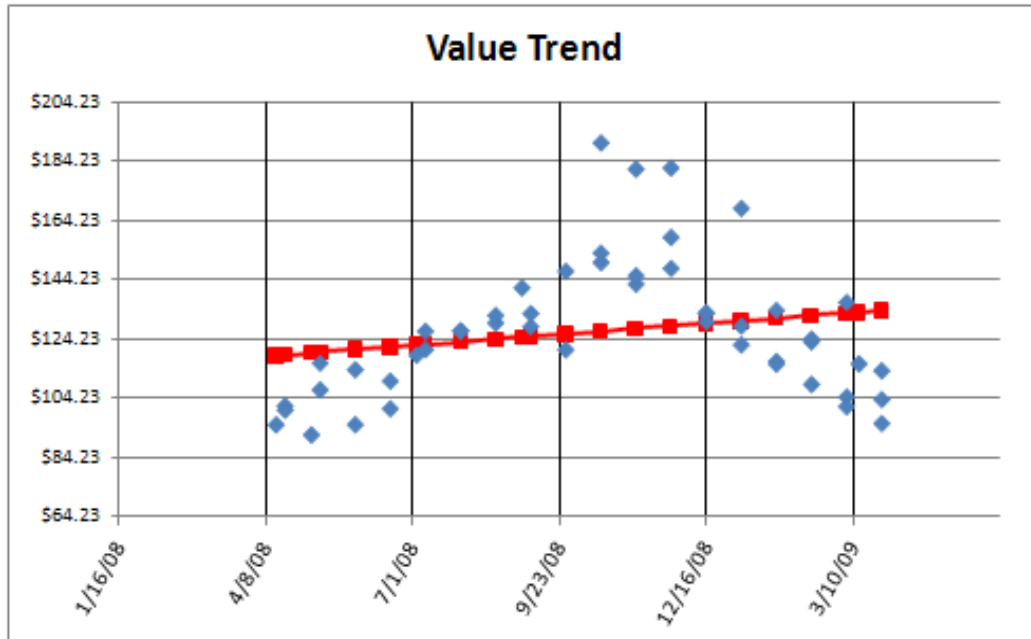




MARKET CONDITION ADJUSTMENT EXTRACTOR & APPLICATOR



The sales are adjusted for market conditions based on the following equation:

$$y = 0.043949787617897000x + 118.594871652803000000$$

	04/01/09 Effective Date of the Appraisal	\$134.07
	Aggregate Adjustments	Mkt. Condition
Sale	Sales Price	Date
Point Val*	(%)	(\$)
Adj. Sales Price		
1	\$131,000	05/08/08
\$119.65	12.05%	\$15,783.03
\$146,783		

Requires Microsoft® Excel® 2003 or 2007 to be loaded on your computer

QUICK-START GUIDE

June 1, 2009

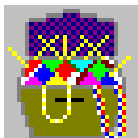
Automated Valuation Technologies, Inc.

MC Adjustment Extractor & Applicator©

This software program and this user's manual have been created by Automated Valuation Technologies, Inc. (AVT). The purpose of AVT is to fill the voids in appraisal practice that result from the rapidly changing appraisal environment. Appraisers often find themselves engaged in new activities which require the use of technology that has not yet been created. This is both unfortunate and unacceptable. It is unfortunate because appraisers are not fully effective in carrying out their duties. It is unacceptable because it compromises the vital role appraisers perform in the safekeeping of their country's greatest wealth: real property. It is AVT's mission to provide the technologies real estate appraisers require to fulfill their duties.

AVT operates under the belief that there is no substitute for the "Neighborhood Appraiser." Their knowledge of the local market is unique and cannot be duplicated by remote computer analysis. These local appraisers are hardworking and dependable. Without question, these gritty individuals will carry out their duties as long as they have the knowledge and tools to do so.

Go to www.scoopgear.com to view other AVT products!



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215 Ellis Avenue, Maryville, TN 37804

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PURPOSE

The purpose of the Market Condition Adjustment Extractor & Applicator© application is to provide an automated method of extracting the appropriate market conditions (time) adjustments and applying those adjustments to the sales in the Direct Comparison Approach. This application is simple and easy for real estate professionals to use. This product is suitable for analyzing residential or commercial markets. The purpose of this Quick-start Guide is to provide instructions on using this application.

SYSTEM REQUIREMENTS

The Market Condition Adjustment Extractor & Applicator© application has the following system requirements:

- ❖ **Windows Operating System**
- ❖ **Microsoft Excel 2003 or 2007 must be loaded on the computer**

HUMAN REQUIREMENTS

- ❖ **The user should have a fundamental understanding of their operating system (Windows XP, Vista) and at least a beginner level of competency in MS Excel.**

If you are not proficient with computers it may be necessary to have your support person set up Excel to run macros for you.

SETTING UP 2007 EXCEL TO RUN MACROS

Loading the Extractor program

1. Create a subfolder in your C:\ drive named "AVTINC". This software will not run on a network drive.
2. Save the files you received in the Email into this new "AVTINC" folder.
3. Verify that two Excel add-ins are turned on. Click the Office button then click "Excel Options", next choose "Add-ins". If the Analysis Toolpak and the Analysis Toolpac-VBA are not on the list then hit the "Go" button and add them.
4. Set Excel to allow macros to run on any workbooks that are in the "AVTINC" subfolder (see end of this guide for directions). All copies of work you do should be saved to that subfolder, so they can run. You may add subfolders within the AVTINC subdirectory. **Do not set Excel to a low security setting!**
5. Vista operating systems only: Turn the "User Account Control" off for step #6 that follows (running the Set Up file).
 - o To temporarily turn this control off go to "Control Panel" then "User Accounts". At the bottom of the next screen choose "Turn User Account Control on or off". Continue till you see a checkbox that you will have to deselect, then reboot the computer.
6. Open the subfolder and open the file named "Set Up.xls". Click on the "Set-up Now" button.
7. When the License Agreement becomes visible read it carefully. If you agree to the terms of this agreement then choose "I Agree" and click on the "Next" button.
8. If Vista then turn the "User Account Control" back on. This is the control that allows Vista to relentlessly and irritatingly ask you to verify everything that it does.
9. Go to your computer desktop and create a shortcut to the "MC Adj_Extractor.xlt". You should always use this shortcut to start a new file because the shortcut will open a copy of the template and not the actual template.
10. If you only have Excel loaded and not the entire MS Office Suite; if you have any problems be sure the "Office Shared Functions" were loaded.

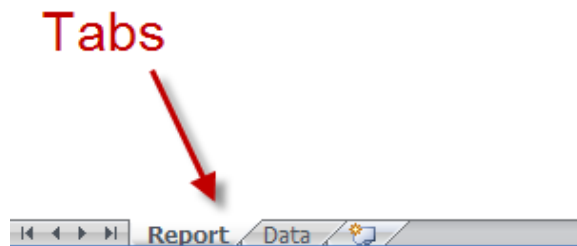
SETTING UP 2003 EXCEL TO RUN MACROS

Loading the Extractor program

1. Create a subfolder in your C:\ drive named "AVTINC". This software will not run on a network drive.
2. Save the files you received in the Email into this new "AVTINC" folder.
3. In the Tool bar at the top of the Excel screen click on "Tools" then "Add-ins" and be sure that the "Analysis tool pack" and the "Analysis Tool Pack (VBA)" are checked.
4. Set the macro security setting to "Medium". On the tool bar click Tools/Macro/Security then choose "Medium". When running the Extractor Excel will ask if it is alright for macros to run. Answer "Yes". **Do not set Excel to a low security setting!**
5. Vista operating systems only: Turn the "User Account Control" off for step #6 that follows (running the Set Up file).
 - o To temporarily turn this control off go to "Control Panel" then "User Accounts". At the bottom of the next screen choose "Turn User Account Control on or off". Continue till you see a checkbox that you will have to deselect, then Reboot.
6. Open the subfolder and open the file named "Set Up.xls". Click on the "Set-up Now" button.
7. When the License Agreement becomes visible read it carefully. If you agree to the terms of this agreement then choose "I Agree" and click on the "Next" button.
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10. If you only have Excel loaded and not the entire MS Office Suite; if you have any problems be sure the "Office Shared Functions" were loaded.

SHEET TABS

The sheet tabs in Excel are found at the bottom left of the screen. They may not be visible if your Windows Task Bar is set as “Locked”. If this is the case then set the bar to auto-hide by right clicking on it and choosing “Properties



MAKING A COMMENT

You can enter a comment in the grayed out area. Use the up & down arrows to either expand or decrease the row height.



MARKET CONDITION ADJUSTMENT EXTRACTOR & APPLICATOR

This data was taken from the local MLS. The search criteria was



MAKING MARKET CONDITION ADJUSTMENTS

The purpose of the MC Adjustment Extractor & Applicator is to assist the appraiser in making specific time (MC) adjustments to each comparable sale in the direct comparison adjustment grid. This method is appropriate for vacant land, apartments, and various commercial properties. Microsoft Excel is the canvas used in the following adjustment extraction process.

The market conditions extraction process has the following steps:

1. Gather the appropriate sales data.
 - a. Perform an MLS search
 - b. Return the search query to a spreadsheet
2. Analyze the data based on some sort of value per unit.
 - a. Unadjusted sales price per property
 - b. Sales price per square foot
 - c. Fully adjusted sales price
 - d. Apartments might be per unit
 - e. Condominiums might be per bedroom
3. Enter the data into the Extractor application
 - a. Type or copy the date of sale and the value per unit in the "Data" sheet; with the dates beginning in column 'A', row 2, and the value per unit in column 'B', row 2.
 - b. If you already have a chart in Excel plotting the value per unit over time then just click on that chart and follow the "Exporting data directly from an Excel Chart" found below.
 - c. Enter the effective date of the appraisal.
 - d. Enter the sales prices and date of sale for each comparable sale.
4. Insert the appropriate trend line onto the plotted points. This trend line is what the individual MC adjustments are based on.
 - a. The Extractor application will automatically compare the X and Y points for the effective date of the appraisal and the comparable sales date on the trend line by mathematically solving the equation that the trend line is based upon. It will:
 - b. calculate the percentage difference in the two value units (Y-axis).
 - c. apply the percentage difference to the comparable sales price.
 - d. Adjust the sales price by the difference found in step 7 above.

Most appraisers have been exercising Steps 1 and 2 while performing the 1004MC analysis; so these steps will not be discussed here.

Enter the data into the Extractor application

Data can be entered two ways: Type or copy and paste the data directly into the Extractor application or import from an existing Excel Chart.

	A	B
1	<u>Date</u>	<u>SP/SF</u>
2	4/15/08	\$95.14
3	4/20/08	\$101.47
4	4/20/08	\$100.14
5	5/5/08	\$91.75
6	5/10/08	\$115.93
7	5/10/08	\$106.93
8	5/30/08	\$95.20
9	5/30/08	\$113.72
10	6/19/08	\$100.58

To type or paste the data into the application click the Tab named "Data" found at the bottom left of the screen.

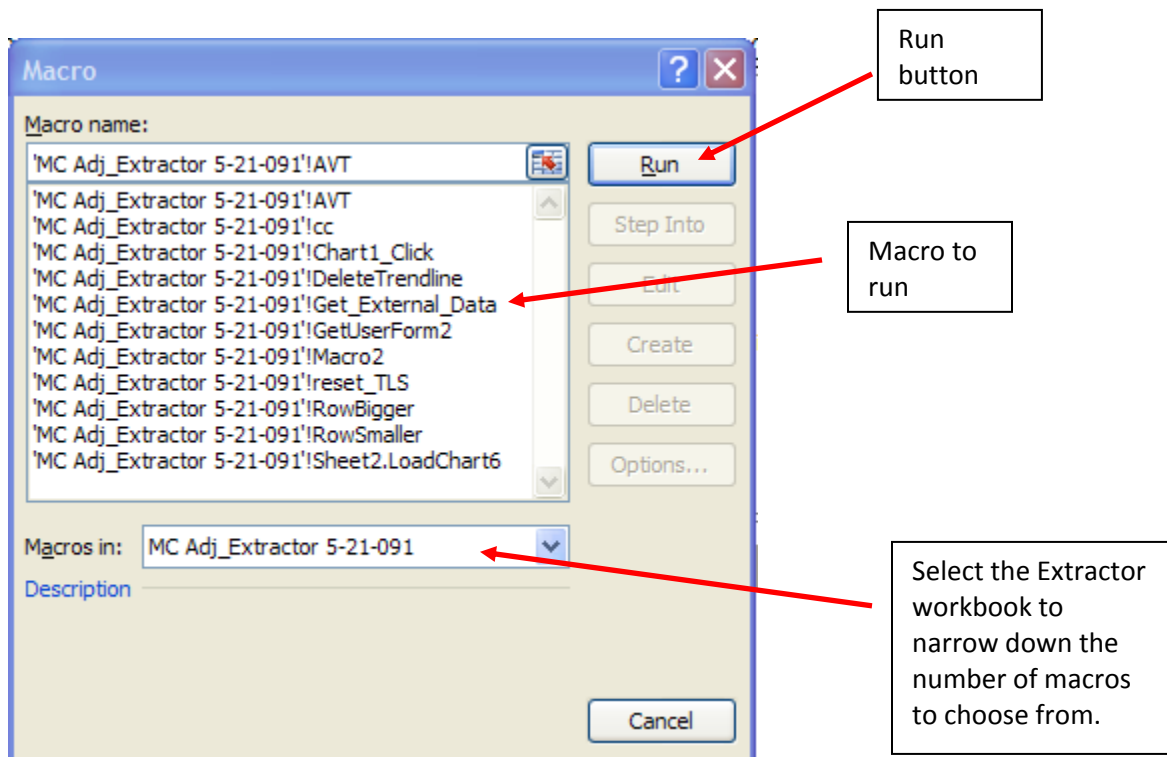
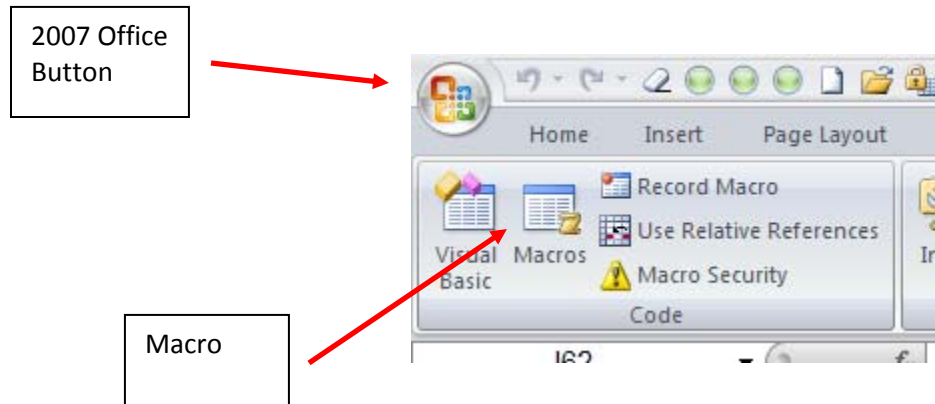
Ignore the data in the other columns to the right of column B. These are used by the Extractor program to perform its functions.

Some appraisers have had access to applications such as the 1004MC Total Solution or other applications that construct the scatter chart for you when performing a MCA. If you already have such a chart constructed in Excel then you can export that data directly from that chart without any cutting or pasting.

To do so you must:

1. Select the chart that contains the data you wish to use in the Extractor application.
 - a. The sheet must be unprotected in order to select the chart.
 - i. Excel 2003 users: Select the "Tools" on the tool bar and then select "Protection"
 - ii. Excel 2007 users: Select the "Review" on the ribbon at the top of the page. Then select the "Unprotect sheet".
 - b. Call up the macro that resides in the Extractor application.
 - i. Be sure the Extractor application is open. Keep in mind that you can have multiple workbooks open in one application of Excel.
 - ii. Excel 2003 users should select "Tools" from the tool bar then "macro" and then "macros". Choose the Extractor workbook and then the macro named "Get_External Data".
 - iii. Excel 2007 users should:
 1. Add the "developer" tab to the ribbon (tool bar at top) by clicking the "Office Button" and then selecting "Excel Options" and then "Show Developer Tab in Ribbon".

- Then click the developer tab and then click Macros. Next choose the Extractor workbook and then the macro named "Get_External Data".



Enter the Effective Date of the Appraisal and the Sales Information



The sales are adjusted for market conditions based on the following equation:

$$y = -0.000000000002993705x^6 + 0.000000003541096438x^5 - 0.000001537391350294x^4 + 0.000293277775210975x^3 - 0.023721868733614000x^2 + 0.910488491122452000x + 93.991530165830500000$$

04/01/09 Effective Date of the Appraisal \$105.36

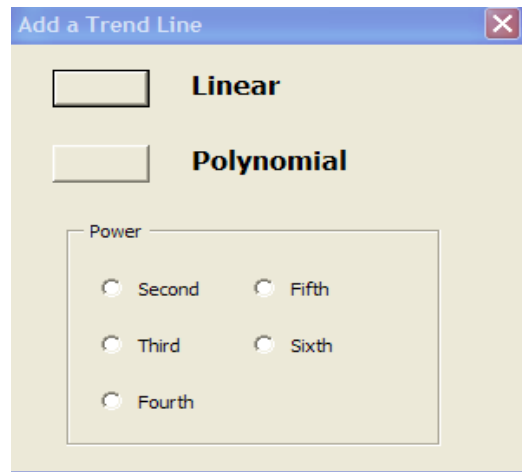
Sale	Sales Price	Date	Point Val*	Aggregate Adjustments		Mkt. Condition Adj. Sales Price
				(%)	(\$)	
1	\$131,000	05/08/08	\$105.75	-0.37%	-\$486.53	\$130,513
2	\$162,000	09/23/08	\$147.93	-28.78%	-\$46,621.10	\$115,379
3	\$115,000	03/01/09	\$112.82	-6.61%	-\$7,606.58	\$107,393
4						

These are the values that are returned for the Value per unit (Y-axis)

Insert the appropriate trend line onto the plotted points

The Extractor application allows the user to insert a straight line or a polynomial with powers from 2 to 6.

Choose the type of trend line to insert. You may insert up to three trend lines at a time in order to decide which one best fits the data.



Add a Trend Line

Linear

Polynomial

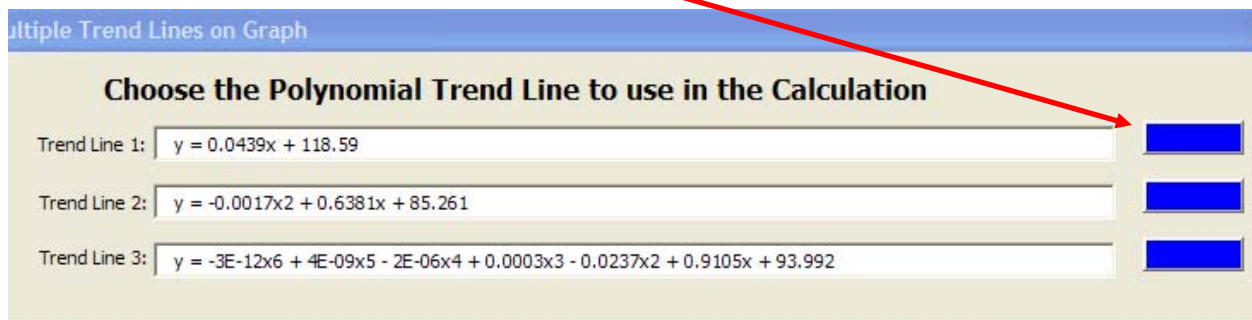
Power

Second Fifth

Third Sixth

Fourth

Next click "Calculate" and choose the trend line that best fits the data by clicking on one of the blue buttons.



Multiple Trend Lines on Graph

Choose the Polynomial Trend Line to use in the Calculation

Trend Line 1:

Trend Line 2:

Trend Line 3:

The appropriate adjustment for each sale is returned and the equation for the trend line is displayed.



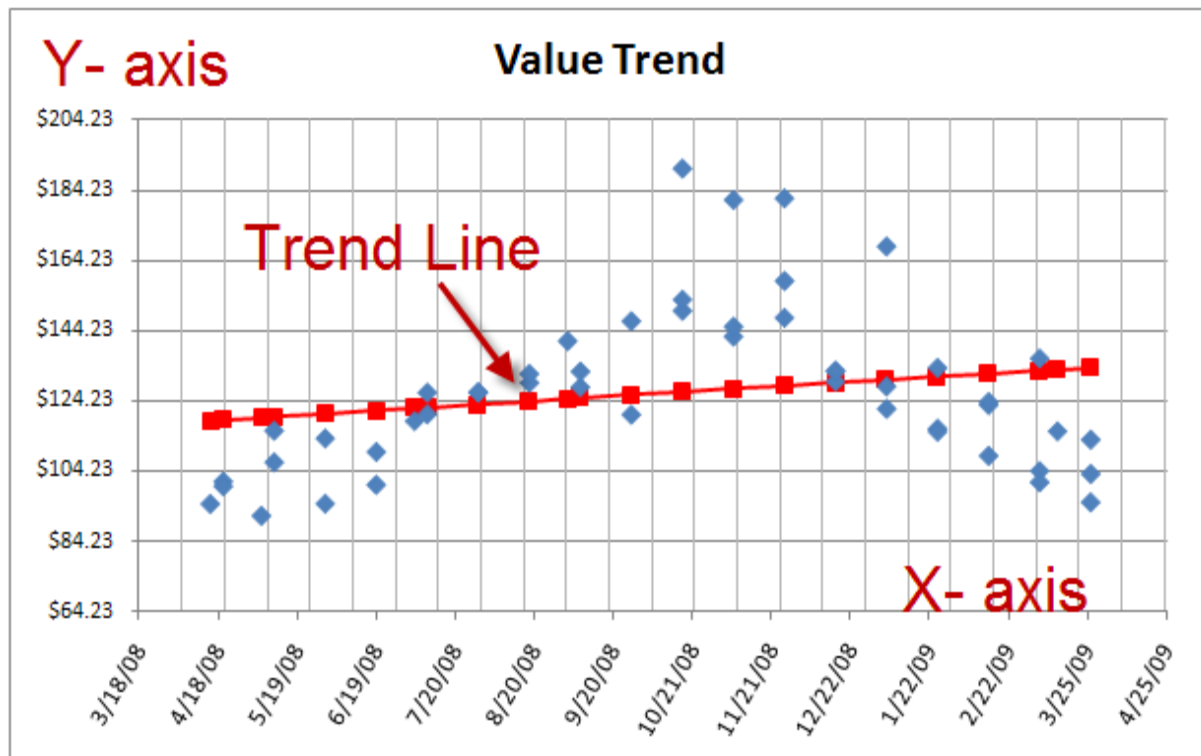
The sales are adjusted for market conditions based on the following equation:

$$y = -0.00000000002993705x^6 + 0.000000003541096438x^5 - 0.000001537391350294x^4 + 0.000293277775210975x^3 - 0.023721868733614000x^2 + 0.910488491122452000x + 93.991530165830500000$$

04/01/09	Effective Date of the Appraisal	\$105.36
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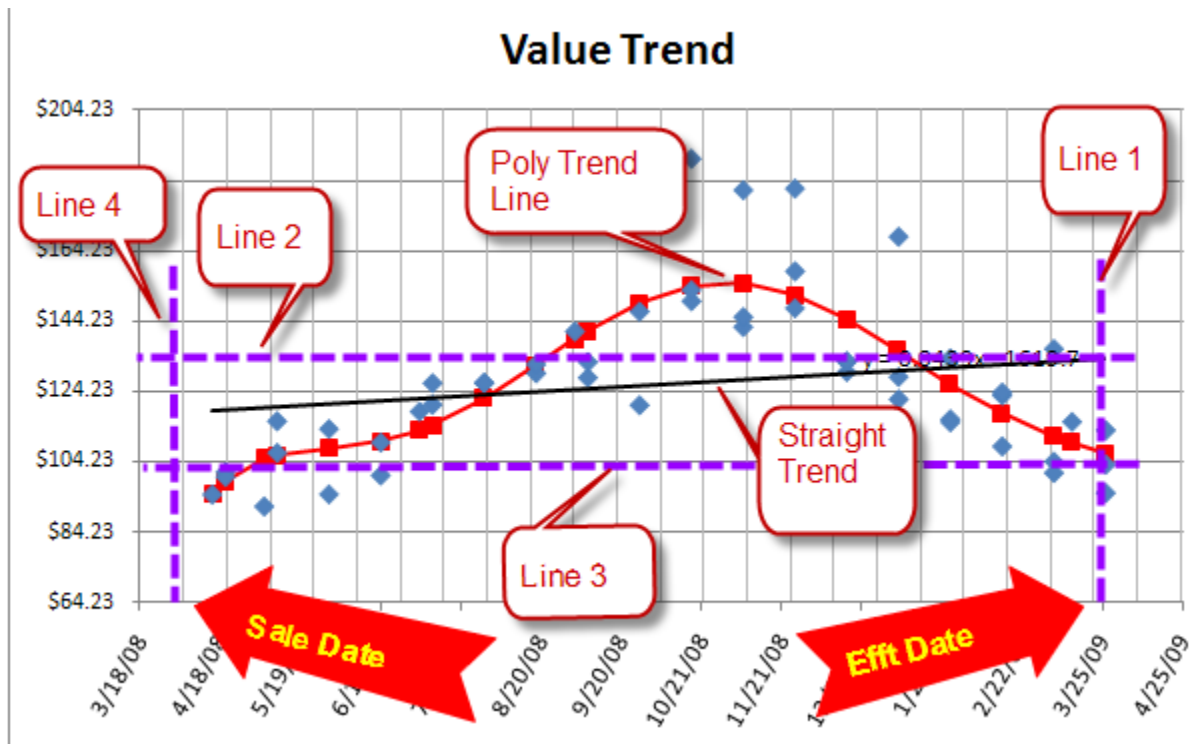
Sale	Sales Price	Date	Point Val*	Aggregate Adjustments		Mkt. Condition Adj. Sales Price
				(%)	(\$)	
1	\$131,000	05/08/08	\$105.75	-0.37%	-\$486.53	\$130,513
2	\$162,000	09/23/08	\$147.93	-28.78%	-\$46,621.10	\$115,379
3	\$115,000	03/01/09	\$112.82	-6.61%	-\$7,606.58	\$107,393
4						

GENERAL INFORMATION AND TIPS



The sales prices per square foot are on the Y-axis, while time is plotted on the X-axis. Each sale is plotted as a “dot” on the scatter chart. It is apparent where the scatter chart got its name. The trend line was placed by Excel based on regression and was fitted to have the summation of the least square of the differences in each point and the trend line.

This data does not seem to fit a straight line very well as value tends to move upwards for a while and then top out around October 2008. Values appear to fall from that point on. This can be seen in the following chart. The red colored trend line appears to fit the data much better. The trend line in this chart is based on a polynomial line. Polynomial lines are appropriate when the value trend changes direction or is curved. The value trend presented in this chart is not conducive to the time adjustment formula that appraisers traditionally use such as adjusting the sales price upward at a consistent specific rate per year.



In the chart above the effective date of the sale is 4/1/09 and the sale sold for \$200,000 on 4/1/08.

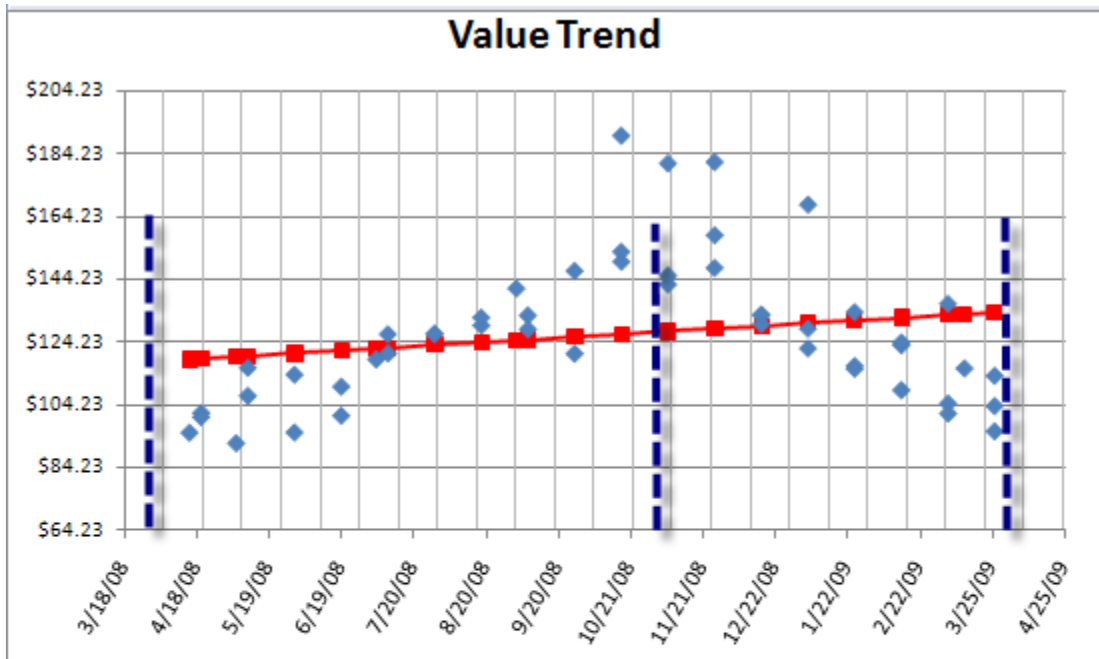
Exercise 1: Based on the data presented what is adjustment should be made to the sale? (A) Based on a straight line analysis, and (B) based on the polynomial curve presented.

The purple dotted lines represent the various intersections. Lines 1 and 4 represent the effective date of the appraisal and the comparable's sale date respectively. The straight regression line intersects Line 4 (Sale Date) at \$118.02 and Line 1 (Eff Date) at \$134.07. This indicates an appreciation rate of 13.6% $(\$134.07 - \$118.02) / \$118.02$.

The polynomial regression line intersects Line 4 (Sale Date) at \$103.93 and Line 1 (Eff Date) at \$105.36. This indicates an appreciation rate of 1.37% $(\$105.36 - \$103.93) / \$103.93$.

On a \$200,000 property the difference between these two methods is \$24,460 $(13.6\% - 1.37\%) \times \$200,000$. This is a significant error.

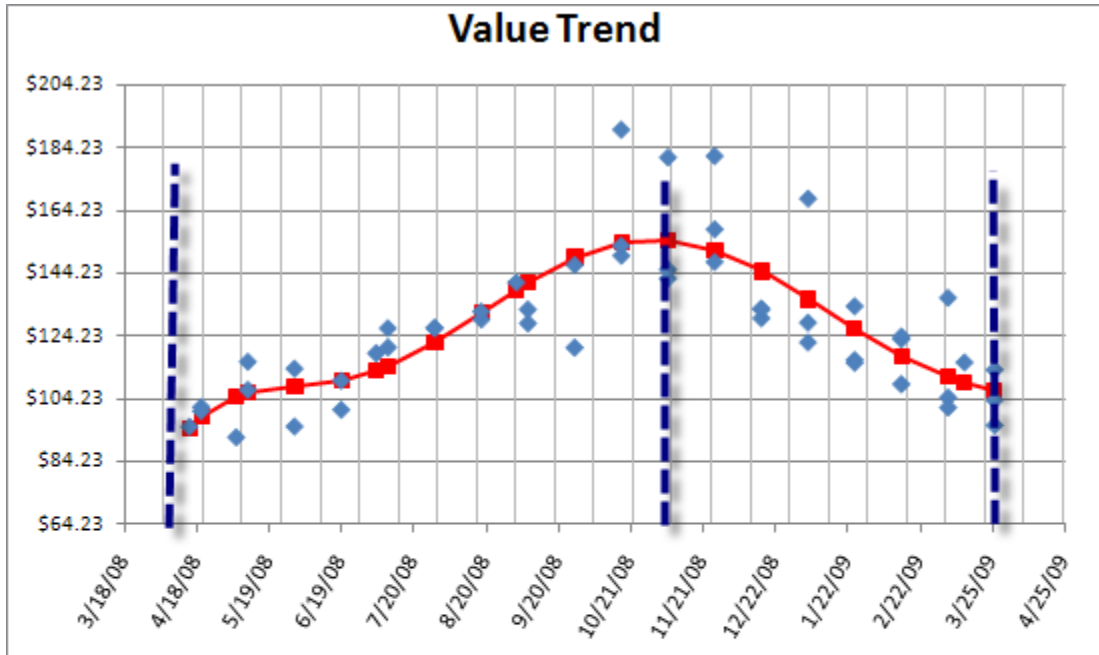
Exercise 2: Using the same data find the appropriate market condition adjustment for a comparable sale which sold for \$200,000 on 11/1/08 with an effective date of the appraisal of 4/1/09. Find the appropriate adjustment for a straight regression line and one based on the polynomial regression line. Use the ruler method and see if you agree the answers the MC Adjustment extractor calculated.



The sales are adjusted for market conditions based on the following equation:

$$y = 0.043949787617897000x + 118.594871652803000000$$

04/01/09		Effective Date of the Appraisal		\$134.07		
Sale	Sales Price	Date	Point Val*	Aggregate Adjustments (%)	(\$)	Mkt. Condition Adj. Sales Price
1	\$200,000	04/01/08	\$118.02	13.59%	\$27,183.86	\$227,184
2	\$200,000	11/01/08	\$127.43	5.21%	\$10,415.89	\$210,416



The sales are adjusted for market conditions based on the following equation:

$$y = -0.00000000002993705x^6 + 0.000000003541096438x^5 - 0.000001537391350294x^4 + 0.000293277775210975x^3 - 0.023721868733614000x^2 + 0.910488491122452000x + 93.991530165830500000$$

04/01/09	Effective Date of the Appraisal	\$105.36
----------	---------------------------------	----------

Sale	Sales Price	Date	Point Val*	Aggregate Adjustments		Mkt. Condition Adj. Sales Price
				(%)	(\$)	
1	\$200,000	04/01/08	\$77.46	36.02%	\$72,045.27	\$272,045
2	\$200,000	11/01/08	\$155.16	-32.10%	-\$64,192.28	\$135,808


Conclusion: When the data points indicate a change in direction or strong curve then a straight-line trend line analysis is inappropriate. It is very adequate for the appraiser to simply apply a straight edge ruler to a chart that has a trend line and do the calculations by hand for each sale. However, for maximum efficiency (appraiser's time) and accuracy computer programs such as AVT's "Market Conditions Adjustment Extractor" can be used.

DOWNLOADING A FREE .PDF WRITER

If you already have Adobe Acrobat (Read & Writer) installed on their computer you can skip this step- you are already ready to go. In order to see which free pdf converters are available Google “Free pdf converter”. Choose one and follow their download instructions.

2007 EXCEL USERS: SETTING “C:\AVTINC FOLDER TO RUN MACROS

These are the directions found in Windows XP. This may be different for Vista users. If so search Vista’s help if this is the case.

1. Click the **Microsoft Office Button**  , and then click **Excel Options**.
2. Click **Trust Center**, click **Trust Center Settings**, and then click **Trusted Locations**.
3. If you want to create a trusted location that is not local to your computer, select the **Allow trusted locations on my network (not recommended)** check box.
4. Click **Add new location**.

IMPORTANT We recommended that you don't make your entire Documents or My Documents folder a trusted location. Doing so creates a larger target for a hacker to potentially exploit and increases your security risk. Create a subfolder within Documents or My Documents, and make only that folder a trusted location.

5. In the **Path** box, type the name of the folder that you want to use as a trusted location, or click **Browse** to locate the folder.
6. If you want to include subfolders as trusted locations, select the **Subfolders of this location are also trusted** check box.
7. In the **Description** box, type what you want to describe the purpose of the trusted location.
8. Click **OK**.