Creating Running Totals in a Pivot Table | BY BILL JELEN

You can build a basic pivot table in six clicks, but pivot tables offer far more functionality than simply summing data. This month we'll look at how additional pivot table features can be used to create a year-to-date (YTD) comparison report for all the customers in a spreadsheet, as shown in Figure 1.

Preparing Your Data

Gather two years of sales data. You should have columns for Customer, Date, and Revenue, and there can be additional data columns. Make sure your data has a one-row heading above each column and that there aren't any blank rows or columns.

Building the Pivot Table

Building the initial pivot table is easy. First, select a cell in your data set. If you're using Excel 2003, go to the Data menu and select PivotTable and PivotChart Report to start the Pivot Table wizard, and then simply click Finish. Double-click the Date field in the pivot table field list. Drag the Revenue field to the report section labeled "Drop Data Items Here." In Excel 2007, choose Insert, Pivot Table, and click OK. Checkmark the Date and Revenue fields in the top of the PivotTable Field List.

At this point, we have a two-column report showing about 500 daily dates running down column A and the corresponding sales by day in column B. And now that the basic report is ready, there are other pivot table functions that we can use.

Grouping Daily Dates by Months and Years

Right-click the first date cell in column A. Choose Group & Show Detail, then Group. In the dialog box that opens, highlight both Months and Years. Click OK. You'll now have about 25 rows in your report, with years shown in column A, months in column B, and revenue in column C.

Pivoting Years across the Columns

It's useful that the Grouping dialog box creates two date fields from your single date field. For example, breaking out years into a separate field enables you to pivot the Years field to another section of the report, say, to create a report showing monthly sales by year. In Excel 2003, drag the Years heading from cell A4 to cell C3. In Excel 2007, drag the Years field from the Row Labels drop zone to the Column Labels drop zone.

Change to Running Totals

While pivot tables usually sum data, there are many other calculation options available. Choose the first cell with revenue and press the Field Settings icon (a blue circle with a white "i"). In Excel 2003, it's located near the far-right end of the Pivot-Table toolbar. In Excel 2007, it's near the left side of the Options ribbon tab.

After pressing the icon in Excel 2003, type a new name, such as "YTD Revenue." Click the Options button to expand the PivotTable Field dialog. Open the Show Data As dropdown and choose Running Total In. In the Base Field box, choose Date. When you click OK, the report will change from showing monthly sales to showing YTD sales.

Figure 1

	A	B	C	D
1	Customer	(All) ▼		
2				
3	Sum of Revenue	Years ▼		
4	Date ▼	2007	2008	% Change
5	Jan	273222	257524	-5.7%
6	Feb	574842	511501	-11.0%
7	Mar	840635	728062	-13.4%
8	Apr	1108401	1020065	-8.0%
9	May	1449813	1307508	-9.8%
10	Jun	1629368	1549391	-4.9%
11	Jul	2015135	1845242	-8.4%
12	Aug	2306796	2132133	-7.6%
13	Sep	2583320	2349209	-9.1%
14	Oct	2885223	2658195	-7.9%
15	Nov	3115496	2960075	-6.0%
16	Dec	3407553	3300259	-3.1%

In Excel 2007, type the new name ("YTD Revenue") in the Custom Name field. On the Show Values As tab, in the dropdown of the same name, select Running Total In. Choose Date as the base field, and click OK.

Final Touches

The report includes a Grand Total column that would be better utilized as a percentage change column. The report also contains a blank Grand Total row that can be removed.

In Excel 2003, right-click any cell in the pivot table and choose Table Options. Uncheck the first two options boxes to turn off Grand Totals for Columns and Grand Totals for Rows. Click OK.

In Excel 2007, right-click any cell in the pivot table and choose PivotTable Options. On the Totals & Filters tab, uncheck the first two boxes to turn off the grand totals.

While pivot tables normally provide a calculated item to calculate the monthly percentage growth, Excel turns off calculated items after you group the daily dates up to monthly dates. You could add Revenue to the report a second time, choosing to Show Data As a Percentage Difference From, based on years, and compared to (previous). But this option leaves an annoying blank column in the report (column D). The best solution is to go low-tech and build a simple formula outside the pivot table to perform the calculation. Type a heading in cell D4. Then *type* the formula =C5/B5-1 into cell D5. It's imperative that you type this formula rather than using the mouse or arrow keys. Otherwise, Excel will automatically generate GetPivotData functions, which are essentially absolute references and not what we want here. (To learn how to stop Excel from generating GetPivotData functions, see www.MrExcel.com/getpivotdata.html.) Copy cell D5 down to the remaining rows in your table and you'll have the monthly percentage growth for each month in the report.

Replicating for Every Customer

Creating this report for every customer in your data set is easier than you think. In Excel 2003, drag the Customer field to the Page Area. From the Pivot Table dropdown on the PivotTable toolbar, choose Show Pages, and click OK. In Excel 2007, drag the Customer field to the Report Filter drop zone. Go to the Options ribbon tab. Open the Options dropdown located on the left side of the ribbon. Choose Show Report Filter Pages, and click OK. Excel will insert one new worksheet for every customer.

Pivot tables are Excel's most powerful function. Going beyond the basics enables greater flexibility and functionality as well as more robust reports. ■

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