

Microsoft Excel Stock Market Activity

Imagine that you are a highly successful Financial Advisor for the biggest firm on Wall Street. You wake up in the morning, grab the *Wall Street Journal*, and a cup of coffee, and you decide that it would make sense to start to plan for your upcoming meeting with Dr. Moneymaker that is scheduled for this morning. You are nervous about this meeting, so advanced preparation is extremely crucial. Dr. Moneymaker is your most important client, and you know that he has recently had some concerns about his portfolio.

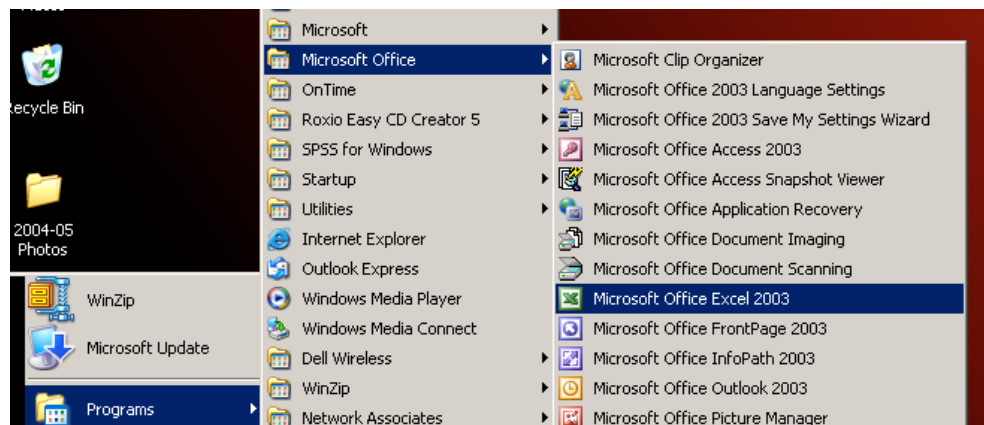
In this activity, you will analyze Dr. Moneymaker's portfolio, and create a spreadsheet that can be used to show Dr. Moneymaker how his portfolio is allocated.

Note: Dr. Moneymaker is very picky about the information that is provided from you and from your firm. Be sure to have a calculator to double check that all information that is calculated by Excel is correct.

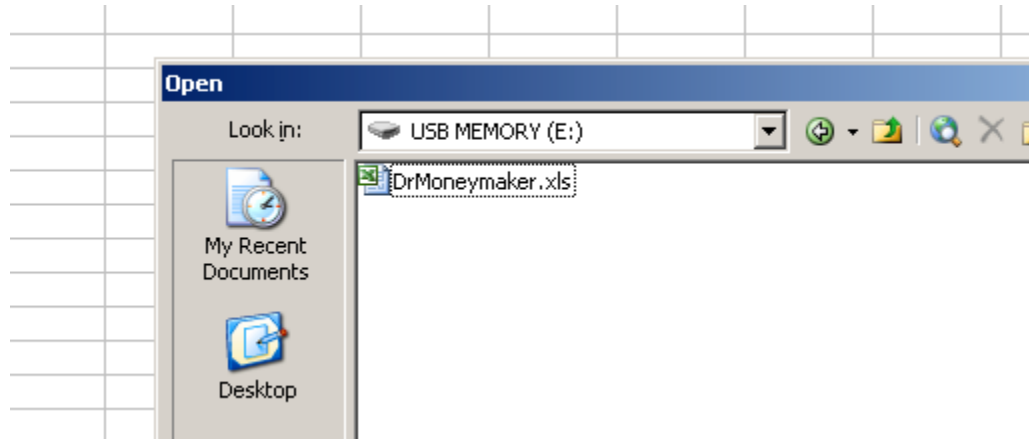
1. Getting Started: a) Click on the *Start* menu:



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- b) Scroll from *Programs* to *Microsoft Office* to *Microsoft Excel*, and click on *Microsoft Excel* to open the program.



c) Click on *File, Open*, and select *My Computer*, then select *E:* drive. Open the file named *DrMoneymaker.xls* from your portable disk drive.



d) A sheet with all of Dr. Moneymaker's holdings should appear.

The prices are automatically updated by the Firm's tremendous technology, so do not worry about updating any of the information. It is all up to date.

	A	B	C	D
1	Company Name	Ticker Symbol	Trading Price	Number of Shares
2				
3	ALCOA INC	AA	27.43	56
4	AMER INTL GROUP INC	AIG	66.71	85
5	AMER EXPRESS INC	AXP	56.82	112
6	BOEING CO	BA	83.4	117
7	CITIGROUP INC	C	50.43	54
8	CATERPILLAR INC	CAT	61.15	116
9	DU PONT E I DE NEM	DD	46.59	184
10	WALT DISNEY-DISNEY C	DIS	31.19	211
11	GEN ELECTRIC CO	GE	35.47	501
12	GEN MOTORS	GM	34.69	48
13	HOME DEPOT INC	HD	36.38	115
14	HONEYWELL INTL INC	HON	42.49	124
15	HEWLETT PACKARD CO	HPQ	39.77	175
16	INTL BUSINESS MACH	IBM	91.85	200
17	INTEL CP	INTC	21.79	305
18	JOHNSON AND JOHNS DC	JNJ	68.76	110
19	JP MORGAN CHASE CO	JPM	47.05	103
20	COCA COLA CO THE	KO	47.07	115
21	MCDONALDS CP	MCD	42.44	145
22	3M COMPANY	MMM	80.47	150
23	ALTRIA GROUP INC	MO	79.32	117

2. A Calculation: a) In order to please Dr. Moneymaker, we must now analyze his holdings in order to recommend adjustments at our meeting. The first step is to calculate each holding's value. In *Cell E1*, enter "Value of Holding," and press *Enter*.

D	E
Number of Shares	Value of Holding
56	
85	

b) Next, calculate the values of each of Dr. Moneymaker's holdings. To do this for Alcoa, select *Cell E3*, then type an equal sign (=).

	A	B	C	D	E
1	Company Name	Ticker Symbol	Trading Price	Number of Shares	Value of Holding
2					
3	ALCOA INC	AA	27.43	56	=
4	AMER INTL GROUP INC	AIG	66.71	85	
5	AMER EXPRESS INC	AXP	56.82	112	

This will start the equation process. Then, click on *Cell C3*, and this should automatically highlight and enter *Cell C3* into the formula.

	A	B	C	D	E
1	Company Name	Ticker Symbol	Trading Price	Number of Shares	Value of Holding
2					
3	ALCOA INC	AA	27.43	56	= C3
4	AMER INTL GROUP INC	AIG	66.71	85	
5	AMER EXPRESS INC	AXP	56.82	112	

Next, hit *Shift 8*, this should enter a "*" into the function. Excel recognizes * as the sign for multiplication.

	27.43	56	= C3*
	66.71	85	

Next, click on *Cell D3* to enter the contents of *D3* into the formula. *D3* should show up as a different color than *C3*.

	Ticker Symbol	Trading Price	Number of Shares	Value of Holding
	AA	27.43	56	= C3*D3
	AIG	66.71	85	

Then, hit *Enter*. This should enter the value of $(27.43 \cdot 56)$ into cell *E3*.

Reflection Questions: Use your calculator to check the answer. What did you calculate for the Value of the Alcoa holding? _____

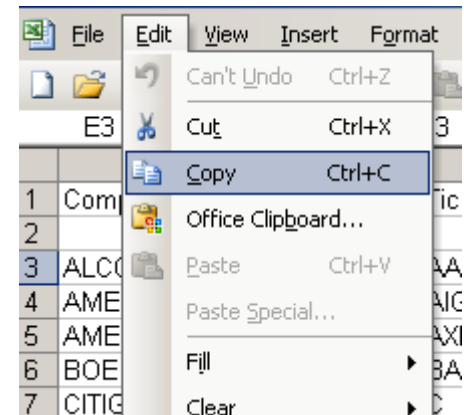
Is your Excel sheet's data correct? _____

If not, review the process above before proceeding to make sure that this information is correct.

3. Copying Calculations: a) The next step in our process is to copy the equation that we completed in the cell above, and paste it into all of the cells in *Column E*. So, click on

Cell E3. Select *Edit* then *Copy* from the toolbar.

This should cause *Cell E3* to have a dashed/moving line around it.



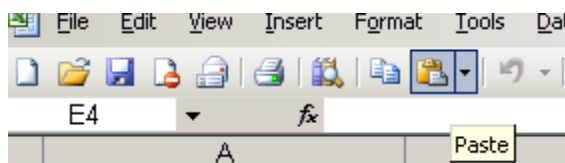
b) Then, Highlight all of the cells from *E4* to *E32*.

To do this, click on *E4*, hold down the *left* mouse button and drag the blue boxes until you reach *E34*.

The highlighted cells should look like this:

A screenshot of an Excel spreadsheet. The column header is 'E' and the row header is 'res'. The cell at the intersection of 'E' and 'res' contains the text 'Value of Holding'. Below this, the cell at row 56 contains the value '1536.08'. A range of cells from row 85 to row 448 in column 'E' is highlighted with a blue background. The row numbers 85, 112, 117, 54, 116, 184, 211, 501, and 48 are visible on the left side of the spreadsheet.

c) Next, select *Paste* from the toolbar or from *Edit – Paste*.



Reflection Questions: Use your calculator to check to see if the answers that have been

calculated are correct. For example:

What is the Value of Holding for MSFT (Microsoft Corp)? _____

What is the Value of Holding for GE (General Electric)? _____

What is the Value of Holding for VZ (Verizon)? _____

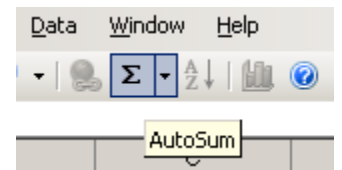
Are these values correctly calculated correctly? _____

In short answer form, how useful is this feature of *Excel*? Why?

4. Summation: a) In order to find out how much money Dr. Moneymaker has invested in his portfolio, we need to sum the value of all of his holdings. To do this, we can use *Excel*'s summation feature. In *Cell D34*, type "Total Value of Portfolio:"

COM	69.71	120
	Total Value of Portfolio:	

b) Then, click into *Cell E34* and select the *AutoSum* key from the toolbar.



c) Next, you should see a cell range from *E3* to *E33* pop up in *Cell E34*.

34.77	100	3477
64.97	300	19491
38.13	116	4423.08
51.6	138	7120.8
69.71	120	8365.2
	Total Value of Portf	
	=SUM(E3:E33)	

SUM(number1, [number2], ...)

Change the *E33* to *E32* and press the *Enter* key.

.71	120	8365.2
Total Value of Portfolio	=SUM(E3:E32)	

You may have to adjust the width of *Column D* to fit all of “Total Value of Portfolio” in the cell. Right click and hold the width line within *Column D*, and drag it to the desired width.

	D
ce	Number of Shares
	Value
27.43	56

Reflection Question:

What is one example of another application of mathematics in which this AutoSum feature could be used?

How could I use AutoSum to calculate just the Total Value of the following holdings:
MRK + PFE + KO + CAT + JPM?

Create a cell called “Dr. Moneymaker’s Favorites,” in *Cell D36*, and calculate the Total Value of the above 5 stocks. (Highlight the cell, click *AutoSum*, click the first stock’s Value, type the + sign (*Shift =*), and then click the next stock’s Value. Repeat this for all 5 stocks.

.71	120	8365.2
Total Value of Portfolio:	238405.34	
Dr. Moneymaker's Favorites	=SUM(E24+E26+E20+E8+E19)	

5. Percentages of Total Value: a) Now it is time to calculate the percentage of each holding based on your calculated “Total Value of Portfolio.” Click into *Cell F1*, and type “Percentage of Total Value,” and press the *Enter* key.

D	E	F
Shares	Value of Holding	Percentage of Total Value
56	1536.08	
85	5670.35	

b) Highlight *Cell F3*, and type “=E3/E34” and press *Enter*.

E	F
Value of Holding	Percentage of Total Value
1536.08	=E3/E34
5670.35	

Repeat this process for E4 through E32.

Reflection Questions:

Using your calculator, divide the value of E3 by E34. What is your answer? _____

Does your answer equal what is inside F3? _____

Is there an easier way to calculate the percentages? Explain how to do it:

6. Rounding values and adding dollar signs: a) In order to present this information to Dr. Moneymaker this morning, we will have to add dollar signs to values that need them, and we will need to round the values that we have calculated and change the decimal value to something more manageable. To add dollar signs, highlight all of the values that are between cells C3 and C32. Then, click on the dollar sign on the toolbar:

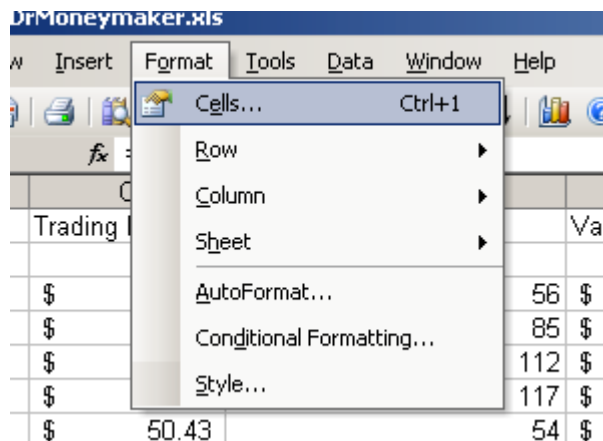


Next, repeat this process for E3 to E32, E34, and E36. Your Columns should now have the appropriate dollar signs next to dollar values.

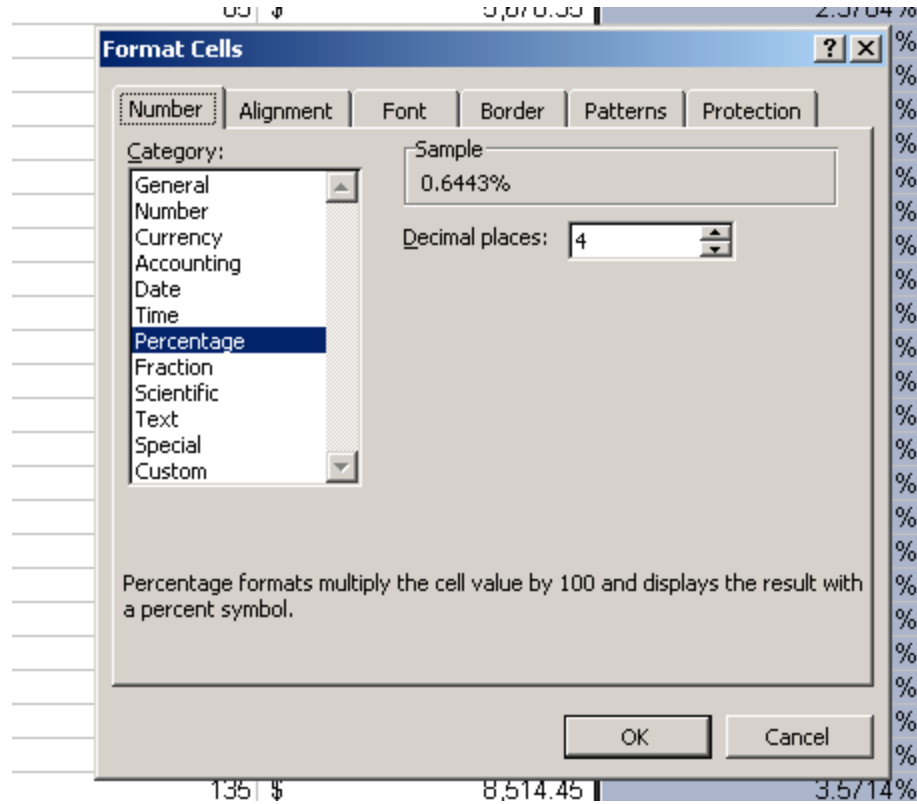
Trading Price	
\$ 27.43	
\$ 66.71	
\$ 56.82	
\$ 83.40	
\$ 50.43	
\$ 61.15	
\$ 46.59	
\$ 31.19	
\$ 35.47	
\$ 34.69	
\$ 36.38	

Total Value of Portfolio:	\$ 238,405.34
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b) Now it is time to add the final touch to Dr. Moneymaker's portfolio review. The percentages are too large for a customer to recognize which holdings are the largest. So, Highlight Cells F3 to F32, and click on *Format – Cells*



and then select *Percentage* and change the *Decimal Places* to 4.



This should change all of your values to percentages that can be easily understood.

	F	G
	Percentage of Total Value	
1,536.08	0.6443%	
5,670.35	2.3784%	
6,363.84	2.6693%	
9,757.80	4.0929%	
2,723.22	1.1423%	
7,093.40	2.9754%	
8,572.56	3.5958%	
6,581.09	2.7605%	
7,770.47	7.4539%	
1,665.12	0.6984%	
4,183.70	1.7549%	

Reflection Question:

How do you think the rounding feature and \$ button on the toolbar enhance a presentation like this?

What other ideas do you have to make this presentation appear even more attractive?

Your Presentation for Dr. Moneymaker is now complete!!! You may want to fine tune your Presentation before giving it to Dr. Moneymaker. Use color to highlight things that you feel are important, and feel free to change the font, spacing, and centering of any cells that you wish. This presentation is customizable, and you should feel free to be creative.

Print a copy of your presentation and submit it along with your answers to the reflection questions..