Whilst we now know how to create a pivot table that provides a summary of the data, a summary of the results doesn't necessarily provide us with information on how our business is performing.

A summary may tell us how many, or how much, but performance is usually measured with a comparison. Comparison of one-time frame to a previous time, comparison of one product line to another, or comparison of one division to another, or even just a comparison of results vs target.

Let's open up our example file and have a look.

In the first example, the pivot table has been created from a quote database.

- The rows show the job categories our organisation is working on
- The columns show the quote status
- And the value summarises how many quotes have been won or lost (pending has been filtered out).

Whilst it may be important to know how many quotes have been one or lost, if we're measuring performance, it'll be more important to know what percentage have been won or lost. So let's change it.

Right click on one of the value fields (lost or won) and select 'Show Values As'. In the pop-out menu, we'll see a whole list of different comparisons that may be applied. In the percentages, we can compare items in the same column (comparing the different job categories),with 'Percentage of Column Total', or we can compare items in the same row (comparing the number of jobs won vs jobs lost), with 'Percentage of Row Total'. Let's apply that one. Click 'Percentage of Row Total'.

Great! This comparison shows us not the number of quotes that were won or lost per job category, but the percentage.

- 85% of all ‘Civil Commercial’ quotes were won.
- 79.78% of all quotes (for all job types) were won.
- Only 45.45% of DPTI quotes were won.

All good information we can use to improve our business.

Let’s have a look at the second example, also created from the same quote database.

- The rows show the depot that will produce our asphalt
- The columns show the months each project will be undertaken
- And the value summarises how many tonnes of asphalt will be required for the projects.

Whilst it is important to know how much asphalt we’ll require each month for the projects, if we’re tracking our plant to plan regular maintenance, it’ll be important to know how many tonnes of asphalt it’s produced – year to date.

Right click on one of the value fields (asphalt per month) and select ‘Show Values As’. In the pop-out menu, select ‘Running Total In’. As this calculation doesn’t define whether the running total is applied to the rows or columns, the dialog box will ask which field the running total needs to be applied to.

We could choose ‘Depot’ and get a running total through the column, but that won’t be very helpful in this instance.

Instead we’ll select ‘Project Date (month)’ to see the running total (or aggregating total) applied across the rows.

Notice how each month shows the aggregating total of the previous months plus the current month – which essentially gives us a year to date total of tonnes of asphalt produced.

This will allow our maintenance manager to plan when regular maintenance needs to be carried out at each plant - I'm sure they'll be very happy.

In the third example, we see the total value of all projects per month. Whilst it’s nice to be able to forecast our turnover, in order to measure performance we need to compare it to something. Let’s compare the increase or decrease in turnover for each month.

Right click on one of the value fields (project value per month) and select ‘Show Values As’. In the pop-out menu, we could select 'Difference From' to see the dollar value difference between each month, but instead we'll look at the percentage increase and percentage decrease by selecting ‘percentage Difference From’.

As this calculation doesn’t define whether the difference is calculated for the rows or the columns, the dialog box will ask which field the difference from should be applied to.

The Base Field is the field to be compared. As we’d like to compare each monthly result, we’ll select ‘Project Date (month)’ as the base field.

For the base item (what to compare each month to), we can choose from any of the items that exist in that field (any of the months), or Previous or Next. As we want to compare each month to the previous month (February compared to January, March compared to February, etc), we’ll select ‘Previous’.

Our PivotTable no longer displays the project total per month, but the % increase or % decrease in project totals, compared to the previous month.

- January shows a blank, as there’s nothing to compare it to.
- February displays a 549% increase from January to February
- March shows a 9.5% decrease from February to March.

You may want to see the total project value per month as well as the comparison. Just drag the ‘bid price’ field into the values area a second time. Now we see the % difference from and the project total per month.

You may want to re-arrange these 2 value fields to see the total project value first and then the comparison. Just drag the fields around within the Values area to rearrange them.

Before we call this complete, let's tidy it up - just a bit.

- The negative percentages (monthly decreases) aren’t very obvious. It’d be so much better if our negatives showed up in red.
- The number formatting of the new bid price field isn’t formatted as currency – I think we should fix that.
- The field names are now a bit deceptive – the field named Sum of Bid Price is actually the comparison, so let’s re-name that. And the field named Sum of Bid price2 is the actual total of all bid prices per month.

Let’s work backwards.

- Select one of the titles ‘Sum of Bid Price2’ and overtype it with a nicer name like ‘Project Total’
- Select one of the titles for ‘Sum of Bid Price’ and overtype it with something more descriptive. This field is calculating the variance, so let’s call it VAR.
- Fix the number formatting for the Project Total field... right click within the field, choose number format and select ‘Accounting’ or ‘Currency’. Probably reduce the number of places after the decimal to zero.
- To reformat the percentages, we’ll have to create our own number format code – just like we did in week 1. Right click on any cell in the VAR field and select Number Format. Choose ‘Custom’ in the left pane. We can see in the ‘Type’ field, the first part of our format code is already entered (0.00%). Remember to add a different format for negative numbers, we simply separate the positive format and the negative format with a semi-colon ; . So

after the existing format code, input a semi-colon and type the word Red inside square brackets. Follow that with the negative symbol then the 0.00% (same as the positive format). And click OK.

Great!

Although I'm not a big fan of banded columns, this is one instance where it would add to our presentation. As each month has 2 columns, each representing different information – it'd be easier to read if these columns were formatted differently.

Go to the Design tab of the ribbon and tick the box for banded columns in the PivotTable Style Options group.

Excellent. Our various pivot tables are all providing different comparisons from the same data:

- The percentage of bids won or lost
- The aggregating total of asphalt produced per plant – year to date
- The percentage increase or percentage decrease on total project values per month, compared to the previous month

And it looks pretty good too. Well done.