc. | 39.58 | 41.2 |
| 19 | SRT | StarTek Inc. | 4.29 | 4.46 |
| 20 | GAS | Nicor Inc. | 44.86 | 46.63 |
| 21 | SBX | SeaBright Holdings Inc. | 8.66 | 9 |
| 22 | JTX | Jackson Hewitt Tax Services | 0.77 | 0.8 |
| 23 | FBP | First BanCorp. | 0.26 | 0.27 |
| 24 | TCL | Tata Communications Limited | 11.72 | 12.17 |
| 25 | BSBR | Banco Santander Brasil SA | 13.32 | 13.8 |
| 26 | VIT | Vanceinfo Technologies Inc | 38.95 | 40.33 |

Next I needed to calculate the percentage change for each stock which I did using a separate loop. After the percentage change was calculated for each stock I used a separate sub procedure to sort the data based on percent change.

```
Sub calcChange()
Dim x As Integer

y = Range("a1048576").End(xlUp).Row
Columns("E:E").Select
    Selection.Style = "Percent"
    Selection.NumberFormat = "0.00%"

For x = 2 To y
On Error Resume Next

    Cells(x, 5).Value = (Cells(x, 3) - Cells(x, 4)) / Cells(x, 4)

Next


End Sub
```

```
Sub sortData()

y = Range("a1048576").End(xlUp).Row

Range(Cells(1, 1), Cells(y, 5)).Sort key1:=ActiveSheet.Columns("E"), _
order1:=xlAscending, Header:=xlYes, ordercustom:=1, _
MatchCase:=False, Orientation:=xlSortColumns


End Sub
```

The last thing I had to do was get the data I wanted into another sheet so that I could easily view it. I wrote another sub procedure to accomplish this which creates a new tab called Biggest Changers (name of tab that holds the stocks). This code also deletes any existing tab by the same name so that only the newest set of data is shown. The code also formats the sheet making the page look easily readable and professional as shown below.

| **Biggest Losers** | | | | |
|---|---|---|---|---|
| **Symbol** | **Description** | **Last Trade** | **Previous Close** | **Percent Change** |
| SWM | Schweitzer-Mauduit International Inc. | 56.96 | 64.62 | -11.85% |
| BTH | Blyth Inc. | 40.19 | 45.48 | -11.63% |
| GFC | Gerova Financial Group Ltd | 20.26 | 21.86 | -7.32% |
| VGR | Vector Group Ltd. | 16.74 | 17.9 | -6.48% |
| CMG | Chipotle Mexican Grill Inc. | 235.95 | 250.96 | -5.98% |
| | | | | |
| **Biggest Gainers** | | | | |
| **Symbol** | **Description** | **Last Trade** | **Previous Close** | **Percent Change** |
| VMO | Invesco Van Kampen Municipal Opportunity Trust | 15.1 | 13.7 | 10.22% |
| GMXR | GMX Resources Inc. | 5.05 | 4.56 | 10.75% |
| CASC | Cascade Corporation | 44.83 | 39.49 | 13.52% |
| CMM | China Mass Media Corp | 3.34 | 2.78 | 20.14% |
| BBW | Build-A-Bear Workshop Inc. | 7.91 | 5.96 | 32.72% |
| DEXO | Dex One Corporation | 6.7 | 4.79 | 39.87% |