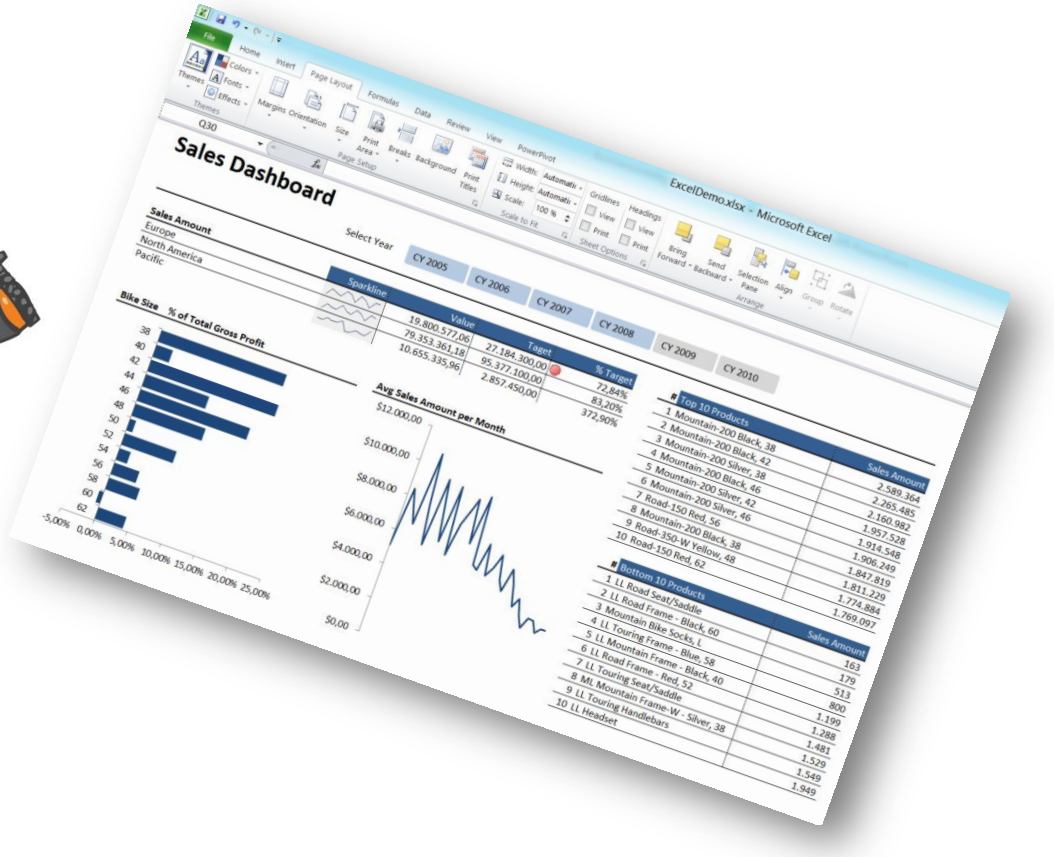
Business Intelligence with Excel 2010



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Who Am I

- Stephan Stoltze
- Working with Microsoft BI for over 12 years
- Microsoft BI Consultant and Trainer
- Founder of the Danish Microsoft BI Community (January 2008 >)
  - www.MSBIP.dk
  - www.SQLBI.dk
  - www.EXCELBI.dk

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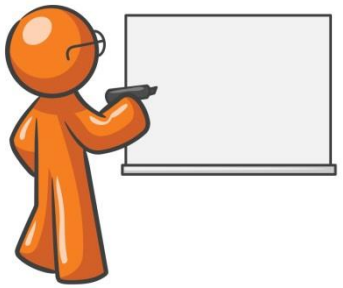
Microsoft CERTIFIED IT Professional

Microsoft CERTIFIED Trainer

Agenda



- Excel and Business Intelligence
- Introduction to PivotTables
- Gems of the PivotTable
- Free format and Cube Functions
- Do's and Don'ts
- Excel BI Add-Ins

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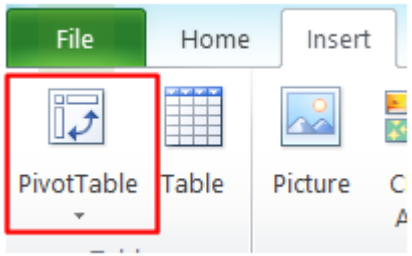
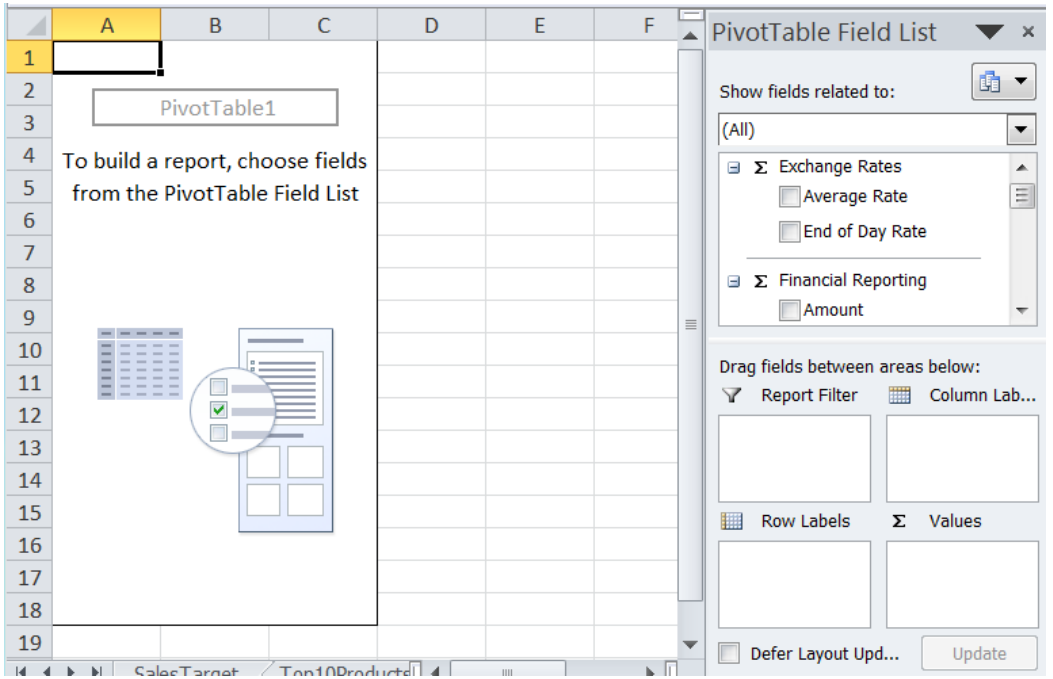
Excel and Business Intelligence

- Excel has evolved into a collaborative tool that supports advanced analysis
- Excel is the main Dekstop Client in MS Self-Service BI offerings

Introduction to PivotTables

- Enables users to build and pivot (Rotate) summary tables formated as a matrix
- In Excel Since 1993 (Excel 5)





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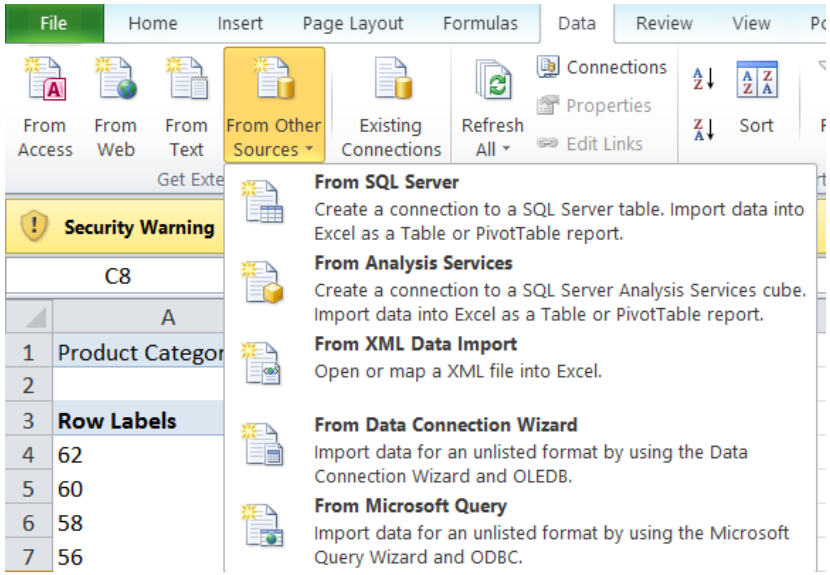
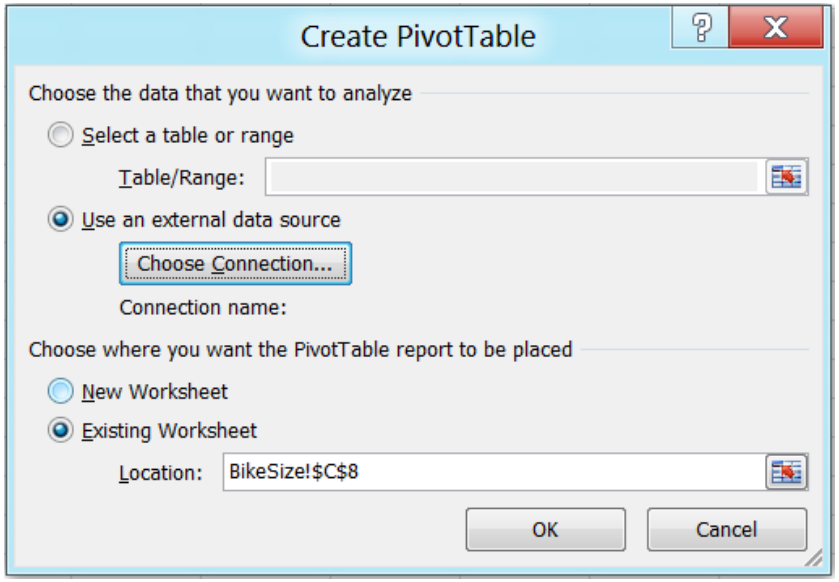
Connect to a Data Source





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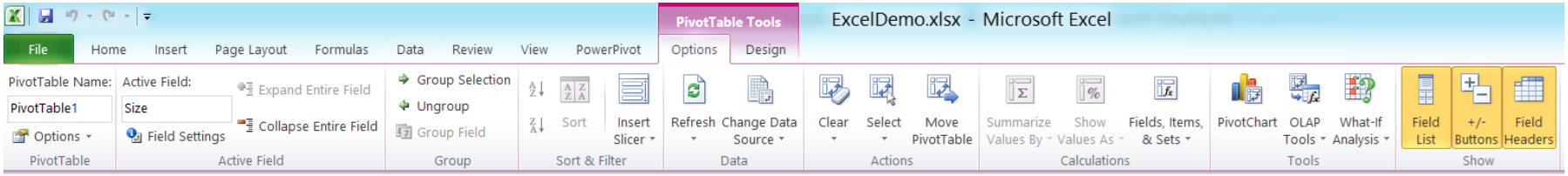
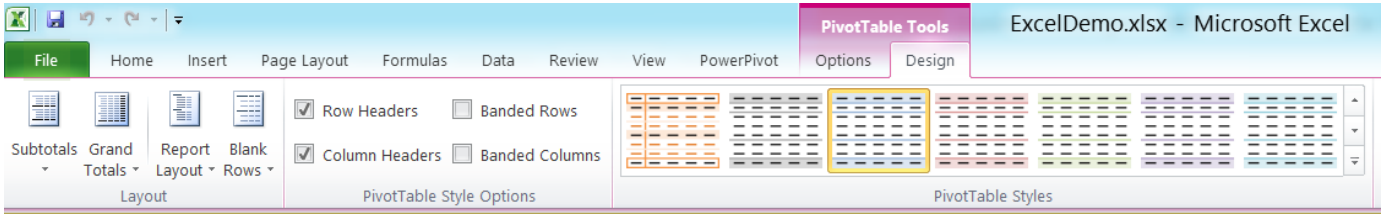
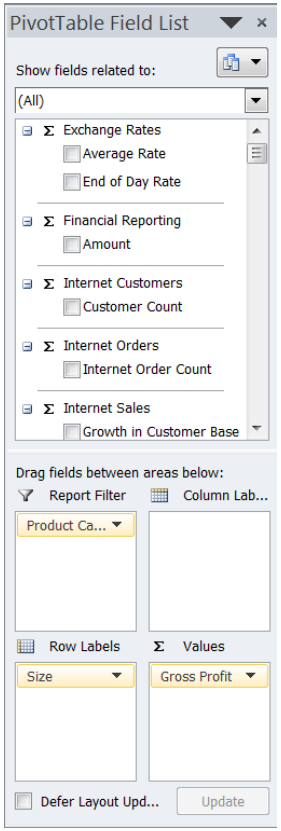
PivotTable Tools



- Field List
- Options
- Design





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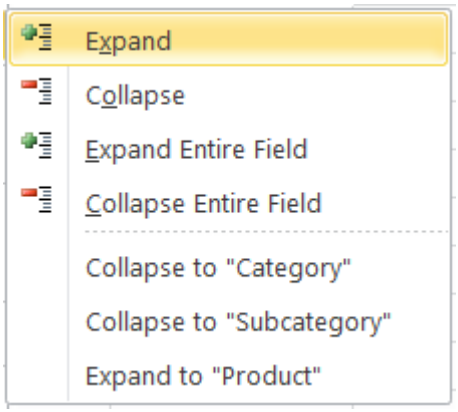
Slice‘n‘Dice

- Slice‘n‘Dice is the way you drag your data into a PivotTable and analyze it
  - Values
  - Row/Cloumns Lables
  - Report Filter
- Defer Layout Update
- Expand to
- Hiding Levels



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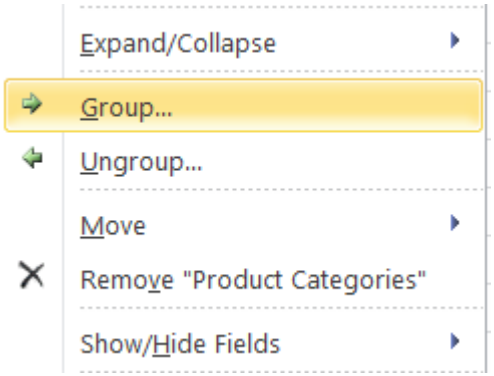
Re-Ordering and Grouping

- Group/UnGroup Members
- Re-ordering
- Changes are Stored in the Workbook



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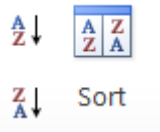
Sorting and Member Search

- Sorting
  - A > Z and Z > A
  - Context aware sorting dialogs (items vs. values)



- Filtering
  - Keep/Hide selected items
  - Top/Bottom List

- Member search
  - Large data sets can efficiently be filtered
  - Search text can contain wildcard characters
  - Filter lists can be accumulated using multiple searches

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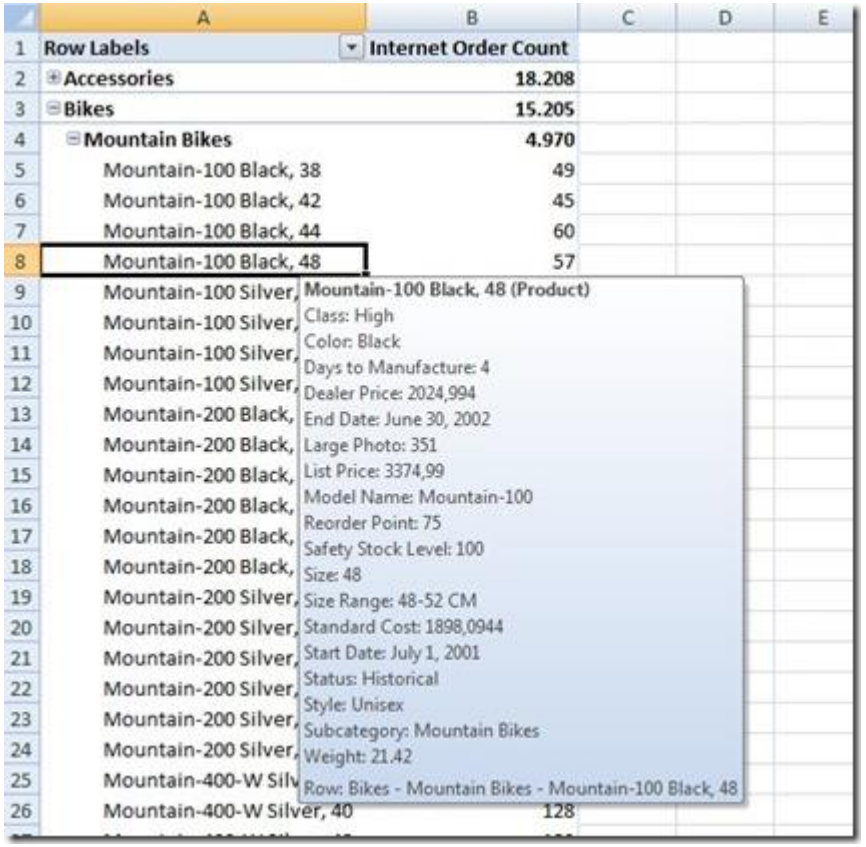
Member Properties

- User defined Memeber Properties from SSAS
- Show in tooltips
- Show in report



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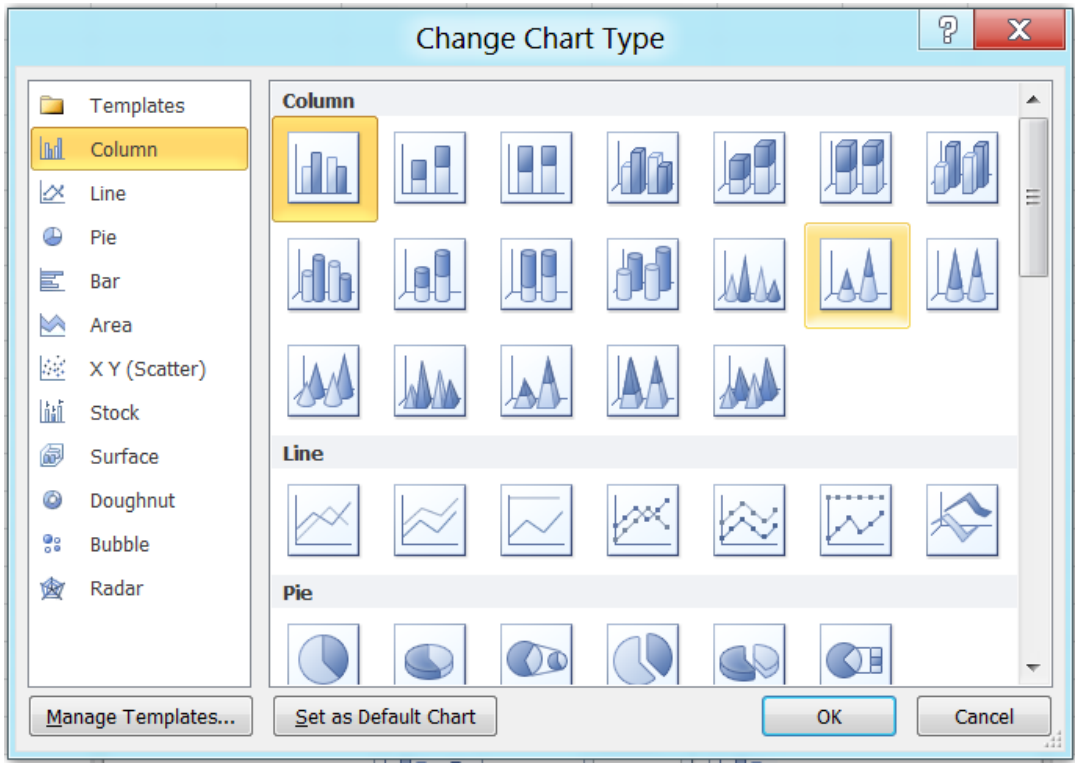
PivotChart

- 11 Different Chart Types
- Always Connected to a PivotTable



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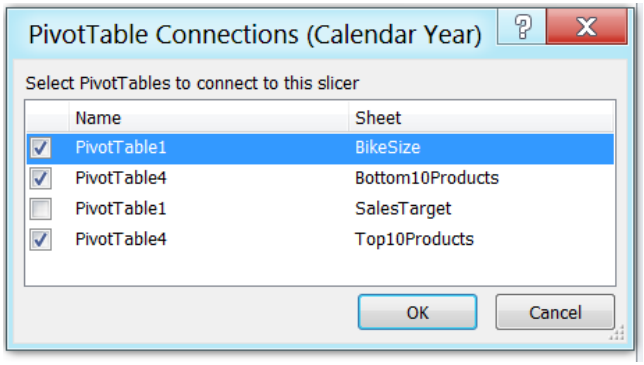
Slicers

- Visual Filter Control
- Connections Can pass selected value(s) to:
  - PivotTables
  - PivotCharts
  - CUBE functions
- Can be formatted using styles



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Gems of the PivotTable

- Show Value As
- Named Sets
- Actions
- What IF Analysis

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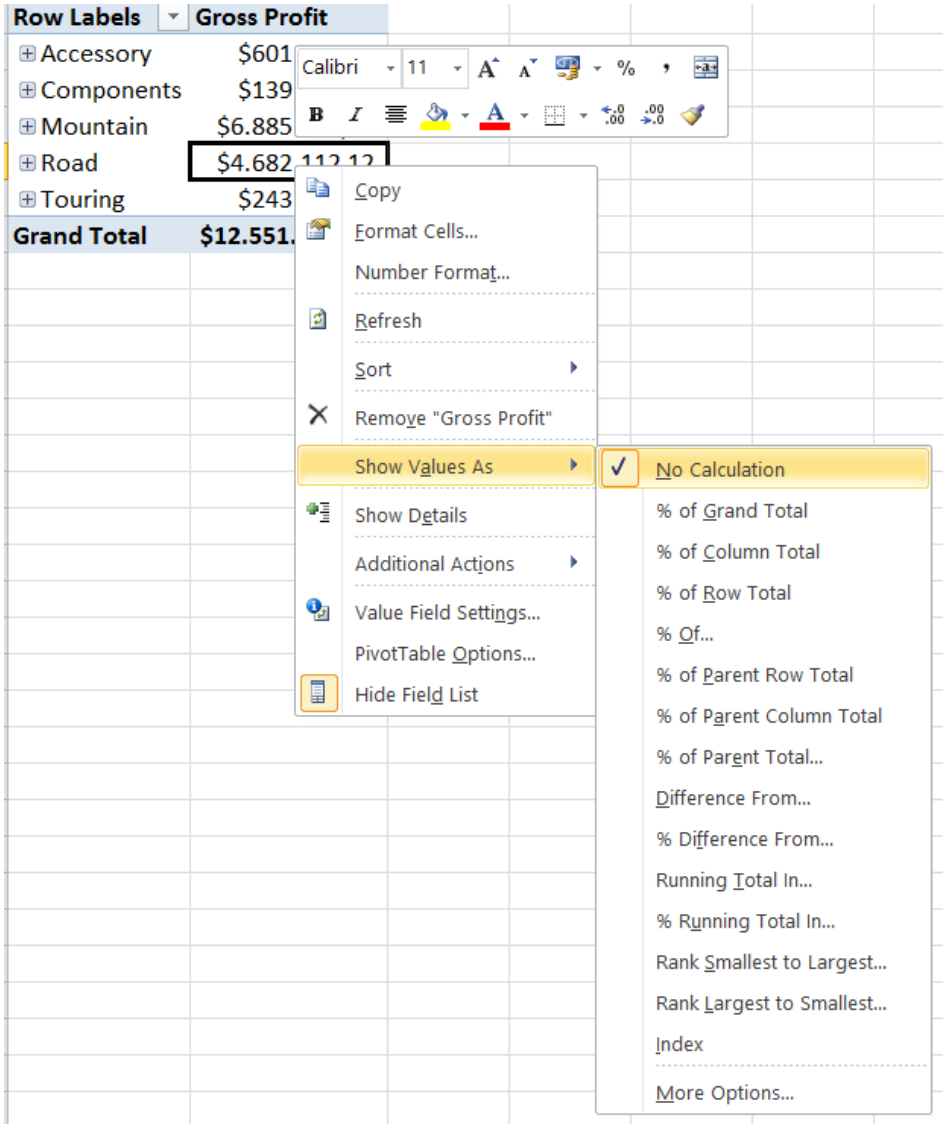
Show Value As

- Alternative to adding extra Calculated Members in SSAS
- Same value can be added several times to a PivotTable



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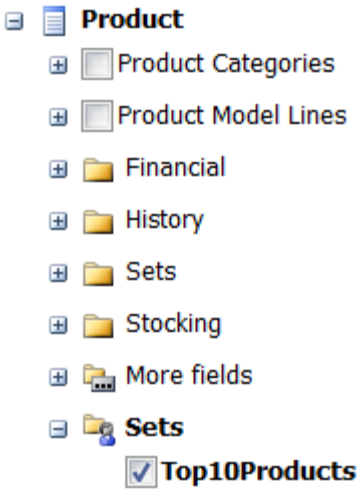
Named Sets

- Named, reusable sets of members
- Can combine members from different hierarchies (asymmetric reporting)
- Can be defined in both SSAS and Excel
- Defined by:
  - Explicit member selection
  - Custom MDX



CY 2005	CY 2006	CY 2007	CY 2008		
Actual	Actual	Actual	Budget	Actual	Budget

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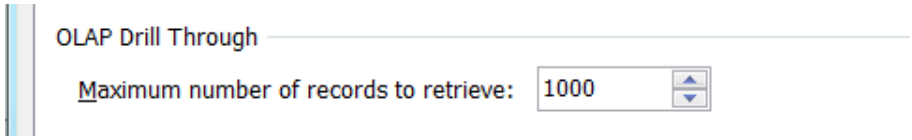
Actions



- Show Details (Drill Through)
- Additional Actions
  - **URL** Displays a URL in a browser
  - **Report** Opens a Reporting Services report by building a report-based URL
  - **RowSet** Linking a rowset to data in a different but related cube in same database
- Server actions that are not supported in Excel
  - Proprietary, Statement, and Dataset
- Not supported on a Set or a Report Filter

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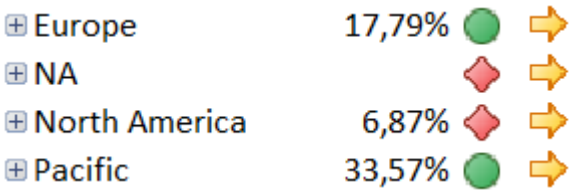
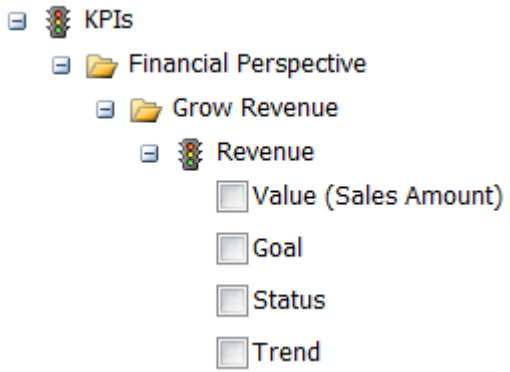
Key Performance Indicators (KPI)

- KPIs Defined in SSAS are supported in Excel
- Rendering can be different in Excel





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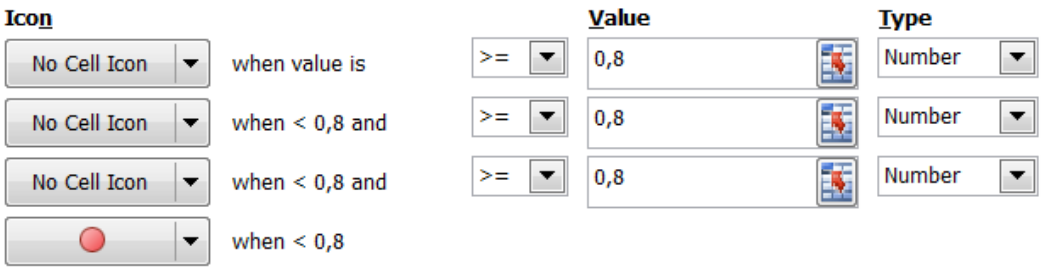
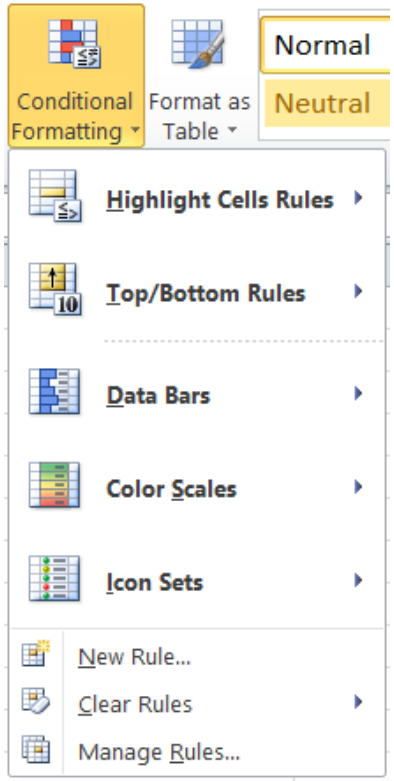
Conditional Formatting

- Allows you to highlight cells whose data satisfies certain criteria
- 5 types of standard formatting
- Rules Manager

- Re-Format SSAS Defined KPI's





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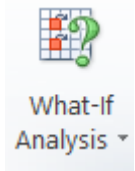
What IF Analysis / Writeback

- Writeback is the user's way to publish data back to a cube
- Other frontend applications/Excel add-ins have supported writeback since Analysis Services 2000
- With Excel 2010 Microsoft Office finally natively supports writeback to cubes
- Writeback is implemented through what-if functionality in PivotTables



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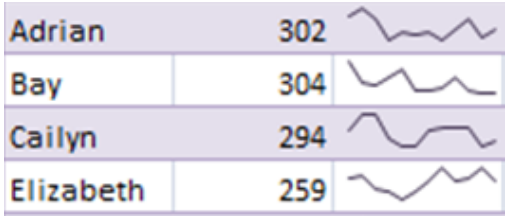
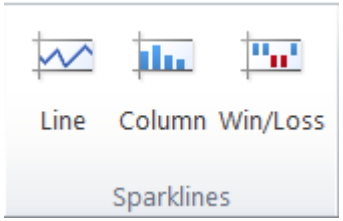
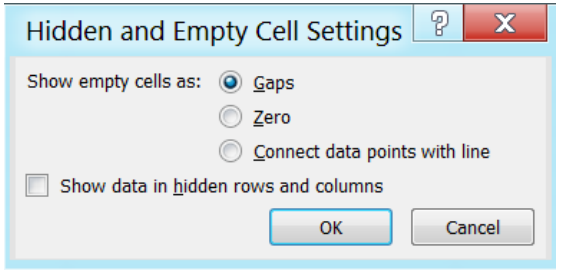
Sparklines



- Small-Heavy-Information-Trend-Lines
- Different types
  - Line
  - Column
  - Win/Loss
- Formating options
  - Axis Options
  - Styles





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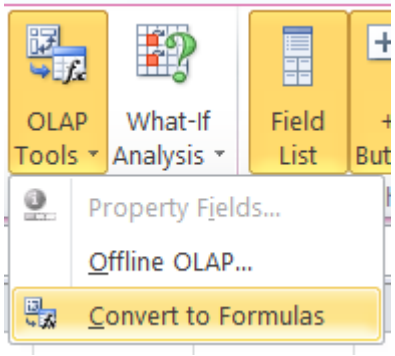
Free Format Reports

- Are usefull when…



- Rearrange and delete cells
- Insert rows and columns
- Use multiple data sources
- Create a nonuniform row or column layout

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Cube Functions

- **CUBEMEMBER**
  - Returns a member or tuple from the cube.
- **CUBEVALUE**
  - Returns an aggregated value from the cube for a member or tuple from the cube.
- **CUBEKPIMEMBER**
  - Returns a key performance indicator (KPI) property and displays the KPI name in the cell.
- **CUBEMEMBERPROPERTY**
  - Returns the value of a member property from the cube.
- **CUBERANKEDMEMBER**
  - Returns the n'th, or ranked, member in a set.
- **CUBESET**
  - Defines a calculated set of members or tuples.
- **CUBESETCOUNT**
  - Returns the number of items in a set.

Cube Functions Examples

- =CUBEMEMBER(". Adventure Works DW Adventure Works";"[Ship Date].[Calendar].[Calendar Year].&[2005]")
- =CUBEVALUE(". Adventure Works DW Adventure Works";"[Measures].[Sales Amount]")

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Do's and Don'ts

- Use Excel for Data Analysis NOT Data Storage
- Avoid Re-Inventing Excel Hell
- Central Storage for Excel Analysis eg. SharePoint
- Avoid "one-time" analysis turning into another periodic report
- Make Excel Analysis easy to change
- Muliti select can break you SSAS cal. members

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Excel BI Add-Ins

- OLAP PivotTable Extensions
- PowerPivot
- Data Explorer
- Data Mining (now also 64-bit)

Conclusion

- Combining all these features and ninja tricks
- ->
- Possible to build VERY advanced analysis reports with Excel 2010

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Links

- Excel Product Team Blog
  - http://blogs.office.com/b/microsoft-excel/
- Analysis Services and PowerPivot Team Blog
  - http://blogs.msdn.com/b/analysisservices/

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Thank You

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