



# Excel Chapter 11: PivotTables and PivotCharts



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# Learning Objectives

- After studying this chapter, you will be able to:
  - ▲ Create PivotTables
  - ▲ Modify and format PivotTables
  - ▲ Apply a filter to a PivotTable
  - ▲ Insert a slicer to filter a PivotTable
  - ▲ Create a calculated field
  - ▲ Create PivotCharts

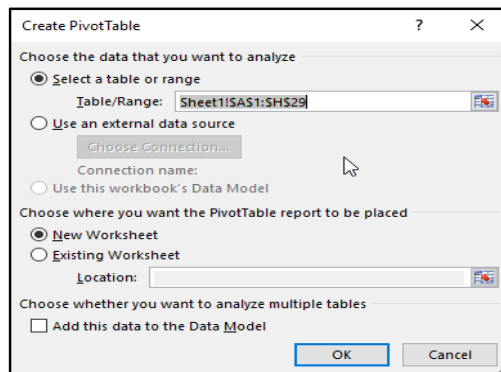
# Creating Pivot Tables

- Used for summarizing information



## Making a PivotTable

- ▲ PivotTables based on an entire range
- ▲ Locate PivotTable on same or separate worksheet



- ▲ Add fields for the row, column, and value areas of the PivotTable



# Creating Pivot Tables (cont.)

## ■ What is a PivotTable?

- ▲ Combination of a table and outline plus some unique features

Row Labels	Sum of Product	Sum of Service
[-] Sales Account Mgr	1,386,000	1,527,000
Darko	162,000	151,000
Eggles	340,000	700,000
Lemmon	210,000	340,000
Mandel	228,000	216,000
Tucker	446,000	120,000
[+] Sales Rep	769,000	710,000
[+] Senior Account Mgr	1,603,000	2,145,000
<b>Grand Total</b>	<b>3,758,000</b>	<b>4,382,000</b>

**PivotTable comparing product and service sales for employees, grouped by position**



# Creating Pivot Tables (cont.)

## ■ Arranging the source data

- ▲ Source data is raw data, not summarized in any way
- ▲ Column headings (fields) appear across the top
- ▲ Rows contain unique entries
- ▲ No blank rows or columns or duplicate values allowed

## ■ Remove duplicates

- ▲ Use Remove Duplicates command on Data tab

# Creating Pivot Tables (cont.)

## ■ Adding PivotTable fields

PivotTable Fields

Choose fields to add to report: [Settings]

Search [Search]

- ☒ Last Name
- ☐ First Name
- ☒ Position
- ☐ Region
- ☐ State
- ☒ Product
- ☒ Service

Drag fields between areas below:

Filters	Columns
	Σ Values

Rows	Σ Values
Position	Sum of Product
Last Name	Sum of Service

Check field names to include in PivotTable

Drag field(s) to become column header(s)

Drag field(s) to calculate

Drag field(s) to become row header(s)

# Working with PivotTables

- Add or remove fields
- Change positioning and order of fields

Sum of Product		Column Labels		
Row Labels	Central	Eastern	Western	Grand Total
[-] Sales Account Mgr	372000	228000	786000	1386000
Darko	162000			162000
Eggles			340000	340000
Lemmon	210000			210000
Mandel		228000		228000
Tucker			446000	446000
[+] Sales Rep	350000	140000	279000	769000
[+] Senior Account Mgr	234000	767000	602000	1603000
<b>Grand Total</b>	<b>956000</b>	<b>1135000</b>	<b>1667000</b>	<b>3758000</b>

Row Labels		Sum of Product
[-] Central		956000
[-] Sales Account Mgr		372000
Darko		162000
Lemmon		210000
[+] Sales Rep		350000
[+] Senior Account Mgr		234000
[-] Eastern		1135000
[-] Sales Account Mgr		228000
Mandel		228000
[+] Sales Rep		140000
[+] Senior Account Mgr		767000
[-] Western		1667000
[-] Sales Account Mgr		786000
Eggles		340000
Tucker		446000
[+] Sales Rep		279000
[+] Senior Account Mgr		602000
<b>Grand Total</b>		<b>3758000</b>

Same data, organized differently in PivotTable



# Working with PivotTables (cont.)



## ■ Changing a PivotTable

- ▲ Check/uncheck fieldnames to add/remove fields
- ▲ Drag field(s) to/from different areas to pivot the table
- ▲ Drag field(s) to Filter area to enable filtering column(s)

	A	B	C	D
1	Position	Sales Rep		
2				
3	Sum of Amount	Column Labels		
4	Row Labels	Product	Service	Grand Total
5	Central	290000	350000	640000
6	Eastern	270000		270000
7	Western	316000	253000	569000
8	Grand Total	876000	603000	1479000

Filter button



# Working with PivotTables (cont.)

## ■ Formatting PivotTables

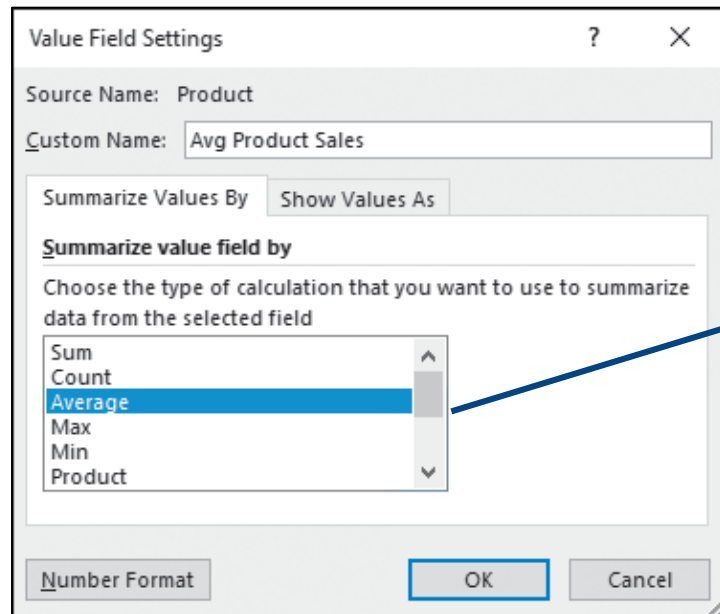
- ▲ Choose styles from gallery on Design tab
- ▲ Choose layout and style options
- ▲ Change number formatting

Sum of Product		Region			
Position	Last Name	Central	Eastern	Western	Grand Total
[-] Sales Account Mgr		\$372,000	\$228,000	\$786,000	\$1,386,000
	Darko	\$162,000			\$162,000
	Egges			\$340,000	\$340,000
	Lemmon	\$210,000			\$210,000
	Mandel		\$228,000		\$228,000
	Tucker			\$446,000	\$446,000
[+] Sales Rep		\$350,000	\$140,000	\$279,000	\$769,000
[+] Senior Account Mgr		\$234,000	\$767,000	\$602,000	\$1,603,000
Grand Total		\$956,000	\$1,135,000	\$1,667,000	\$3,758,000



# Working with PivotTables (cont.)

## ■ Changing value field settings



The image shows the 'Value Field Settings' dialog box in Microsoft Excel. The 'Source Name' is 'Product'. The 'Custom Name' field contains 'Avg Product Sales'. The 'Summarize Values By' tab is selected, and the 'Show Values As' tab is also visible. Under 'Summarize value field by', there is a list of calculation types: Sum, Count, Average (which is highlighted in blue), Max, Min, and Product. At the bottom, there is a 'Number Format' button, and 'OK' and 'Cancel' buttons.

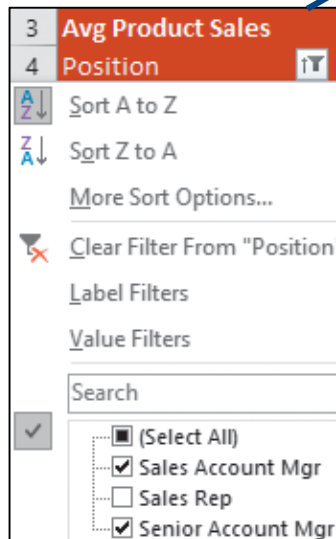
Customize name

Choose different function

# Filtering a PivotTable

- Multiple ways to filter: AutoFilter, add a filter field, add a slicer
- Filtering a PivotTable with AutoFilter

AutoFilter button displays menu with sorting and filtering options



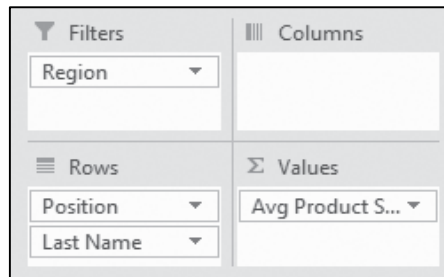
Avg Product Sales	Region			
Position	Last Name	Central	Eastern	Western
Sales Account Mgr		\$186,000	\$228,000	\$393,000
	Darko	\$162,000		
	Eggles			\$340,000
	Lemmon	\$210,000		
	Mandel		\$228,000	
	Tucker			\$446,000
Senior Account Mgr		\$234,000	\$383,500	\$602,000
	Anderson			\$602,000
	Cartman		\$450,000	
	Louis	\$234,000		
	Oster		\$317,000	
Grand Total		\$202,000	\$331,667	\$462,667



# Filtering a PivotTable (cont.)

## ■ Filtering a PivotTable with a filter field

### ▲ Drag a field to the Filters area



## ■ Filtering a PivotTable with slicers

### ▲ Menu frames on a worksheet with all filtering choices in one field

Position	Last Name	Avg Product Sales
Sales Account Mgr		\$200,000
	Darko	\$162,000
	Lemmon	\$210,000
	Mandel	\$228,000
Sales Rep		\$163,333
Senior Account Mgr		\$333,667
Grand Total		\$232,333

Region

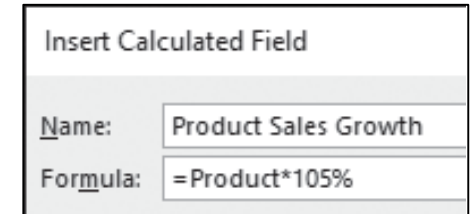
Central

Eastern

Western

# Creating Calculated Fields

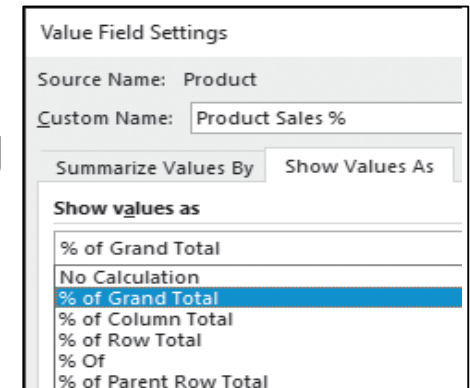
- Create own calculations instead of using a function
- Show Values As
  - ▲ Determine how values display by using comparison operations
- Refreshing PivotTable data
  - ▲ Must refresh PivotTable after updates have been made to the data
  - ▲ Option for refreshing upon opening file



Insert Calculated Field

Name: Product Sales Growth

Formula: =Product\*105%



Value Field Settings

Source Name: Product

Custom Name: Product Sales %

Summarize Values By: Show Values As

Show values as

- % of Grand Total
- No Calculation
- % of Grand Total
- % of Column Total
- % of Row Total
- % Of
- % of Parent Row Total

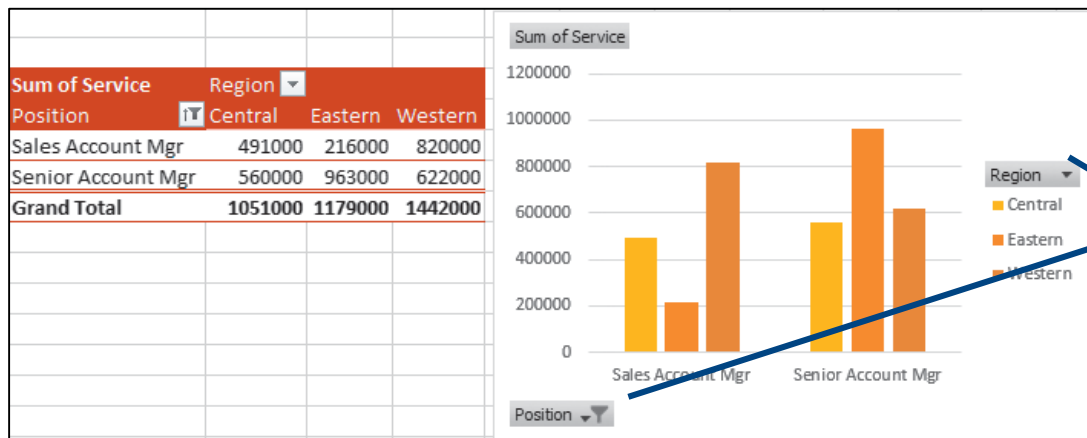


# Creating PivotCharts

## ■ Based on PivotTable data

- ▲ Value area fields display as data series on the chart
- ▲ Row labels become axis labels
- ▲ Column labels become chart legend

## ■ Filtering PivotCharts



Row/Column label  
AutoFilter buttons

