



Section 33

Advanced Charts

By the end of this Section you should be able to:

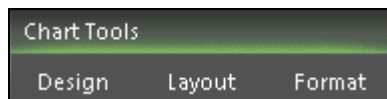
- Use Chart Options
- Add Moving Averages to Charts
- Change a 3D Chart View
- Use Data Labels and Markers
- Create Stacked Bar Charts

Chart Tools

The **Chart Tools** tabs; **Design**, **Layout** and **Format** on the **Ribbon**, control all the features relevant to charts, their construction, location and appearance.

To display Chart Tools

- Make a chart active by selecting it.
- The **Ribbon** changes because the chart is active. The **Chart Tools** tabs are displayed; **Design**, **Layout** and **Format**.



To change chart type

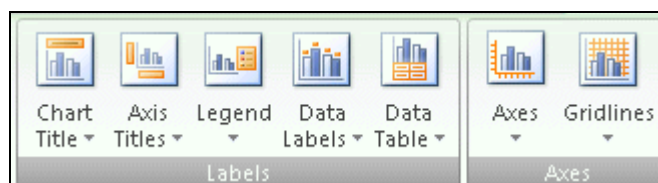
- Display the **Design** tab. Click the **Change Chart Type** button. Choose a different chart type and click **OK** to display it.

To change the chart data

- Click the **Select Data** button. Data can be added to the chart using this dialog box. Series names can be added or edited as well as the axis labels. Click **OK** after any changes.

To change labels and axes

- Display the **Layout** tab. The buttons in the **Labels** and **Axes** groups are used to change the various parts of a chart.



- Use the appropriate button to make changes.

To use the format selection button

- Click on any area of the chart, such as the **Plot Area** (grey). Click the **Format Selection** button. The chosen area can now be formatted as required. Click **Close**.

Moving Average

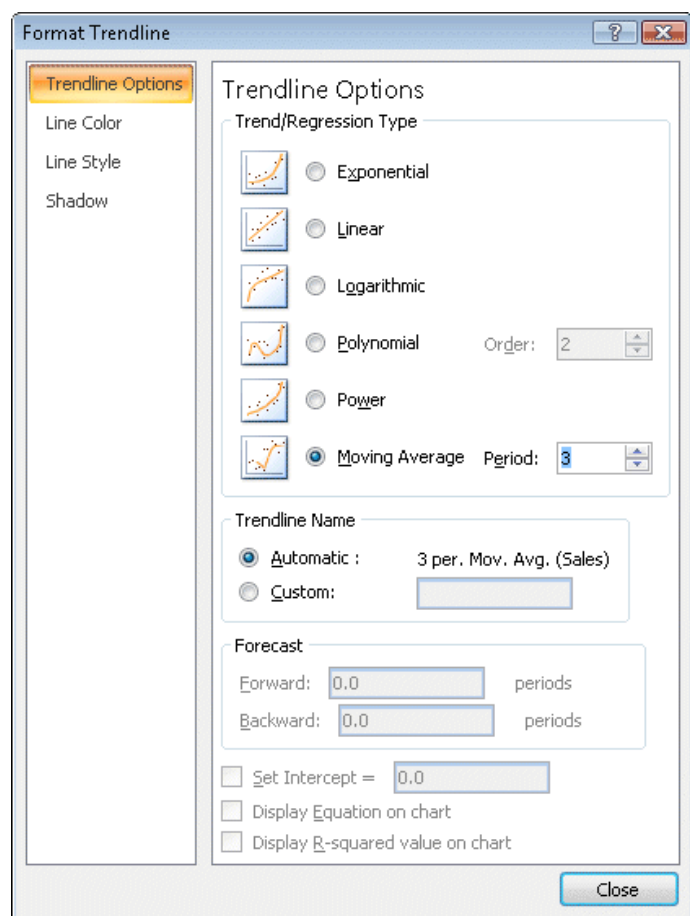
Moving Average is a **Trendline** option, where each value is an average of the data from a specified number of previous months.

To add a Moving Average

- Make a chart active by selecting it.
- Display the **Layout** tab and click the **Trendline** button.
- Select **More Trendline Options** and select the **Series** on which to base the trendline.
- Select the **Moving Average** option and change the **Period** as required.
- This diagram shows the **Moving Average** value set to 3. The average for each of the three previous months, and therefore starts at the third month. Move the **Format Trendline** dialog box if necessary.

To format a trendline

- The **Moving Average** can be formatted. Under **Trendline Name**, select **Custom** and enter the required name. This is the legend name.
- Display the **Line Style** section and make any changes required. Click **Close**.



3-D Chart Rotation

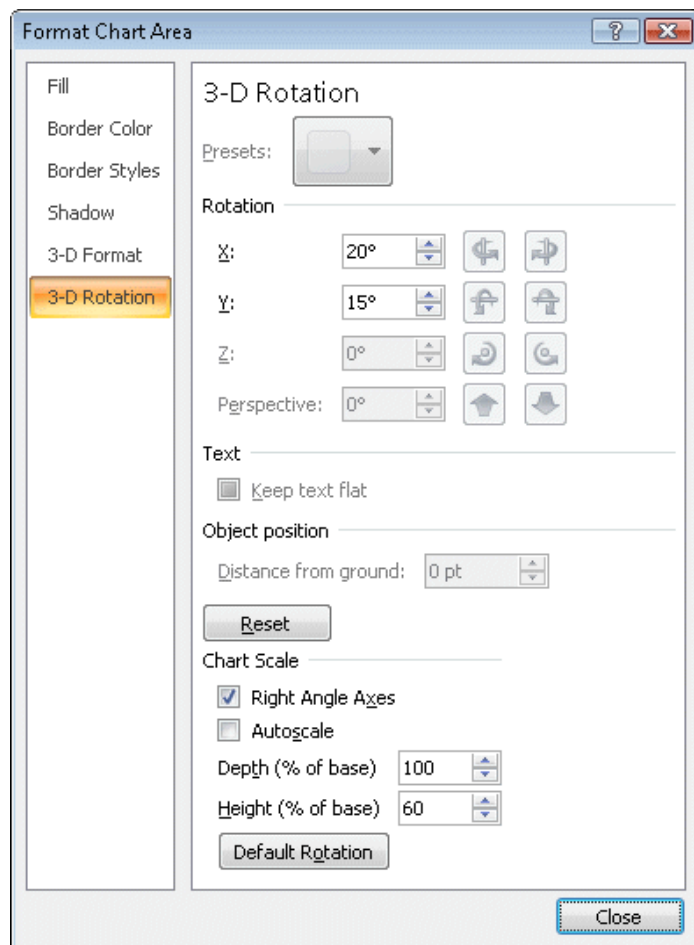
3-D Rotation changes the point and angle from which a 3D chart is viewed.

To change the 3D chart view

- Make a 3D chart active by selecting it.
- Display the **Layout** tab and click the **3-D Rotation** button.
- The sideways and vertical rotation can be altered. Under **Chart Scale** uncheck **Right Angle Axes**.
- Experiment with the angles by clicking on the various buttons.
- Click the **Default Rotation** button to return to the start position.
- Click **Close**.

To format 3D charts

- Double click or right click on the area to be changed and select **Format ###**.
- Click the **Shape** tab to display or alter the available shapes.
- Display **Series Options**, this controls the gaps between the data by using the sliders. Drag the **Gap Width** slider to the far left for no gap or to the far right for a large gap. Click **Close**.



Data Labels and Markers

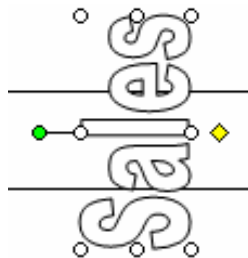
Data Labels add information via values or graphics to data ranges to improve the ease of use. **Markers** are the symbols or objects that define a data point on a chart. In Bar and Columns charts, the usual markers of coloured bars or blocks can be replaced by other objects such as graphic images or **WordArt**.

To add data labels

- Make a chart active by selecting it.
- On the **Layout** tab, click the **Data Labels** button. A list of positions is displayed, click **More Data Label Options**. By default the **Values** are added to the **Outside End** position.
- Make a selection and then click **Close**.

To create picture markers

- Graphic objects, e.g. *WordArt* can be added to **Bar** and **Column** charts. To add **WordArt** to the columns, display the **Insert** tab and click the **WordArt** button.
- Select a *WordArt* option.
- Enter the word to be used, the example has used **Sales**. This inserts the *WordArt* as an object. Click the green rotate button and drag if the text orientation is to be changed.



- Using the **Home** tab, click **Copy** to copy the object.
- Select the data series by clicking on one of the columns and then **Paste** the graphic to add it to all the columns.
- Click on the original **WordArt** and press **<Delete>** to remove it.

*Note: Picture markers can be added to **Bar** and **Column** charts using the **Fill** section of the **Format Data Series** dialog box. With the **Picture or texture fill** option selected, use the options from **Insert from** to locate and insert a suitable graphic.*

Stacked Bar Charts

Stacked Bar Charts are column charts with the data series placed above each other and are used to compare how the parts make up the total.

There are 4 **Stacked Bar Chart** options within **Column** types:

Compare the contribution of each value to a total across categories 2D.

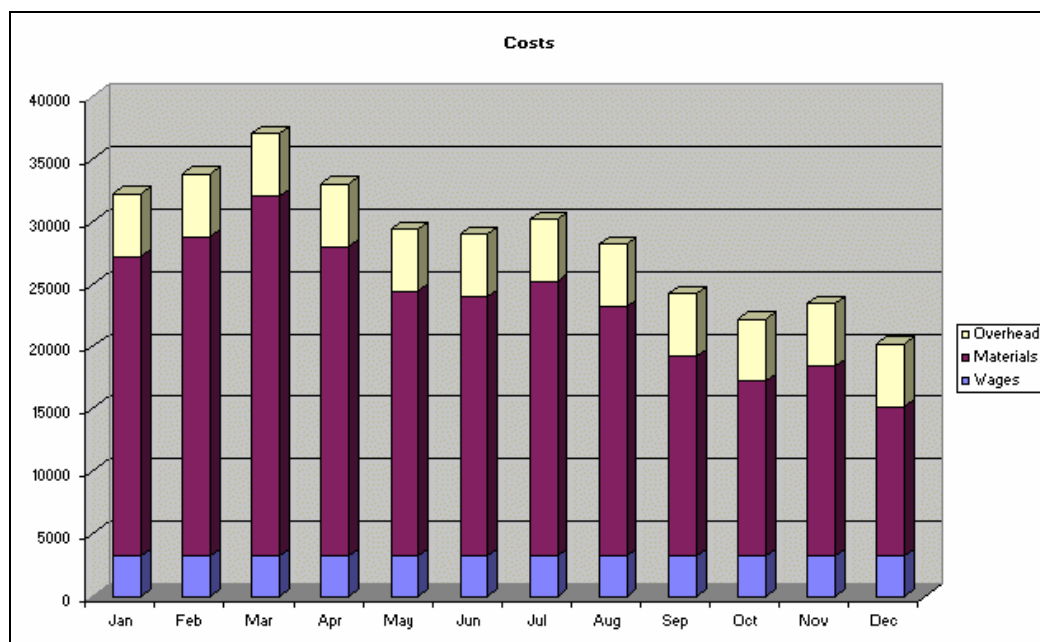
100% stacked compares the percentage of each value 2D.

Compare the contribution of each value to a total across categories 3D.

100% stacked compares the percentage of each value 3D.

To create a stacked bar chart

- Make a chart active by selecting it.
- Click the **Change Chart Type** button on the **Design** tab.
- The **Column** options are displayed. Select a **Stacked Column** option and click **OK**.



Summary

| | |
|---------------------|---|
| Chart Tools Options | Select the Chart and choose from the available Ribbon options |
| Trendlines | Select Chart Layout and select Trendline |
| Format Trendline | Double click on the Trendline |
| Moving Average | Select Chart Layout and select Trendline then More Trendline Options then choose Moving Average |
| 3D Chart View | Select Chart Layout and select 3D Rotation |
| Format Charts | Double click on the area of the chart to be formatted |
| Add Data Labels | Double click on the data series or data point, click the Data Labels tab and make a selection |
| Stacked Bars | Select Column in Chart Type and choose from the 4 Stacked Bar options |