

Excel Tips and Tools for Better Productivity



Display of Zeros and Precision as Displayed

One of the confounding problems of using any of the financial number formats (accounting, currency, and number) is the display of zeros. Recall that the third part of any number format code is the code to display zeros. However, the format code only applies when the value in a cell is equal to zero, not when the value in a cell appears to be zero, such as when a small value rounds off automatically to zero for display. This is especially problematic when using the accounting format because cells can be displayed as zeros, positive zeros, or negative zeros as shown in Figure 1.

		<u>Zero</u>	<u>Positive Zero</u>	<u>Negative Zero</u>
Accounting Format Display	\$	\$ -	\$ 0.00	\$ (0.00)
	w/o \$	-	0.00	(0.00)
Actual Number in Cell		0	0.001	-0.001

Figure 1 - Zero Display Using the Accounting Format

Some practitioners have become so frustrated with this problem that they enter hard-coded zeros over formulas when this occurs so that zeros display consistently throughout their reports. In the process of overwriting their formulas, however, they potentially corrupt their worksheet so that it does not recalculate properly in the future.

There are two easily applied solutions to this problem. The most common solution is to round-off calculations to the number of displayed decimals. In other words, the values **0.001** or **-0.001** (or smaller) rounded to two decimals would result in a cell value of zero, which would be displayed properly when using the accounting format. When a positive or negative zero cell is encountered, simply round the contents of the cell to the appropriate number of decimal places using the **ROUND** function.

The second solution to this problem is to enable global rounding in the affected workbook. When global rounding is enabled, all values are rounded to their cell formats. In other words, the values **0.001** or **-0.001** (or smaller) displayed with two decimals would automatically be rounded to a cell value of zero, which would be displayed properly when using the accounting format. To enable global rounding in a workbook, users of Excel 2010 should click the **File** tab of the Ribbon, **Options, Advanced**, and in the section labeled **When calculating this workbook**, check the box next to **Set precision as displayed** and click **OK**.

Regardless of which version of Excel is running, enabling global rounding in a workbook causes Excel to display the warning shown in Figure 2.

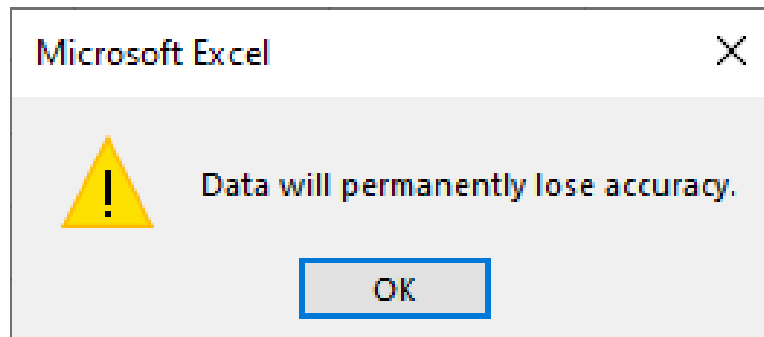


Figure 2 - Warning Message Displayed When Precision as Displayed is Enabled

Do not be alarmed by the warning. Click **OK**, and all the cells that contain zeros will now display properly.

Before continuing, an explanation of the warning message is in order. To do that, we must first review how Excel makes calculations. In default, Excel rounds off for display but uses the underlying data to make calculations. Precision as displayed alters the way that Excel evaluates formulas. With precision as displayed enabled, Excel ignores the underlying data and uses the data displayed on the screen to make calculations. Hence, when precision as displayed is enabled, all calculations will foot and cross-foot properly. In other words, practitioners will not encounter the proverbial one cent rounding error that often results in worksheets because the numbers displayed on the screen are used to make the calculations. The example in Figure 3 will help in explaining precision as displayed.

Units Rec'd	Product Code	PO	Total	Average Unit Cost	
4	G217-9	06-1838	247.11	\$ 61.78	
15	H77-9	06-1838	494.22	32.95	
12	H83-3	06-1799	741.33	61.78	
7	K562-3	06-1803	988.44	141.21	
Total Received				\$ 297.71	
With Precision as Displayed Disabled					
					Average Unit Cost
					\$ 61.777500000000
					32.948000000000
					61.777500000000
					141.205714285714
					\$ 297.708714285714

Units Rec'd	Product Code	PO	Total	Average Unit Cost	
4	G217-9	06-1838	247.11	\$ 61.78	
15	H77-9	06-1838	494.22	32.95	
12	H83-3	06-1799	741.33	61.78	
7	K562-3	06-1803	988.44	141.21	
Total Received				\$ 297.72	
With Precision as Displayed Enabled					

Figure 3 - Rounding Error Corrected by Enabling Precision as Displayed

Note the one-cent (least significant digit) rounding error in the table at the top of Figure 3. The total displayed is \$297.71 but should read \$297.72. The error occurs because Excel is using the underlying data shown in the column displayed on the right to make the calculation. In the bottom table, precision as displayed has been enabled. In this case, Excel is using the data displayed on the face of the worksheet to make the calculation, and the rounding error disappears.

The Excel Data Model

All versions of Excel 2013 and newer include the Excel Data Model, a core in-memory OLAP data engine. Excel Data Models effectively allow us to link or relate multiple tables of data together so that Excel treats them as one. This not only provides great convenience, but it also facilitates much faster calculation times and allows for far more data to be included in your analyses, particularly PivotTable-based reports.

4-4-5 Reporting with Related Tables

As mentioned in the preceding paragraph, we can relate multiple tables together and treat the resulting Excel Data Model as a single object. A practical example of this is to relate the **Sales** transaction summary table to the **Dates** table, thereby avoiding the complexity of building VLOOKUP formulas to perform this task. The only requirement is that the Dates table contain a record for each date, rather than just the beginning date for each period, as required to use VLOOKUP. Similarly, we could use related tables instead of VLOOKUP in transforming coded data into an understandable format.

Begin the PivotTable creation process by selecting **Insert, PivotTable** to open the **Create PivotTable** dialog box. Enter the name of the first table and make sure to check **Add this data to the Data Model** as shown in Figure 4. Click **OK** to display the PivotTable placeholder and Field List.

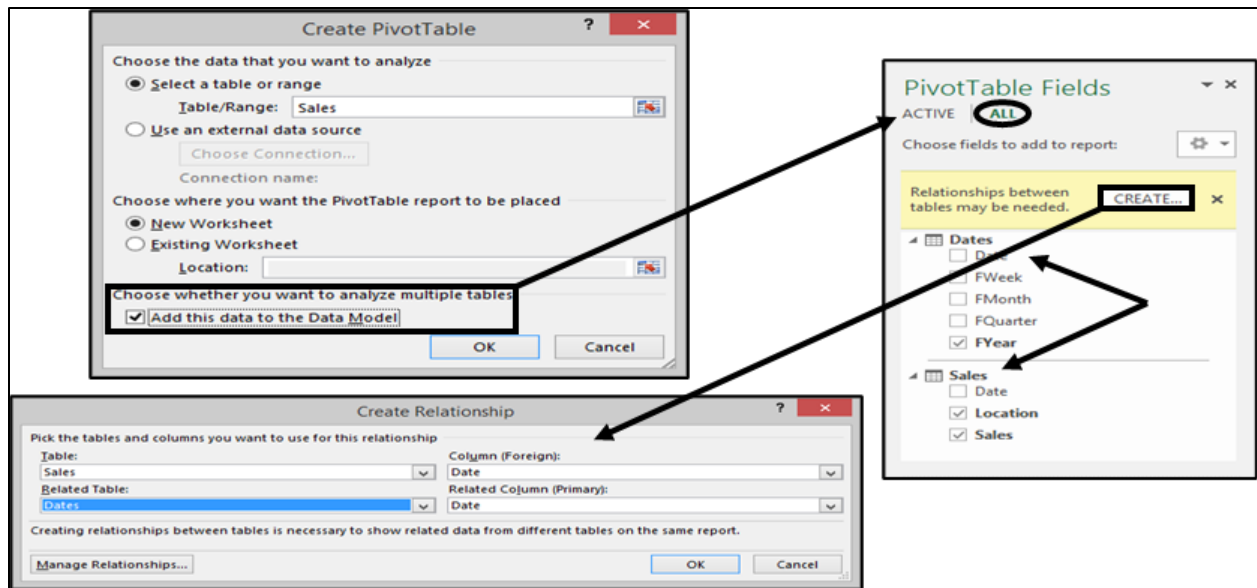


Figure 4 – Creating a PivotTable Using the Excel Data Model

When a table is added to the Data Model, the PivotTable Field List can display all fields from all tables in a workbook. If the tables are not related, relationships can be created on a common field directly from the Field List as shown in **Figure 4**. With the Excel Data Model, end users can create PivotTables from multiple related tables, even if the tables themselves are from multiple external data sources.

Relationships

In the previous example, establishing relationships between tables was accomplished through a link in the PivotTable Field List. A more sophisticated approach to establishing and maintaining data relationships between tables is available through the ribbon. Select **Data, Relationships** to access this functionality as shown in **Figure 5**.

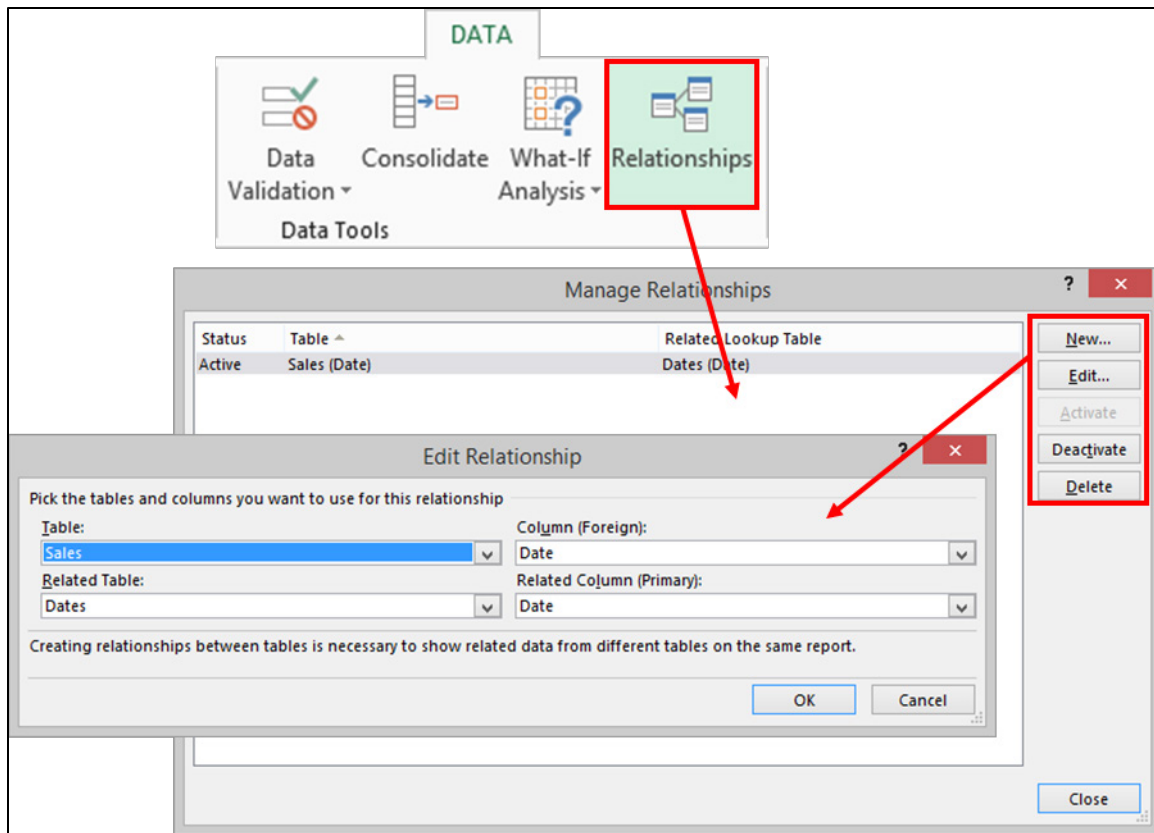


Figure 5 – Creating and Maintaining Data Relationships

Power BI

Power BI is a separate product from Microsoft. It is significant enough for mention in this session because it works in partnership with Excel and capitalizes on your existing knowledge of Excel. Any Excel workbook including specialized reports like PivotTables can be imported directly into Power BI. There are two versions of Power BI for end users. Power BI Pro \$10 per month (cloud-based) and Power BI Desktop (no charge).

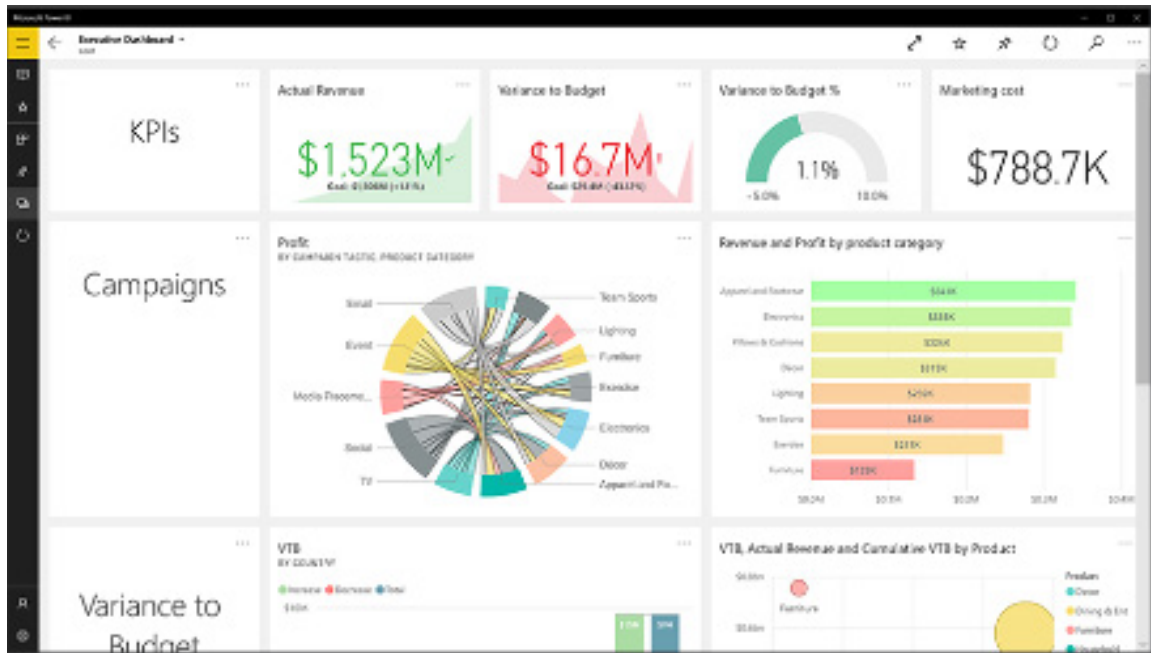


Figure 6 – Sample Report Created with Power BI

Understanding Excel Dates

Gregorian Calendar

Excel dates are serial numbers that follow the Gregorian calendar and have a start date basis of January 1, 1900. To see this, change the format on the date to any numeric format or use General format and you can easily see the number. This is a significant characteristic because it means that business professionals using Excel perform mathematical calculations on dates just as they do with any other numbers.

1904 Date Basis

Not all information systems followed this rule and as a result some use the start date of January 1, 1904. For many years this was a non-issue but the reemergence of Apple products makes this an issue again. Excel can handle these issues with a setting found in **Excel Options, Advanced**. Pictured in **Figure 7**, this is a workbook-level setting.

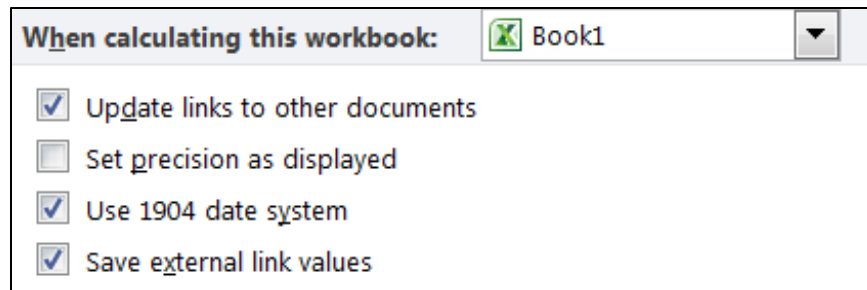


Figure 7 – Changing Excel for Windows to the 1904 Date System

Flash Fill

Flash Fill is a data manipulation feature that allows users to split, combine, or rearrange data quickly and easily without using commands or complicated formulas. Whether it's rearranging customer contact names, inserting parentheses and hyphens in telephone numbers, or separating account numbers and account names in a QuickBooks trial balance, Flash Fill can get the job done, as shown in **Figure 8**.

Contact	Phone		Account No and Account	
Abercrombie, Kristy	4155556579		10100 · Checking	
Allard, Robert	6505553422		10300 · Savings	
Baker, Chris			10400 · Petty Cash	
Balak, Mike	Kristy Abercrombie	(415) 555-6579	11000 · Accounts Receivable	10100 Checking
Barley, Renee	Robert Allard	(650) 055-3422	12000 · Undeposited Funds	10300 Savings
Bauman, Mark	Chris Baker	(415) 555-2253	12100 · Inventory Asset	10400 Petty Cash
Bolinski, Rafal	Mike Balak	(415) 555-6636	12800 · Employee Advances	11000 Accounts Receivable
Bristol, Sonya	Renee Barley	(415) 555-7262	13100 · Pre-paid Insurance	12000 Undeposited Funds
Burch, Jason	Mark Bauman	(415) 555-8669	13400 · Retainage Receivable	12100 Inventory Asset
	Rafal Bolinski	(415) 555-3262	15000 · Furniture and Equipment	12800 Employee Advances
	Sonya Bristol	(415) 555-5239		13100 Pre-paid Insurance
	Jason Burch	(415) 555-2351		13400 Retainage Receivable
				15000 Furniture and Equipment

Figure 8 – Use Flash Fill to Manipulate Data

There are multiple ways to apply Flash Fill. In default, Excel displays Flash Fill suggestions as you work. As shown in **Figure 9**, a user has modified the first record and has moved to the second record. As the user begins modifying the second record, Excel automatically displays a suggested flash fill for the column. At that point, the user can press **ENTER** to accept the suggested flash fill or press **ESC** to cancel the suggested fill. Alternatively, select **Data, Flash Fill** from the ribbon or press **CTRL + E** to execute Flash Fill from the keyboard.

To reformat a list of telephone numbers, type one number as it is to appear with parentheses and a hyphen, press **ENTER**, and then press **CTRL + E**. If Excel is unsure of what is to be done for any record, it will skip the record. Move the cursor to a skipped record and "correct" it, and then

press **CTRL + E** to fill similar records. Continue this process until the entire column has been updated.

Contact	Phone	Contact Name	Phone
Abercrombie, Kristy	4155556579	Kristy Abercrombie	(415) 555-6579
Allard, Robert	6505553422	Robert Allard	(650) 055-3422
Baker, Chris		Chris Baker	(415) 555-2253
Balak, Mike		Mike Balak	(415) 555-6636
Barley, Renee		Renee Barley	(415) 555-7262
Bauman, Mark		Mark Bauman	(415) 555-8669
Bolinski, Rafal	4155553262	Rafal Bolinski	(415) 555-3262
Bristol, Sonya	4155555239	Sonya Bristol	(415) 555-5239
Burch, Jason	4155552351	Jason Burch	(415) 555-2351

Figure 9 – Excel Automatically Displays a Suggested Flash Fill

The Accounting Format & Custom Formats

The Accounting Format

When asked if they use the accounting format, many accounting professionals respond that they do not use it at all. In reality, the accounting format is probably the most frequently used number format within the profession. That is because the accounting format is applied whenever the currency or comma styles are selected from the **Home** tab of the Ribbon, as shown on the left in **Figure 10**, or from the **Mini-Toolbar**, as shown in the same figure on the right. The Mini-Toolbar appears whenever a user right-clicks on the worksheet grid.



Figure 10 - Currency and Comma Style Buttons on the Ribbon and Mini-Toolbar

The currency style applies the accounting format with the dollar sign and two decimal places, while the comma style applies the accounting format without the dollar sign. The accounting format displays negative numbers within parentheses and ensures that decimal points align – perfect for financial reports!

Single and Double Underlines

The accounting format affects the way single and double underlines are applied to numbers and labels. When using the accounting format, single and double underlines for subtotals, totals, and column headings do not span the entire column as do cell borders. The accounting format indents

single and double underlines one space from the left and right cell margins. This provides the necessary break in underlines across adjacent columns without resorting to the frequent practice of inserting narrow *faux* columns to accomplish the same effect.

	A	B	C	D	E
1	DNM Marketing Inc				
2	Income Statement vs. Budget				
3	For the Year Ended December 31, 2012				
4					
5		In Millions of Dollars			
			Adjusted		Variance
6	Region	Budgeted	Budgeted	Actual	from
7					Adjusted
8	Southern	\$ 2.80	\$ 2.70	\$ 2.72	\$ 0.02
9	Eastern	4.60	4.70	4.69	(0.01)
10	Midwestern	3.90	3.50	3.30	(0.20)
11	Mountain	1.70	1.70	1.65	(0.05)
12	Far West	4.70	4.80	4.82	0.02
13					
14	Total Revenues	<u>\$ 17.70</u>	<u>\$ 17.40</u>	<u>\$ 17.18</u>	<u>\$ (0.22)</u>

Figure 11 - Report Showing the Effect of the Accounting Format on Single and Double Underlines

Figure 11 displays single and double underlines applied to labels and numbers in cells formatted with the accounting format. Notice how the single and double underlines do not quite span the width of the cells, thereby allowing for breaks in the underlines between adjacent columns.

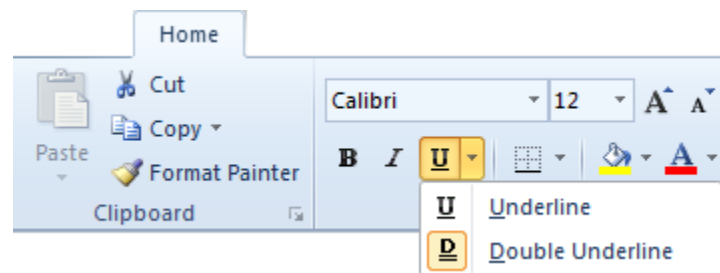


Figure 12 - Applying Underlines and Double Underlines from the Ribbon



For single and double underlines to display and print properly for cells containing text, the single or double underline formats must be applied after applying the accounting format. For cells that are already underlined when the accounting format is applied, simply remove and then reapply the underline format.

Custom Formats

Custom formats can format numbers and text in ways suitable for financial reporting. For example, financial statements may need to be restated and reported in thousands, millions, or billions. While many accounting practitioners accomplish this task by dividing their actual data by an appropriate divisor, the same result can be accomplished by merely using a custom format to display the existing actual data in thousands, millions, or billions, as shown in **Figure 13**.

	<u>YTD</u>
Net Sales	\$ 243,585,573.23
Cost of Goods Sold	<u>156,498,219.84</u>
Gross Margin	87,087,353.39
Operating Expenses	<u>62,792,138.76</u>
Income from Operations	24,295,214.63
Income Taxes	<u>5,587,899.36</u>
Net Income	<u>\$ 18,707,315.27</u>

	<u>YTD</u>
	<u>Thousands</u>
Net Sales	\$ 243,585.57
Cost of Goods Sold	<u>156,498.22</u>
Gross Margin	87,087.35
Operating Expenses	<u>62,792.14</u>
Income from Operations	24,295.21
Income Taxes	<u>5,587.90</u>
Net Income	<u>\$ 18,707.31</u>

	<u>YTD</u>
	<u>Millions</u>
Net Sales	\$ 243.59
Cost of Goods Sold	<u>156.50</u>
Gross Margin	87.09
Operating Expenses	<u>62.79</u>
Income from Operations	24.30
Income Taxes	<u>5.59</u>
Net Income	<u>\$ 18.71</u>

Figure 13 - Using Custom Formats to Report in Thousands or Millions

To create a custom format to report in thousands, millions, or billions, first format your cells with the desired accounting formats – with or without decimals and dollar signs. Next, access the **Format Cells** dialog box with the dialog launcher in the **Font** group on the **Home** tab of the Ribbon or from the context-sensitive menu. In the **Format Cells** dialog box, select the **Number** tab and then **Custom** in the **Category** box. Modify the format code in the **Type** box to append commas to the positive and negative formats appropriate for your needs. To format the numbers in thousands, append one comma; for millions, append two commas; and for billions, append three commas.

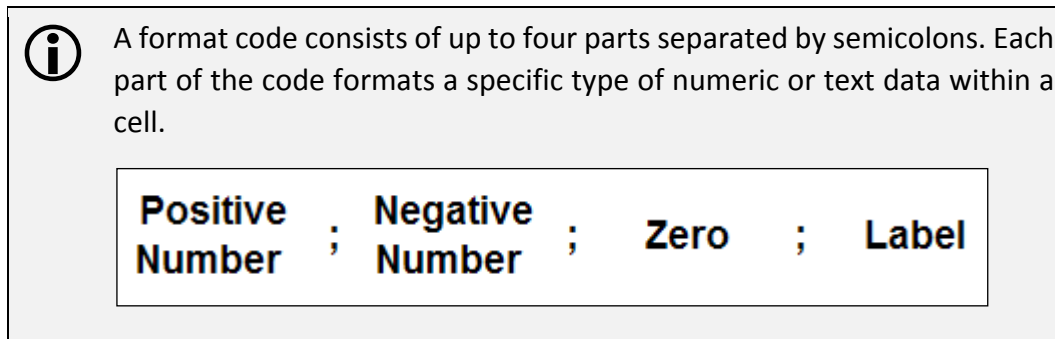


Figure 14 contains the appropriate format codes for using the accounting format displayed in thousands, millions, and billions. Note the comma placement identified by the arrows and underlines. Also, note that the toolbar buttons for increasing or decreasing the number of decimal points displayed works with these custom format codes.

With Dollar Signs	
Dollars	_ (\$* #,##0.00_);_(\$* (#,##0.00);_(\$* "-"??_);_(@_)
Thousands	_ (\$* #,##0.00,_);_(\$* (#,##0.00,);_(\$* "-"??_);_(@_)
Millions	_ (\$* #,##0.00,,_);_(\$* (#,##0.00,,);_(\$* "-"??_);_(@_)
Billions	_ (\$* #,##0.00,,,_);_(\$* (#,##0.00,,,);_(\$* "-"??_);_(@_)
Without Dollar Signs	
Dollars	_ (* #,##0.00_);_(* (#,##0.00);_(* "-"??_);_(@_)
Thousands	_ (* #,##0.00,_);_(* (#,##0.00,);_(* "-"??_);_(@_)
Millions	_ (* #,##0.00,,_);_(* (#,##0.00,,);_(* "-"??_);_(@_)
Billions	_ (* #,##0.00,,,_);_(* (#,##0.00,,,);_(* "-"??_);_(@_)

Figure 14 - Custom Codes for Displaying the Accounting Format in Thousands, Millions, and Billions

To display and print negative numbers in red, modify any number format to include the tag **[Red]** immediately preceding the negative number format code as shown. In addition to red, the following colors may be used in format codes: *black, white, green, blue, magenta, yellow, and cyan.*

Some accounting professionals prefer to display **0.00** for zeros when using the accounting format. This is accomplished easily by modifying the accounting format to include the appropriate zero format code. The two custom format codes required, one with dollar signs and the other without, are displayed in **Figure 15**.

With Dollar Signs	_ (\$* #,##0.00_);_(\$* (#,##0.00);_(\$* <u>0.00</u>_);_(@_)
Without Dollar Signs	_ (* #,##0.00_);_(* (#,##0.00);_(* <u>0.00</u>_);_(@_)

Figure 15 - Accounting Format Code Modified to Display 0.00

Custom Date Formats

Just like number formats, date formats can be customized. The following table contains the codes for building custom date formats.

To Display	Use Code
Months as 1-12	M
Months as 01-12	Mm
Months as Jan-Dec	Mmm
Months as January-December	Mmmm
Months as the first letter of the month	mmmmm
Days as 1-31	d
Days as 01-31	dd
Days as Sun-Sat	ddd
Days as Sunday-Saturday	dddd
Years as 00-99	yy
Years as 1900-9999	yyyy

Table 1 - Custom Date Format Codes

In the worksheet shown in **Figure 16**, the column headings are entered as dates. In this case, each column heading is the last date of the month formatted to display the three-letter abbreviation for the month.



E8				8/31/2012		
	A	B	C	D	E	F
1	GTM Manufacturing Inc					
2	Retail Sales Division					
3	Summarized Income Statement					
4	Stated in Millions of US Dollars					
5	For the Three Months Ended August 31, 2012					
6						
7						
8		Jun	Jul	Aug	3 Months to Date	
9	Revenue	\$ 380.00	\$ 380.00	\$ 275.00	\$ 1,035.00	

Figure 16 - Using Date Formats to Display Month Headings

Using dates as column headings allows the report date in the report heading to link easily by formula to the latest reported month. This ensures that the report date is always accurate and does not require manual update.

Cleanup Data with Text to Columns Tool and Power Query

The data parsing capabilities of Excel are excellent but often you can still end up with “trash” in cells. When faced with text that look like numbers or dates that are not formatted properly, you can run the **Text to Columns** tool to transform your data quickly and easily. This will run the data through the standard “car wash” and should clean up your issues.

As an alternative, you may wish to investigate the power of Excel’s Power Query feature. With Power Query, you can easily link or import data from external data sources into Excel. Just as important though is the ability to use Power Query to apply *transformations* to your data. Transformations are those “clean-up” processes such as sorting, filtering, splitting columns, combining columns, rearranging data, replacing values, etc. that you might need to perform repetitively. With Power Query, once you perform your transformations the first time, Excel “memorizes” those transformations and automatically performs them every time you update your data.

Using the Camera to Create Report Forms

That brings us to the **Camera** tool. The **Camera** allows users to cut and paste dynamic pictures of data ranges which can then be arranged in any layout for display or printing. To use the **Camera**, first add the tool to the QAT. Just click on the drop-down arrow at the right end of the QAT and select **More Commands**. In the **Excel Options** dialog box, select **Commands Not in the Ribbon**. Scroll down in the list of commands and select the **Camera** tool. Click **Add** and then **OK** to close the dialog box as shown in **Figure 17**.

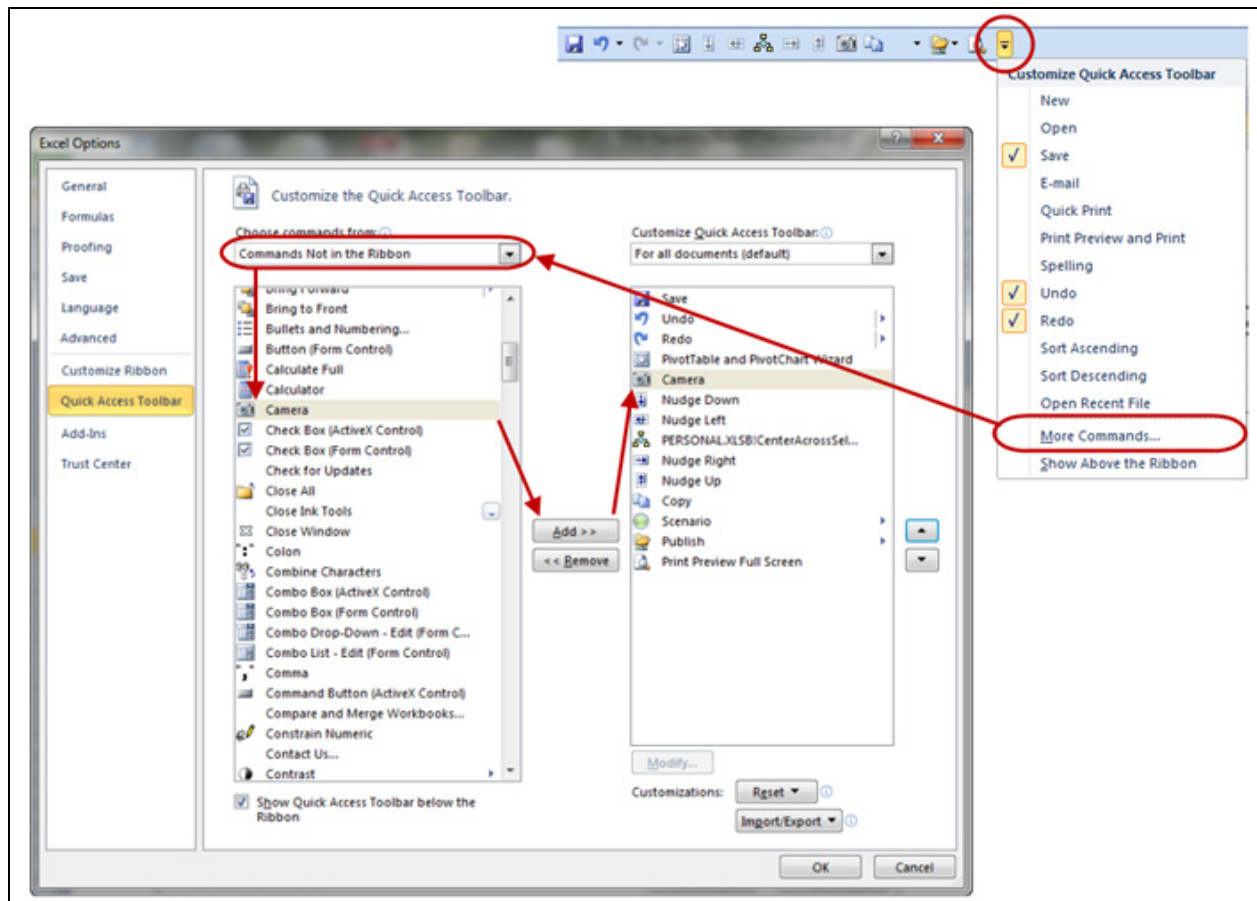


Figure 17 - Adding the Camera to the QAT

The use of the **Camera** is similar in operation to cut-and-paste. Highlight the range to copy and click the **Camera** toolbar button. Now, navigate to the worksheet that will serve as your report form and click with your mouse on the sheet. A picture of your data snippet will be pasted on the worksheet. Click and drag the picture to its proper location. Repeat the process with other data snippets to build your report form as shown in **Figure 18**.

OPUHA DAM LIMITED			
Hydro Optimisation Model			
Generation Station and Opuha Dam @ 100,000 MI, 50-Year Project Life			
Assumptions		Financial Performance Assumptions/Indicators	
Capital Cost		Inflation Rate	2.00%
Dam	\$19,700,000	Required After-Tax Real Rate of Return	7.50% 5.42%
Power Station	9,800,000	Required After-Tax Nominal Rate of Return	9.65% 7.53%
Total Cost	29,500,000	NPV @ After Tax Real Rate of Return	\$2,041,939
Capital Structure		After Tax Internal Rate of Return	8.04%
Share Capital	\$6,125,000		
Bank Loan	15,000,000		
Shareholder Loans	8,375,000		
Tax Free Operating Grant	888,889		
Operating Revenue		Base	Weighted Average Cost
Wholesale Price of Power (c/kWh)	4.200	4.200	4.328
Demand for Power (GWh)	33.000	33.000	34.20
Power Station	1,386,000	1,386,000	\$1,480,176

Figure 18 – Sample Data for Camera Application

Footnotes on Numbers

This final tip is only for those of you who are obsessive, although that may include a majority of the accounting profession. From time to time, accounting practitioners ask whether it is possible to have footnote numbers on numeric data. It is possible, but the process is sufficiently convoluted to warrant its use only in the context of templates. In other words, we do not necessarily suggest using this process in workbooks created as part of day-to-day tasks and activities.

Attempts to add footnote numbers to numeric data usually end in frustration. That's because the footnote number becomes the least significant digit in the number to be footnoted and because the superscript formatting is not maintained. Since a footnote number actually alters the numeric value in a cell, any calculation on the number is also affected. The solution is to convert the numeric data to text. However, that creates another problem – we can't use labels that look like numbers in calculations using functions, such as SUM or AVERAGE, that accounting professionals use every day. The solution requires numeric data that is calculated accordingly on one worksheet (the working sheet) and reported on another (the reporting sheet) as text that looks like numeric data, along with the requisite footnote numbers. The footnote numbers will be added to the reporting sheet by using a VLOOKUP table. The lookup table will consist of numbers cross-referenced to UNICODE superscript numeric characters.

The **Footnotes on Numbers.xlsx** file contains the sample data that we will use for this example. It contains three worksheets: 1) Numeric Balance Sheet, 2) VLookup Table, and 3) Report Balance Sheet. **Figure 19** shows the Numeric Balance Sheet. The amount columns contain numeric data. The narrow green columns contain the desired footnote number for the data.

	A	B	C	D	E
1	GTM Construction, Inc				
2	Comparative Balance Sheet				
3	July 31, 2012				
4					
5					
6	Assets	2012	#	2011	#
7	Current Assets:				
8	Cash	\$ 300	1	\$ 5,583	
9	Receivables:				
10	Accounts Receivable	2,581,600		1,938,464	
11	Less: Allowance for Doubtful Accounts	(75,000)		(76,255)	
12	Other:	101,944		105,381	
13	Inventories	2,854,907	2	2,780,841	
14	Prepaid Expenses	86,651		66,548	
15	Deferred Tax Asset	170,660		170,660	
16	Total Current Assets	5,721,062		4,991,222	
17					
18	Other Assets:				
19	Deposits	5,041		5,027	
20	Note Receivable from Officer	1,259,773		1,259,773	
21	Cash Surrender Value of Officers' Life Insurance	85,074		248,106	
22	Deferred Tax Asset	846,121		846,121	
23	Total Other Assets	2,196,009		2,359,027	
24	Total Current and Other Assents	7,917,071		7,350,249	

Figure 19 - Balance Sheet with Numeric Data

To begin, format the VLookup Table and Report Balance Sheet with Lucida Sans Unicode font. On the VLookup Table worksheet, create the VLOOKUP table to return the superscript numbers associated with the footnotes desired as shown in **Figure 20**.

	A	B
1	Footnotes	
2	1	¹
3	2	²
4	3	³
5	4	⁴
6	5	⁵
7	6	⁶
8	7	⁷
9	8	⁸
10	9	⁹
11	10	¹⁰
12	11	¹¹
13	12	¹²
14	13	¹³
15	14	¹⁴
16	15	¹⁵

Figure 20 - VLOOKUP Table to Return Footnote Numbers

To create a VLOOKUP table to handle up to fifteen footnotes, do the following.

1. Create a list of numbers from 1 to 15 in column A.
2. In column B, adjacent to each cell containing a number, enter the Unicode character(s) for the equivalent superscript digit(s). From the **Insert** tab of the Ribbon, select **Symbol**. Scroll through the list and select the appropriate character. Click **Insert** and then **Close**.
3. Move down one cell and repeat the process until the list is complete.



Note that a UNICODE character set **must be used**. Make sure to format the worksheet holding your VLookup table and final report in Lucida Sans Unicode.

4. Create a defined name for the table. Highlight the table and then type in **Footnotes** in the **Range Box**.

With the VLOOKUP table created, we need to create a formula to move the data to the report worksheet, along with a footnote, if it exists. Our formula will need to use some of the trickery discussed earlier to get the result that we desire. **Figure 21** shows the results of our efforts.

	A	B
1	GTM Construction, Inc	
2	Comparative Balance Sheet	
3	July 31, 2012	
4		
5	Assets	
6	Current Assets:	
7	Cash	\$300 ¹
8	Receivables:	
9	Accounts Receivable	2,581,600
10	Less: Allowance for Doubtful Accounts	(75,000)
11	Other:	101,944
12	Inventories	2,854,907 ²
13	Prepaid Expenses	86,651
14	Deferred Tax Asset	170,660
15	Total Current Assets	5,721,062
16		
17	Other Assets:	
18	Deposits	5,041
19	Note Receivable from Officer	1,259,773
20	Cash Surrender Value of Officers' Life Insurance	85,074
21	Deferred Tax Asset	846,121
22	Total Other Assets	2,196,009
23	Total Current and Other Assents	7,917,071

Figure 21 - Report Balance Sheet with Footnotes Displayed on Numbers

Following is the generalized form of the formula used to move and concatenate the data. The sheet reference has been removed for clarity.

- 1: =IF(B8="", "",
- 2: TEXT(B8, " _(\$*#,##0 _);_(\$*(#,##0);_(\$*_???)")
- 3: &IF(ISERROR(VLOOKUP(C8, Footnotes, 2))=TRUE, "",
- 4: VLOOKUP(C8, Footnotes, 2)))

The first line tests whether there is data in a cell of the Numeric Trial Balance. If no data is found, the formula returns a null string so that the cell appears blank. If it finds data, the second line converts it to text formatted with a modified accounting format. Line three tests whether concatenating a nonexistent footnote causes an error. If it causes an error, the formula concatenates a null string. If it does not find an error, it concatenates the proper superscript character for the footnote from the VLOOKUP table.

Ideas

Ideas in Excel empowers you to understand your data through high-level visual summaries, trends, and patterns. Simply click a cell in a data range, and then click the **Ideas** button on the Home tab. Ideas in Excel will analyze your data and return interesting visuals about it in a task pane.

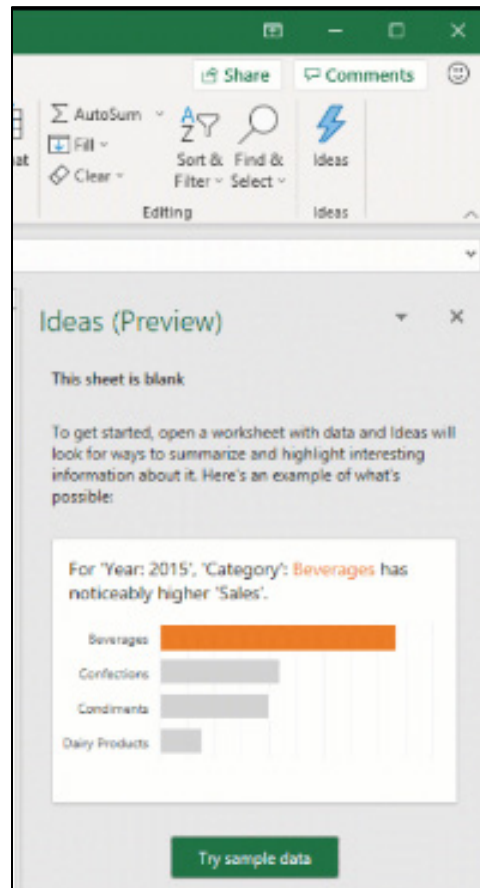


Figure 22 – Sample Output from Ideas

Summary

Excel currently offers approximately 700 functions, countless keyboard shortcuts, and literally hundreds of other features. Yet, most professionals use only a handful of these tools. That is largely because of the unawareness of other features available in Excel that can boost efficiency and accuracy when working in the application. In this session, you have learned about some of the more useful of these tools. But the list is large and we have just seen the tip of the iceberg, so commit to a strategy of continual learning so that you can realize the fullest potential of Excel!