

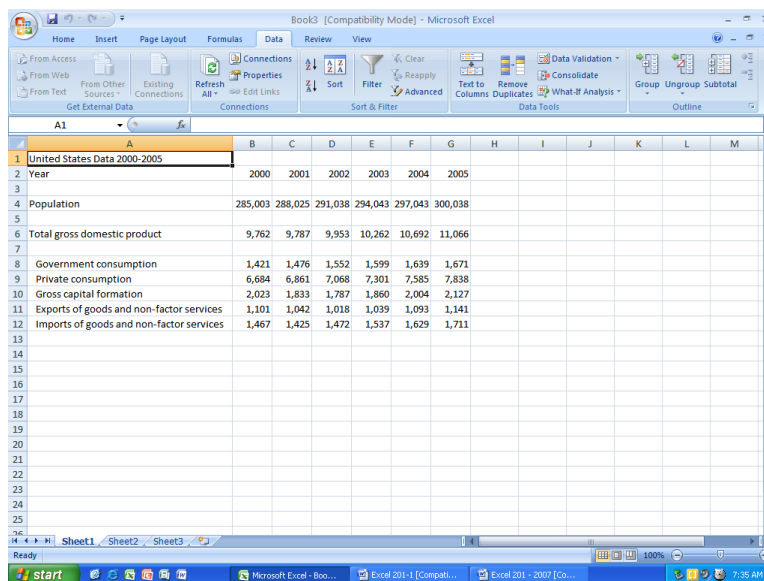
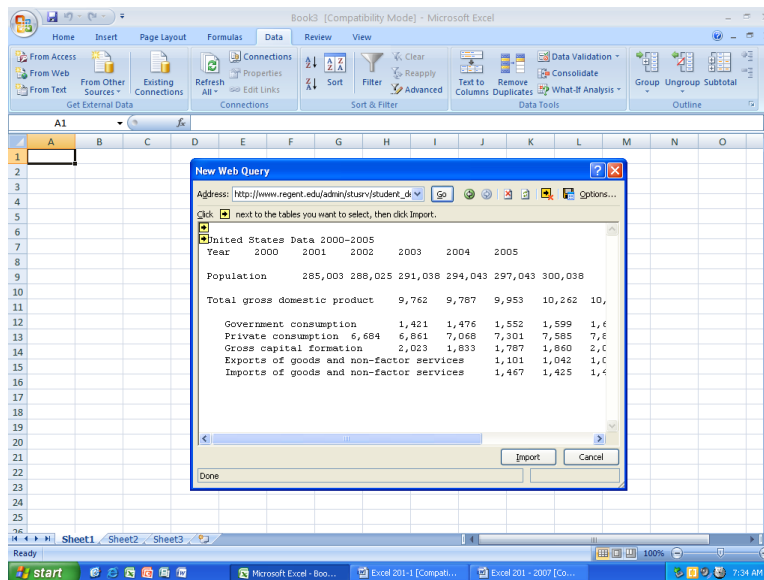
# Advanced Excel Training

December 2007

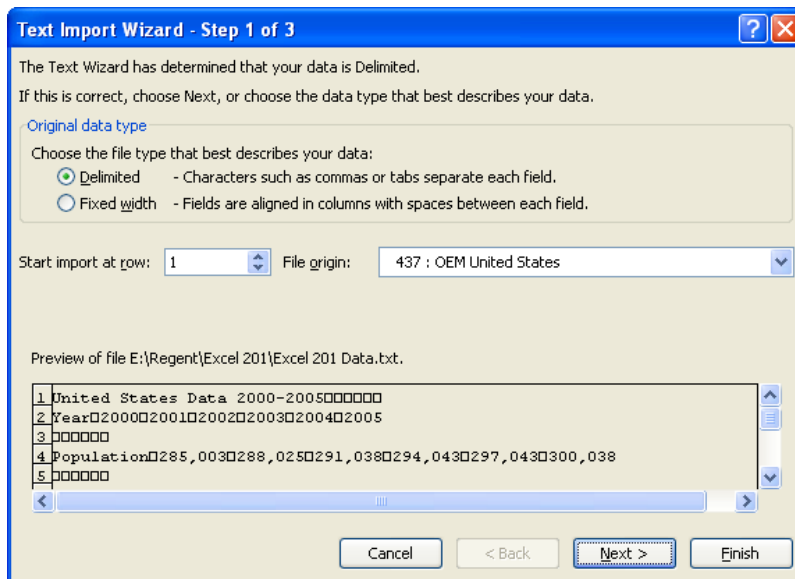
## 1. Create worksheet of economic data.

- A. Import Data – to import data into the current spreadsheet do the following:
  - a. Click **Data** on the menu bar.
  - b. Choose **Get External Data**.
  - c. Choose **From Web** from the submenu.
  - d. Enter [http://www.regent.edu/admin/stusrv/student\\_dev/docs/Workshops/Excel\\_Advanced/USData2000.txt](http://www.regent.edu/admin/stusrv/student_dev/docs/Workshops/Excel_Advanced/USData2000.txt) and click **Go**.

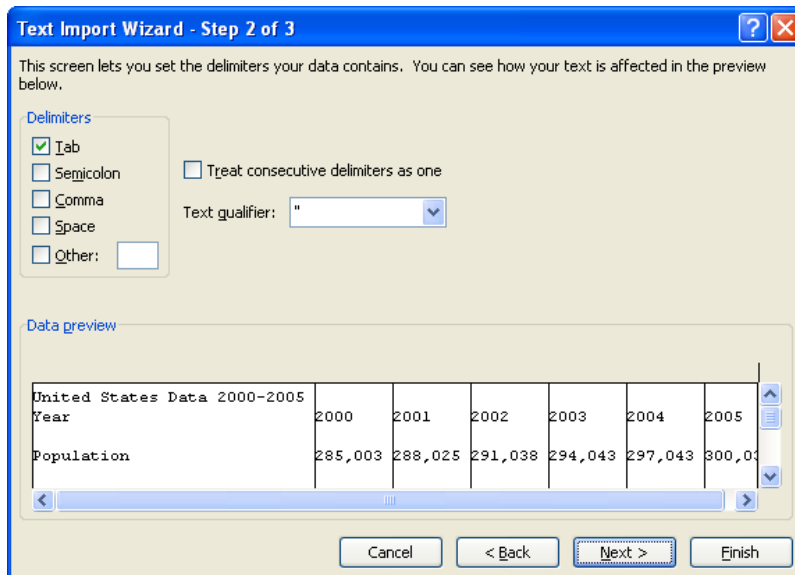
When the data appears in the **New Web Query** window, click **Import** and **OK**.



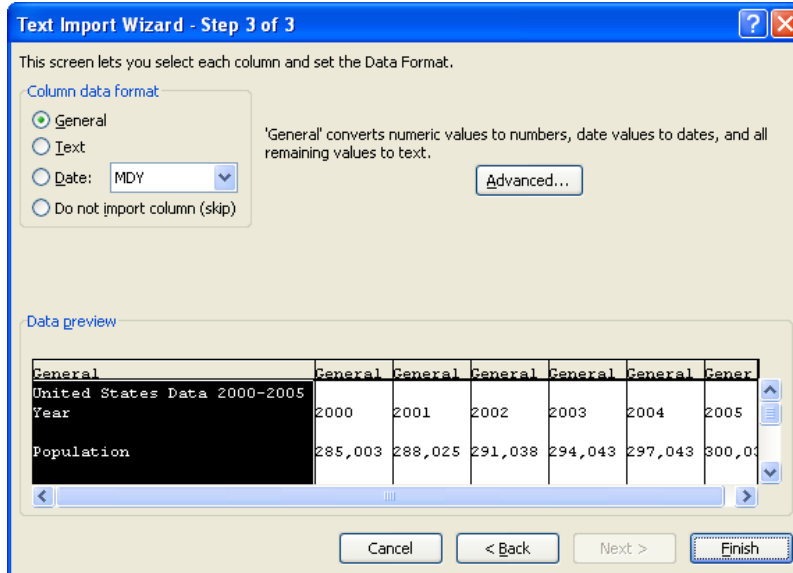
Importing from a text file instead of a webpage would cause the **Text Import Wizard** to open and take you through the following steps A-E. (Review these steps as necessary, but the path of this tutorial continues with Step 2 on page 4.)



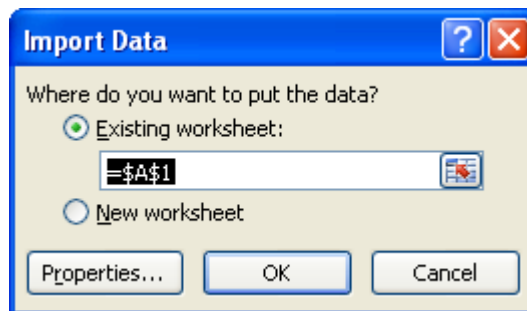
- A. Make sure **Delimited** is the data type that is selected. It is usually the default setting.
- B. Click **Next**.



- C. In *Text Import Wizard Step 2*, make sure the Delimiter is **Tab**. Click **Next**.

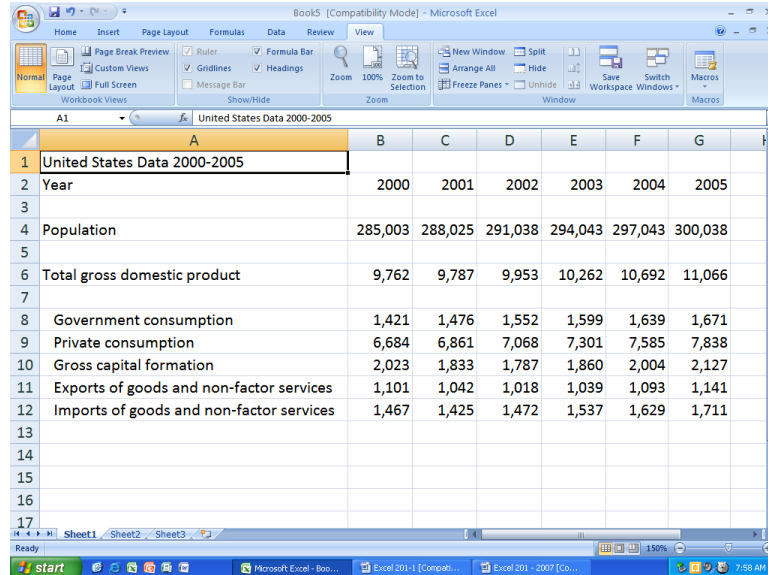


- D. *Text Import Step 3* of the wizard allows you to change the data formatting for each column. Leaving the column data format set to **General** is a good idea while importing the data. The data can be changed at any time, if desired. Click **Finish**.
- E. The last step of the wizard will ask where you want the imported data to be placed.



The default choice is cell A1 of the current worksheet. Since we don't have any other information in our worksheet, we would click **OK** to place the data at the top left corner of our spreadsheet.

The data would be placed in the appropriate cells of the spreadsheet beginning at A1.



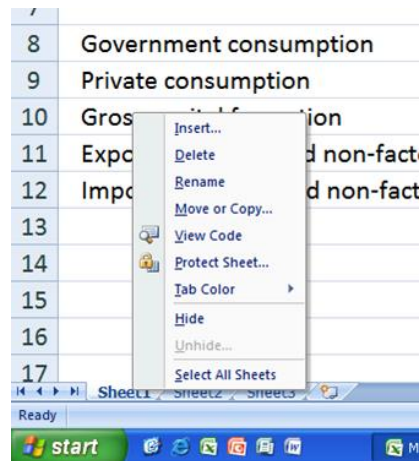
The screenshot shows a Microsoft Excel spreadsheet titled 'United States Data 2000-2005'. The data is organized as follows:

Year	2000	2001	2002	2003	2004	2005
Population	285,003	288,025	291,038	294,043	297,043	300,038
Total gross domestic product	9,762	9,787	9,953	10,262	10,692	11,066
Government consumption	1,421	1,476	1,552	1,599	1,639	1,671
Private consumption	6,684	6,861	7,068	7,301	7,585	7,838
Gross capital formation	2,023	1,833	1,787	1,860	2,004	2,127
Exports of goods and non-factor services	1,101	1,042	1,018	1,039	1,093	1,141
Imports of goods and non-factor services	1,467	1,425	1,472	1,537	1,629	1,711

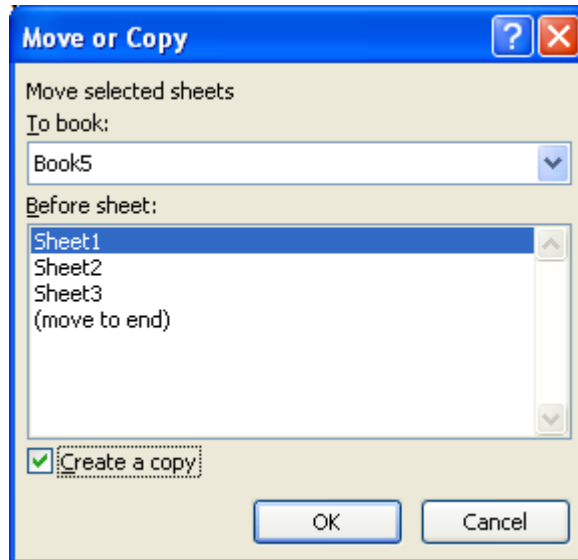
## 2. Auto-format the table

To auto format the table we will work from a copy. To duplicate the table by creating a copy of the sheet you must:

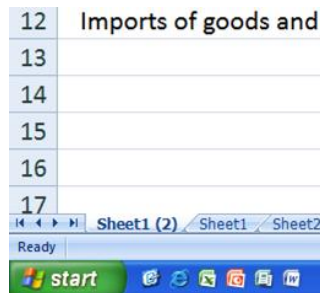
- ✓ Right click the *Sheet1* tab.
- ✓ Choose **Move or Copy**.



- ✓ Click the **Create a copy** check box.
- ✓ Click **OK**.

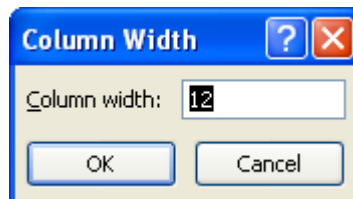


The new sheet will be temporarily called *Sheet1 (2)* until a name is assigned. Double click the tab name to select it, type *AutoFormat*, then press **Enter**.



Next, set the column widths for **B-G** at **12** characters:

- ✓ Select columns B-G.
- ✓ From the **Cells** menu on the **Home** tab, select **Format > Column Width**.
- ✓ Enter “12” in the **Column Width** dialog box and click **OK**.



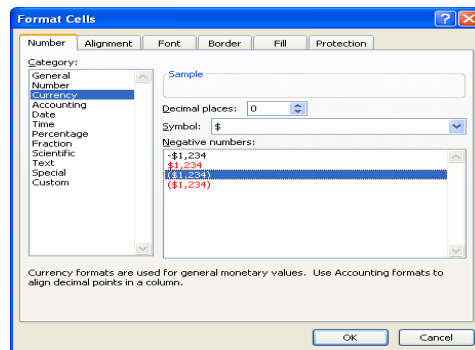
To Format the data:

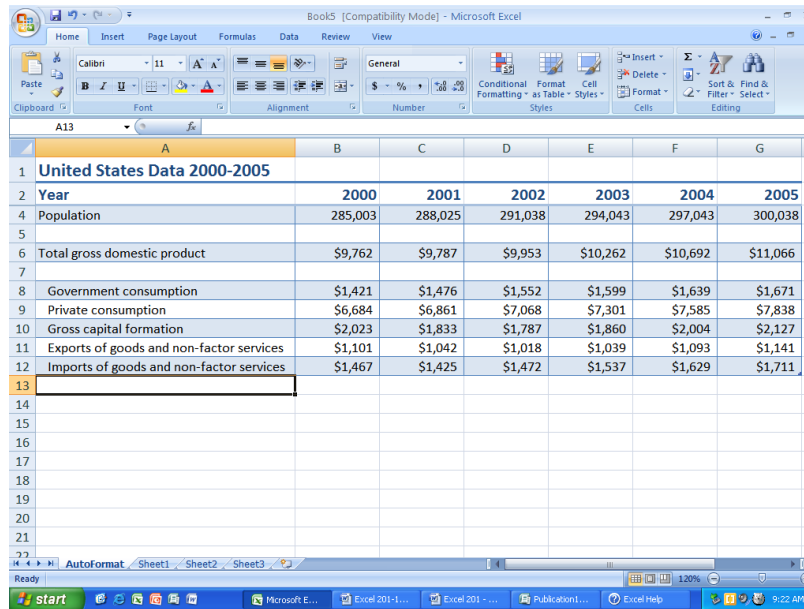
- ✓ Select Row 1 (A1:G1).
- ✓ On the **Home** tab's scrolling **Style** menu, use the down arrow to scroll down to the **Heading 1** option and select **Heading 1**.
- ✓ Select Row 2 (A2:G2).
- ✓ On the **Home** tab's scrolling **Style** menu, select **Heading 2**.
- ✓ Select Rows 4 through 12 (A4:G12). NOTE: A new row 3 will be automatically inserted.
- ✓ On the Home tab's **Style** menu, click on **Format as Table**, and select **Table Style Light 16**. Click **OK** on the **Format as Table** dialog box that opens, and click **Yes** when the message appears, **Your selection overlaps... Do you want to convert...?**
- ✓ Right click on the number **3** at the left margin of row 3 and select **Hide**.

Year	2000	2001	2002	2003	2004	2005
Population	285,003	288,025	291,038	294,043	297,043	300,038
Total gross domestic product	9,762	9,787	9,953	10,262	10,692	11,066
Government consumption	1,421	1,476	1,552	1,599	1,639	1,671
Private consumption	6,684	6,861	7,068	7,301	7,585	7,838
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Imports of goods and non-factor services	1,467	1,425	1,472	1,537	1,629	1,711

### 3. Change cell formats to include dollar signs (\$) where needed.

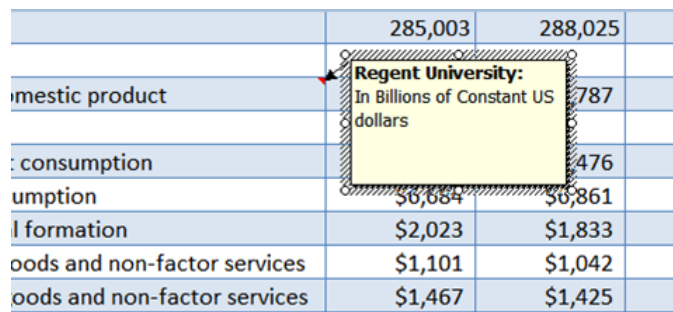
- ✓ Select cells (B6:G12).
- ✓ On the **Home** tab's **Cells** menu, click on **Format**, and then **Format Cells**.
- ✓ From the **Number** tab, choose **Currency**, change decimal places to 0, and change negative numbers to show in parentheses.
- ✓ Click **OK**.





4. In cell A6 (Total Gross Domestic Product) add "In billions of constant 2000 U.S. dollars" as a comment:

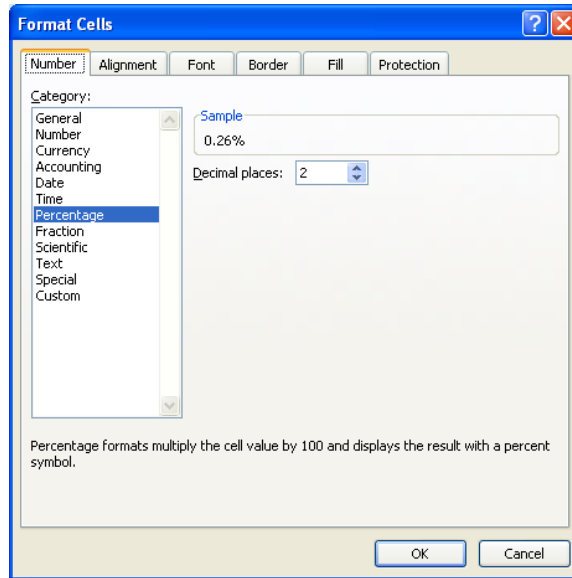
- ✓ Click on cell A6 to select it.
- ✓ Right click the cell and choose **Insert Comment** from the menu.
- ✓ Delete any text from the comment box, if applicable.
- ✓ Type *In Billions of Constant US dollars*.
- ✓ Click on another cell to close the comment box.



When the mouse pointer is positioned over the red triangle in the upper right corner of the cell, the comment will appear.

5. Set a formula to calculate year to year growth.

- ✓ Insert a blank row after *Total Gross Domestic Product* (row 6).
  - Right click in row 7.
  - Select **Insert**.
  - Select **Entire Row** on the **Insert** menu that appears, and click **OK**.
- ✓ In cell A7, enter *GDP Year to Year Growth*.
- ✓ Select cell C7. On the **Home** tab's **Cell** menu, click on **Format** and select **Format Cells**.
  - Select **Percentage**, **2** decimal places, and **OK**.



- ✓ In cell C7, enter the following formula:  $=(C6-B6)/C6$  and press **Enter**.
  - This will calculate the percentage of increase between 2001 and 2000.
- ✓ Drag the formula in cell C7 to the right to copy it by placing your mouse pointer on the bottom right corner of the cell, clicking and holding the left mouse button, and dragging over to G7. (When you place your mouse pointer on the bottom right corner of C7 it must be a black “+” in order to copy the formula correctly.)

Year	2000	2001	2002	2003	2004	2005
Population	285,003	288,025	291,038	294,043	297,043	300,038
Total gross domestic product	\$9,762	\$9,787	\$9,953	\$10,262	\$10,692	\$11,066
GDP Year to Year Growth		0.26%	1.67%	3.01%	4.02%	3.38%
Government consumption	\$1,421	\$1,476	\$1,552	\$1,599	\$1,639	\$1,671
Private consumption	\$6,684	\$6,861	\$7,068	\$7,301	\$7,585	\$7,838
Gross capital formation	\$2,023	\$1,833	\$1,787	\$1,860	\$2,004	\$2,127
Exports of goods and non-factor services	\$1,101	\$1,042	\$1,018	\$1,039	\$1,093	\$1,141
Imports of goods and non-factor services	\$1,467	\$1,425	\$1,472	\$1,537	\$1,629	\$1,711

**6. Use conditional formatting to highlight years with growth above 2%.** Conditional formatting allows Excel to change the appearance of data based on certain criteria.

- ✓ Select the row of year to year growth percentages (C7 – G7)
- ✓ On the **Home** tab’s **Styles** menu, click on **Conditional Formatting, New Rule**, and then **Format only cells that contain**.

- ✓ For each condition you set, you will need to fill in the boxes that appear in the **Format only cells with** section.
  - For Condition 1:
    - Leave the words **cell value** in the first box.
    - Select **greater than or equal to** in the second box.
    - Type **2%** in the third box.
    - Set the formatting for bold font with a blue font color.
      - Click on the **Format** button to open the **Formal Cell** dialog box.
      - Click on the **Font** tab.
      - Select **Bold** under **Font style**, use the drop-down arrow next to the **Color** box to select a blue tone, then click **OK**.
  - For Condition 2:
    - Leave the words **cell value** in the first box.
    - Select **less than** in the second box.
    - Type **2%** in the third box.
    - Set the formatting for bold font with a red font color, as in Condition 1, above.

Year	2000	2001	2002	2003	2004	2005
Population	285,003	288,025	291,038	294,043	297,043	300,038
Total gross domestic product	\$9,762	\$9,787	\$9,953	\$10,262	\$10,692	\$11,066
GDP Year to Year Growth		0.26%	1.67%	3.01%	4.02%	3.38%
Government consumption	\$1,421	\$1,476	\$1,552	\$1,599	\$1,639	\$1,671
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Exports of goods and non-factor services	\$1,101	\$1,042	\$1,018	\$1,039	\$1,093	\$1,141
Imports of goods and non-factor services	\$1,467	\$1,425	\$1,472	\$1,537	\$1,629	\$1,711

**Step 7. Use absolute references to calculate the percentage of the total gross domestic product for each year that each line item (A9 – A13) represents.**

- ✓ Copy the *AutoFormat* worksheet (see Step 2 on page 3 for instructions).
- ✓ Rename the new worksheet *GDP Percentages*.
- ✓ Insert one new column to the right of each year.
  - To insert a new column after the **2000** column (column B), right click on the **C** at the head of Column C.
  - Select **Insert**.
  - Repeat for remaining columns.
- ✓ Key a percent sign (%) in row 8 for each of the new columns. Align these cells to the right by selecting them with your cursor, then clicking on the **Align Text Right** icon on the **Home** tab's **Alignment** menu.
- ✓ Change **Format** to **percentage** with **2** decimals.

- On the B tab's **Cells** menu, click on **Format**, and then **Format Cells**.
- From the **Number** tab, choose **Percentage**, and change decimal places to 2.
- ✓ In cell C9 enter the formula =B9/\$B\$6.
- ✓ Copy this formula into cells E9, G9, I9, K9, and M9, then “drag” the formula down each column (as in Step 5 on page 8).
- ✓ **Format** the entire table again (make sure column width for columns B through M are set for a width of 12 – see Step 2, page 5).

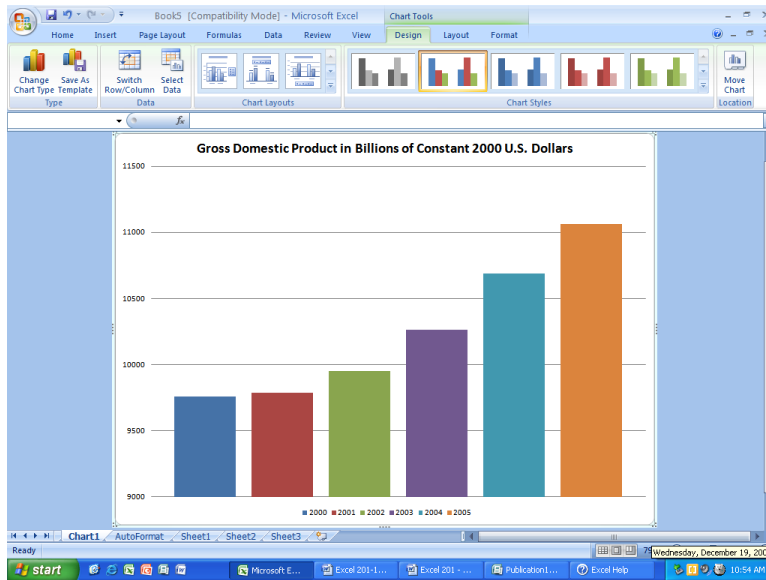
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	United States Data 2000-2005												
2	Year	2000		2001		2002		2003		2004		2005	
4	Population	285,003		288,025		291,038		294,043		297,043		300,038	
6	Total gross domestic product	\$9,762		\$9,787		\$9,953		\$10,262		\$10,692		\$11,066	
7	GDP Year to Year Growth			0.26%		1.67%		3.01%		4.02%		3.38%	
8			%		%		%		%		%		%
9	Government consumption	\$1,421	14.56%	\$1,476	15.12%	\$1,552	15.90%	\$1,599	16.38%	\$1,639	16.79%	\$1,671	17.12%
10	Private consumption	\$6,884	68.47%	\$6,861	70.28%	\$7,068	72.40%	\$7,301	74.79%	\$7,585	77.70%	\$7,838	80.29%
11	Gross capital formation	\$2,023	20.72%	\$1,833	18.78%	\$1,787	18.31%	\$1,860	19.05%	\$2,004	20.53%	\$2,127	21.79%
12	Exports of goods and non-factor services	\$1,101	11.28%	\$1,042	10.67%	\$1,018	10.43%	\$1,039	10.64%	\$1,093	11.20%	\$1,141	11.69%
13	Imports of goods and non-factor services	\$1,467	15.03%	\$1,425	14.60%	\$1,472	15.08%	\$1,537	15.74%	\$1,629	16.69%	\$1,711	17.53%

### Step 8. Freeze panes so that row and column labels are fixed as you scroll.

- ✓ Click in cell B4.
- ✓ On the **View** tab's **Window** menu bar click **Freeze Panes**, and select **Freeze Panes**.

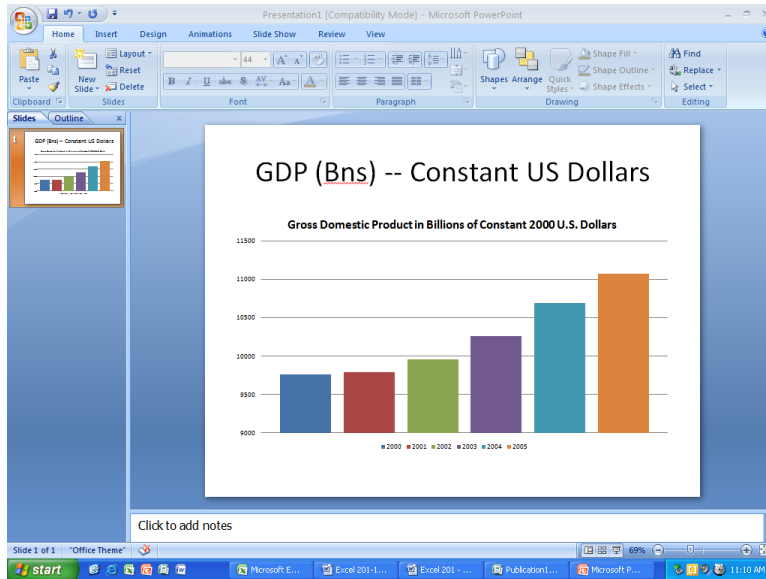
### Step 9. Create a chart and link it to PowerPoint .

- ✓ Click the *AutoFormat* worksheet tab.
  - Select cells B2 to G2. Right click and choose **Copy**
  - Right click in cell B20 and select **Paste Special**. In the **Paste Special** dialog box that opens, select **Values** in the **Paste** section, **None** in the **Operation** section, check the **Transpose** check box, and click **OK**.
- ✓ Copy the *Total Gross Domestic Product* for each year (B6 to G6) and special paste and transpose them next to the years (into cell C20, using the same steps as above).
- ✓ Click on cell B20. Move your cursor to the formula bar and insert an apostrophe before the number. This tells Excel to treat the value as text instead of as a number. A small green mark will appear in the corner of the cell when this has been done. Repeat for cells B21-B25. *This is very important when creating a table using the Chart Wizard.*
- ✓ Highlight cells B20 to C25.
- ✓ On the **Insert** tab's **Charts** menu, click the **Column** icon and select the **2-D Clustered Column** option.
- ✓ With the chart still selected, click on the **Move Chart** button from the **Design** tab's **Location** menu, and select **New Sheet**, leaving the sheet labeled *Chart 1*, and click **OK**.
- ✓ On the **Design** tab's **Data** menu, click on **Switch Row/Column** and **Layout 3** from the **Chart Layouts** menu, then click on highlight *Chart Title* and type in *Gross Domestic Product in Billions of Constant 2000 U.S. Dollars*.



**Copy the chart to PowerPoint.**

- ✓ Click to select the entire chart.
- ✓ Right click and select copy.
- ✓ Go to the Start menu and open PowerPoint.
- ✓ In PowerPoint choose a page in which to paste the chart.
- ✓ Right click and select Paste. Resize and label slide as desired.



Excel Advanced

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