

Two Axis Chart Sample

Intro

Create a chart with ExcelApplication that has two axes: primary axis and secondary axis.

Two-axis charts can add a lot to the visual presentation of your report. This demo shows revenue and cost data as columns, so they can easily be compared to each other for a specific time period. The profit, calculated by an Excel formula on the revenue and cost figures, is displayed as a line so that the trend is clear.

Code

```
public class TwoAxisChart
{
    private ExcelApplication xlw;
    private Workbook wb;
    private Worksheet wsData;
    private Worksheet wsBalance;
    private Chartsheet wsTwoAxisChart;
    private Chartsheet wsPieChart;
    private bool ProfitLine = true;

    /// <summary>
    /// Build the report with ExcelApplication
    /// </summary>
    public void GenerateReport()
    {
        //Create an instance of ExcelApplication and
        // open the template workbook.

        xlw = new ExcelApplication();

        //Open the template workbook
        string templatePath = @"..\..\ExcelTemplateFiles\twoAxisTemplate.xlsx";
        wb = xlw.Open(templatePath);

        //Get references to two existing worksheets
        // in the workbook.

        wsData = wb.Worksheets["FinData"];
        wsBalance = wb.Worksheets["BalanceSheet"];

        //Create the Two Axis chart
        this.CreateTwoAxisChart(ProfitLine);

        //Create the pie chart
        this.CreatePieChart();
        wb.Worksheets.MoveSheet(wsPieChart, 0);

        //Move the sheets in the workbook
        wb.Worksheets.MoveSheet(wsTwoAxisChart, 0);

        //Save the report
        xlw.Save(wb, @"..\..\ExcelOutputFiles\TwoAxisChart_output.xlsx");
    }
}
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    }

    /// <summary> Add a pie chart to the wsPieChart Chartsheet.</summary>
    private void CreatePieChart()
    {
        //Create a chart sheet for the pie chart.
        // Name the sheet "PieChartSheet" and insert it
        // as the first worksheet in the workbook.

        wsPieChart =
            wb.Worksheets.CreateChartsheet(ChartType.Pie.StandardPie,
            "PieChartSheet", 0);

        Chart chrtPie = wsPieChart.Chart;

        //Set category data
        string categoryFormula = "BalanceSheet!A8:A13,BalanceSheet!A17:A18";
        chrtPie.SeriesCollection.CategoryData = categoryFormula;

        //Create a series object
        string seriesFormula = "BalanceSheet!B8:B13,BalanceSheet!B17:B18";
        Series srsAssets = chrtPie.SeriesCollection.CreateSeries(seriesFormula);
        srsAssets.Name = "Assets";

        //Show data labels on the pie chart as percentages
        srsAssets.DataLabels.ContainsValueAsPercentage = true;
    }

    /// <summary> Create a two-axis column/line chart on a new
    chartsheet.</summary>
    /// <param name="bProfitLine">If true, add the second axis to the
    chart.</param>
    private void CreateTwoAxisChart(bool ProfitLine)
    {
        //Create a chartsheet with a clustered column chart.
        // Name it "ChartSheet" and make it the first worksheet
        // in the workbook.

        wsTwoAxisChart =
            wb.Worksheets.CreateChartsheet(ChartType.Column.Clustered, "ChartSheet", 0);

        Chart chrtTwoAxis = wsTwoAxisChart.Chart;

        //Set category data and assign it to the primary axis
        chrtTwoAxis.SeriesCollection.CategoryData = "FinData!C3:F3";

        //Create two series objects in the chart.
        // One for revenue and one for cost.

        Series srsRevenue =
            chrtTwoAxis.SeriesCollection.CreateSeries("FinData!C4:F4");
        srsRevenue.NameFormula = "FinData!A4";

        Series srsCost =
            chrtTwoAxis.SeriesCollection.CreateSeries("FinData!C5:F5");
        srsCost.NameFormula = "FinData!A5";

        //Create some colors to stylize the chart.
        Color clrRed = wb.Palette.GetClosestColor(255,48,58);
    }

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Color clrBlue = wb.Palette.GetClosestColor(89,69,255);
Color clrLighterBlue = wb.Palette.GetClosestColor(51, 155, 232);

//Set the color of the bars of the revenue and cost series objects.
srsRevenue.Interior.ForegroundColor = clrRed;
srsCost.Interior.ForegroundColor = clrBlue;

//Add Profit Line
// Add a third series to display profit.
Series srsProfit =
chrtTwoAxis.SeriesCollection.CreateSeries("FinData!C6:F6");

//Display as a standard line, and set it to
// the secondary axis.

srsProfit.ChartType = ChartType.Line.StandardLine;
srsProfit.AxisType = AxisType.Secondary;
srsProfit.NameFormula = "FinData!A6";

//Change the appearance of the line chart's
// data point markers. Set the type and color.

srsProfit.DataPointMarker.MarkerType = DataPointMarker.ShapeType.X;
srsProfit.DataPointMarker.BackgroundColor = clrLighterBlue;
srsProfit.DataPointMarker.ForegroundColor = clrLighterBlue;

//Change the color and weight of the line itself.
srsProfit.Line.Visible = true;
srsProfit.Line.Color = clrLighterBlue;
srsProfit.Line.Weight = ChartLine.LineWeight.Medium;

//Set the title of the chart and set the title font
ChartText chrtTitle = chrtTwoAxis.Title;
chrtTitle.Formula = "FinData!A1";
chrtTitle.Font.Name = "Trebuchet";
chrtTitle.Font.Size = 14;
chrtTitle.Font.Bold = true;

```

```
} }
```

Downloads

- Template: [TwoAxisTemplate.xlsx](#)
- Output: [TwoAxisChart_output.xlsx](#)