

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:

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

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

File		Home		Insert		Page Layout		Formulas		Data		Review		View		Developer		Add-Ins		Tea	
 Paste Clipboard		 Cut  Copy Format Painter		Calibri 11 B <i>I</i> <u>U</u>   				     Wrap Text      Merge & Center				General \$ %									
A11		fx																			
	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					

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

File		Home		Insert		Page Layout		Formulas		Data		Review		View		Developer							
 Paste		 Cut		 Copy		 Format Painter		Clipboard		Calibri 11		 B  <i>I</i>  <u>U</u>		 		Font		  		 		Alignment	
B10				fx																			
	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																							
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10																							
11																							