

How ExcelWriter Inserts Rows

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Introduction

There are two ways to insert rows of data using ExcelWriter:

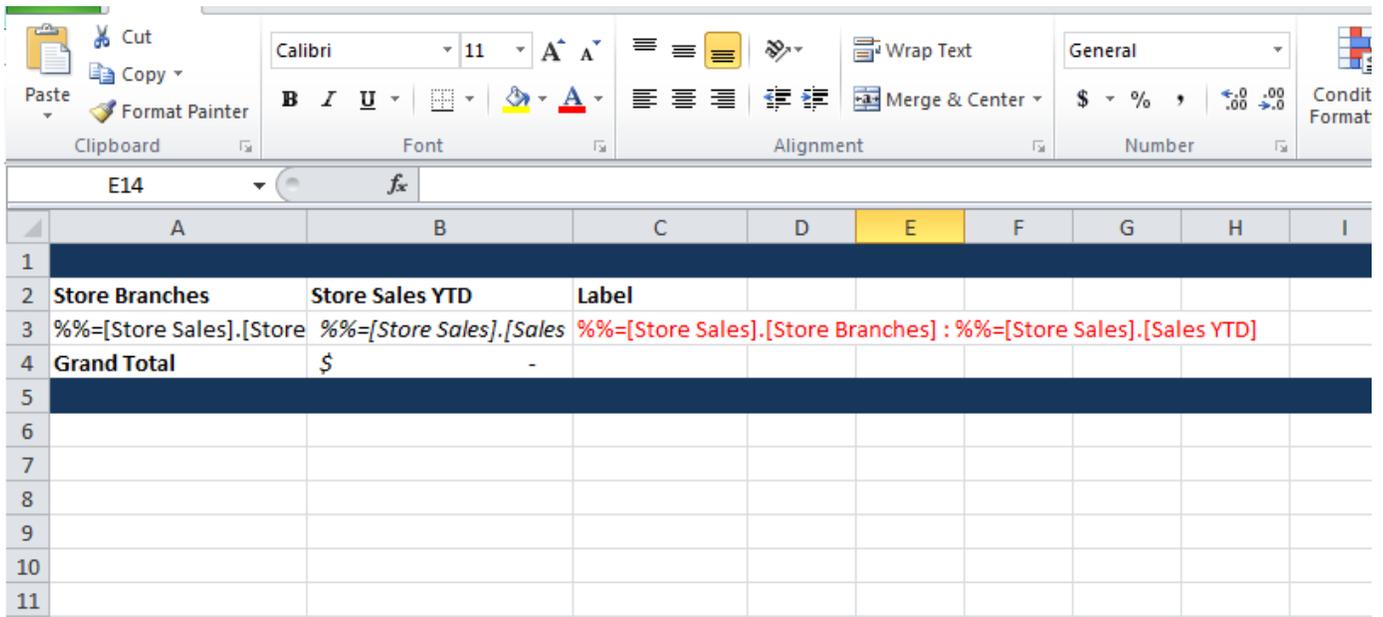
- `ExcelTemplate`'s `#ExcelTemplate.BindData` method
- `ExcelApplication`'s `#Worksheet.ImportData` method

ExcelTemplate.BindData

When data is imported into a template file that contains data markers with `ExcelTemplate.BindData` ([API Reference](#)), the following is true:

- ExcelWriter inserts a brand new row for each row of data in the data source.
- Content in the cells below the data markers will be pushed down as the new rows are added.
- Styles and formatting in the data marker row will be copied for each new row.
- Formulas that reference the data marker row will be updated to reflect the newly inserted rows.

For example, we start with a simple template file that contains data markers:



The screenshot shows the Microsoft Excel ribbon with the following tabs: Clipboard, Font, Alignment, Number, and Conditional Format. The active cell is E14. The spreadsheet contains the following data:

	A	B	C	D	E	F	G	H	I
1									
2	Store Branches	Store Sales YTD	Label						
3	<code>%%=[Store Sales].[Store</code>	<code>%%=[Store Sales].[Sales</code>	<code>%%=[Store Sales].[Store Branches] : %%=[Store Sales].[Sales YTD]</code>						
4	Grand Total	\$ -							
5									
6									
7									
8									
9									
10									
11									

Here is the template after it has been populated with data:

	A	B	C	D	E	F	G
1							
2	Store Branches	Store Sales YTD	Label				
3	Store 1	\$ 549,396,031.00	Store 1 : 549396031				
4	Store 2	\$ 135,912,382.00	Store 2 : 135912382				
5	Store 3	\$ 850,383,812.00	Store 3 : 850383812				
6	Store 4	\$ 230,512,344.00	Store 4 : 230512344				
7	Grand Total	\$ 1,766,204,569.00					
8							
9							
10							
11							
12							
13							
14							

Below is a break down of what was affected when the data was imported.

Content below the data markers

In this example, there is content below the data marker row (a Grand Total row and a blue footer row). These will be pushed down as new rows are inserted.

Before importing data

	A	B	C	D
1				
2	Store Branches	Store Sales YTD	Label	
3	%%=[Store Sales].[Store	%%=[Store Sales].[Sales	%%=[Store Sales].[Store	
4	Grand Total	\$ -		
5				
6				
7				
8				
9				
10				

After the data is imported, these rows are moved from rows 4 & 5, to rows 7 & 8.

Formatting on the data marker row

There are several formatting elements on the data marker row. This formatting will be applied to each new row of data.

- Currency number formatting on B3
- Italic font on B3

- Red font on C3

Before importing data

	A	B	C	D
1				
2	Store Branches	Store Sales YTD	Label	
3	%%=[Store Sales].[Store	%%=[Store Sales].[Sales	%%=[Store Sales].[Store	
4	Grand Total	\$	-	
5				
6				
7				
8				

After the data is imported, this formatting is applied to rows 3 through 6.

Formulas

- There are two formulas
 - B4 contains a SUM formula that references a data marker cell. The lower boundary will expand to include new rows.
 - C3 contains a formula that references a data marker cell. The row values will be updated for each new row.

Before/After 'SUM' formula:

Clipboard		Font		Alignment	
B4		fx		=SUM(B3:B3)	
	A	B	C	D	
1					
2	Store Branches	Store Sales YTD	Label		
3	%%=[Store Sales].[Store	%%=[Store Sales].[Sales	%%=[Store Sales].[Store Branch		
4	Grand Total	\$	-		
5					
6					
7					
Clipboard		Font		Alignment	
B7		fx		=SUM(B3:B6)	
	A	B	C	D	
1					
2	Store Branches	Store Sales YTD	Label		
3	Store 1	\$ 549,396,031.00	Store 1 : 549396031		
4	Store 2	\$ 135,912,382.00	Store 2 : 135912382		
5	Store 3	\$ 850,383,812.00	Store 3 : 850383812		
6	Store 4	\$ 230,512,344.00	Store 4 : 230512344		
7	Grand Total	\$ 1,766,204,569.00			
8					
9					
10					

Before/After formula:

C3 fx =A3 & " : " & B3				
	A	B	C	D
1				
2	Store Branches	Store Sales YTD	Label	
3	%%=[Store Sales].[Store	%%=[Store Sales].[Sales	%%=[Store Sales].[Store Branch	
4	Grand Total	\$ -		
5				
6				
7				

C5 fx =A5 & " : " & B5				
	A	B	C	D
1				
2	Store Branches	Store Sales YTD	Label	
3	Store 1	\$ 549,396,031.00	Store 1 : 549396031	
4	Store 2	\$ 135,912,382.00	Store 2 : 135912382	
5	Store 3	\$ 850,383,812.00	Store 3 : 850383812	
6	Store 4	\$ 230,512,344.00	Store 4 : 230512344	
7	Grand Total	\$ 1,766,204,569.00		
8				
9				

Worksheet.ImportData

When data is imported into a worksheet using ExcelApplication's `Worksheet.ImportData` (API Reference), the following is true:

- ExcelWriter does NOT insert new rows.
- Values and formulas can be overwritten by the new values.
- Formulas referencing the cells with the new data are not updated.
- Formatting is not applied to the cells containing the new values.

For example, we take the same template, but remove the data markers:

Before

B11 fx				
	A	B	C	D
1				
2	Store Branches	Store Sales YTD	Label	
3	Data inserted here	Data inserted here	Data inserted here : Data inser	
4	Grand Total	\$ -		
5				
6				
7				
8				
9				

When the data is imported, the SUM formula that was in cell B4 is overwritten with one of the new values. Also, the formatting in cells A4, B3, B4, and C3 is only there because it was present in the original template. Also, the background color in row 5 was removed when the data was imported.

After

The screenshot shows the Microsoft Excel interface with the Home ribbon selected. The ribbon includes options for Clipboard (Cut, Copy, Paste, Format Painter), Font (Calibri, size 11, bold, italic, underline, text color, background color), and Alignment (bullet points, text alignment, wrap text, merge & center). The spreadsheet below shows columns A through E and rows 1 through 11. Row 1 is a dark blue header row. Row 2 contains the headers: Store Branches, Store Sales YTD, and Label. Row 3 shows Store 1 with sales of \$ 549,396,031.00 and label Store 1 : 549396031. Row 4 shows Store 2 with sales of \$ 135,912,382.00. Row 5 shows Store 3 with sales of 850383812. Row 6 shows Store 4 with sales of 230512344. Row 10 is highlighted in yellow and contains a black rectangular box.

	A	B	C	D	E
1					
2	Store Branches	Store Sales YTD	Label		
3	Store 1	\$ 549,396,031.00	Store 1 : 549396031		
4	Store 2	\$ 135,912,382.00			
5	Store 3	850383812			
6	Store 4	230512344			
7					
8					
9					
10					
11					