An Excel Based Analytical Tool for Undertaking an Internal PEFA Review or for Scoring a PEFA Analysis at the National or Sub-National Levels

Developed for UNCDF under Contract No: 103/07 /2016

Design and Customization of “Looking” Diagnostic Tools

PFM - PAPUA NEW GUINEA

July 2016-January 2018

Introduction 1

- As part of a UNCDF contract the consultant developed and tested a PEFA reporting tool fit for use by Papua New Guinea civil servants .
- The diagnostic was prepared using Standard PEFA 2011 Field guide and was redeveloped as a reduced PEFA set at the subnational level.
- These Excel tools will facilitate and expedite internal PEFA reviews and self evaluations at the national or sub national levels
- The National PEFA (2011) reporting tool will be presented at the ICGFM conference.
- These Excel tools do not have the sanction or approval of the PEFA Secretariat

What's in the file and worksheets- "An Excel Analytical Tool for 2011 PEFA"

1. Overview of PEFA
2. Overview of scoring, data entry and scoring for M1 and M2 and considerations for national and subnational PEFA
3. Comparative Master Scoring sheet for all indicators
4. Indicator sheets 28 PEFA national indicators, 3 donor indicators,1 sub-national transfer indicator)

   Each indicator includes 3-4 worksheets

   A. Brief description of Indicator
   B. Indicator Data entry and calculation sheet
   C. Grade Scoring Sheet using dimension averaging
   D. Grade Scoring Sheet using PEFA 2011/2106 Table for selected Indicators
5. Grade Scoring sheet templates

Overview

This methodology is based on-

1. PEFA 2011 Fieldguide
2. PEFA 2013 Performance Measurement at the Sub National Level- Definitions and Typology
3. PEFA 2016 Supplementary Guidelines for Subnational Governments

Please refer to these documents for a detailed Description of PEFA methodology and the individual scoring indicators

The PEFA workbook has been prepared to allow local government authorities to prepare a PEFA assessment in an expeditious fashion by automated all calculation and grading processes. It is still in a draft stage.

This methodology is provided to the Government of PNG on a pilot basis and has not been reviewed by the PEFA Secretariat and does not have the approval of the PEFA Secretariat

National and Sub National PEFA

- National PEFA have a standardized content. However subnational PEFAs are customized depending on
  1. Level of government subject to PEFA
  2. Objectives and Terms of Reference of the PEFA analysis
  3. Availability of Information at the Sub National level (Try to minimize and control potential “NS”)
  4. Capacity, resources and timeframe of the PEFA team.

Information on preparing and undertaking a sub-national EFA are available on the PEFA website www.pefa.org

Scoring the Indicators

1. Each of the indicators has from 1 to 4 components called "dimensions" in the PEFA Guides.

2. Scoring the indicator is based on either using the minimum value included of the dimensions (M1 Method) or using an averaging calculation of the dimensions (M2 Method).

3. Using the M1 calculation method, the score for the entire dimension is the minimum of the dimension scores adjusted upward "+" if another dimension in the indicator has scored higher than the minimum. The M2 scoring method uses an average value.

4. The score on the indicator using the M2 method is an average value for the score on the individual dimensions. In actual practise this value is determined not by averaging but in reference to a table contained in the PEFA reference materials which only approximates the mathematical "average' score calculation.

5. If a dimension cannot be reliably scored it is assigned "ns" and graded as "no score" . A "ns" will not affect the average score calculation under the M2 calculation. This calculation is a simplifaction of standard PEFA methodology which uses 2 (PEFA 2016) or 3(PEFA 2011) variants of "ns" not applicable, not used or not rated.

PEFA Scoring with M2 “Averaging” of dimensions

- For an indicator with only one dimension that grade is the same for M1 and M2
- For multi-dimensional indicators the grade is determined through averaging the individual dimension scores.
- PEFA 2011 and 2016 contain (the same) conversion tables for 2, 3 and 4 dimensions which determine the average grade for all combinations of scores in calculating M2
- However these scores are not the arithmetic average of scores in 3 or 4 dimensions using a “1” interval between grades (such as A=4,B=3,C=2,D=1)
- With 3 dimensions “.33” must be added to the individual scores to arrive at the PEFA table grade
- With 4 dimensions “.25” must be added to the individual scores to arrive at the PEFA table grade
- By comparison without the adjustments 20% of 3 dimension averaged calculated grades are lower than the score for identical 3 dimension grades determined by the PEFA conversion table.
- And 30% of 4 dimension averaged calculated grades without the adjustment are lower than the score for identical 4 dimension grades determined by the PEFA conversion table

PEFA 2011/2016 PEFA Grade Conversion Table

TABLE 1: Conversion table for indicator scores using the averaging method M2 (AV)

Dimension scores			Overall M2 (AV) score
2-DIMENSIONAL INDICATORS			
D	D		D
D	C		D+
D	B		C
D	A		C+
C	C		C
C	B		C+
C	A		B
B	B		B
B	A		B+
A	A		A
3-DIMENSIONAL INDICATORS			
D	D	D	D
D	D	C	D+
D	D	B	D+
D	D	A	C
D	C	C	D+
D	C	B	C
D	C	A	C+
D	B	B	C+
D	B	A	B
D	A	A	B
C	C	C	C
C	C	B	C+
C	C	A	B
C	B	B	B
C	B	A	B
C	A	A	B+
B	B	B	B
B	B	A	B+
B	A	A	A
A	A	A	A

Dimension scores				Overall M2 (AV) score
4-DIMENSIONAL INDICATORS				
D	D	D	D	D
D	D	D	C	D
D	D	D	B	D+
D	D	D	A	D+
D	D	C	C	D+
D	D	C	B	D+
D	D	C	A	C
D	D	B	B	C
D	D	B	A	C+
D	D	A	A	C+
D	C	C	C	D+
D	C	C	B	C
D	C	C	A	C+
D	C	B	B	C+
D	C	B	A	C+
D	C	A	A	B
D	B	B	B	C+
D	B	B	A	B
D	B	A	A	B
D	A	A	A	B+
C	C	C	C	C
C	C	C	B	C+
C	C	C	A	C+
C	C	B	B	C+
C	C	B	A	B
C	C	A	A	B
C	B	B	B	B
C	B	B	A	B
C	B	A	A	B+
C	A	A	A	B+
B	B	B	B	B
B	B	B	A	B+
B	B	A	A	B+
B	A	A	A	A
A	A	A	A	A

NOTE: Dimension scores can be counted in any order. It is only the quantities of each score that are important for aggregation.

Table 1 MUST NOT be applied to indicators using the M1 (WL) scoring method.

PEFA Scoring with M2 “Averaging” of Dimensions

The analytical tool was originally prepared using M2 scores prepared using the arithmetic average of the dimension scores and not the PEFA 2011/2016 Table

For dimensions 12 and 19 a separate score for the “Aggregate Score from PEFA 2011 Grid” is provided. This score is calculated using a separate second master scoring sheet for the indicator which includes the PEFA grade conversion table. This table can be added to the other multi dimension indicators where the PEFA Table may provide a different grade from the aggregate average calculation.

It will only be relevant in calculation where the indicator-

- **Is an M2 not M1 calculation**
- **The indicator has 3 or 4 dimensions**

For M1 grades or M2 grades with 1 or 2 dimensions there is no discrepancy between average calculated score and PEFA 2011/2016 Table scores

Using Excel Form Tools
Insert Developer in Ribbon

To Place Developer Tab in Ribbon

1. Click File Tab in Ribbon

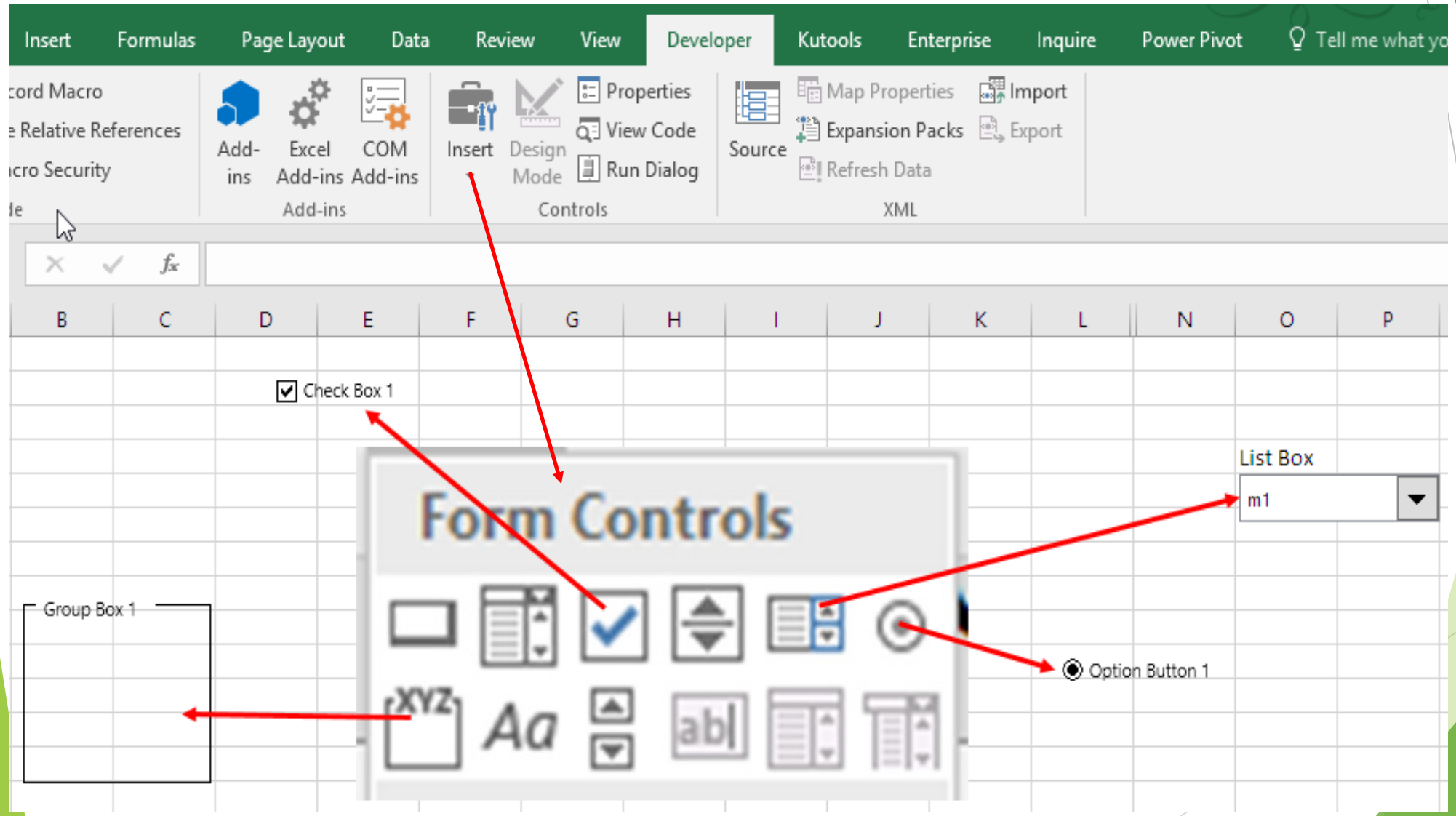
2. Click "Options" in list

3. Click "Customize Ribbon"

4. Check "Developer" in column on right the "Customize Ribbon " column

<for hyperlink to video click this text box >

Forms Control Overview



1. Making Entries in the Data Entry Worksheet

For Each of the Indicators there are three worksheets

Worksheet 1 contains a description of the Indicator

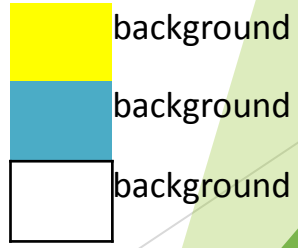
Worksheet 2 is for data selection, data entry and scoring of the indicator. All cells are locked except for the variables you will choose or enter

Worksheet 3/4 contain "Scoring" cells (contains a formula) for scoring the indicator for M1 and M2 methods. They are locked to prevent changing the formula

Data Entry cells have a

Scoring cells have a

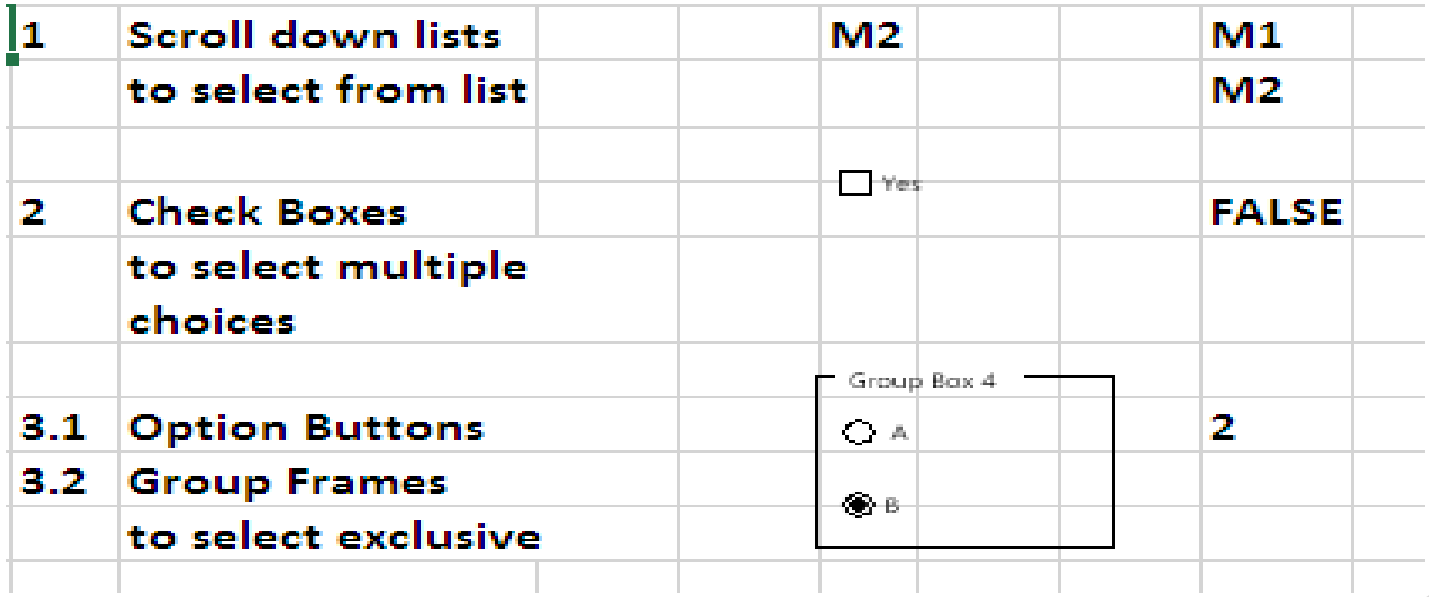
Buttons or Checkboxes are



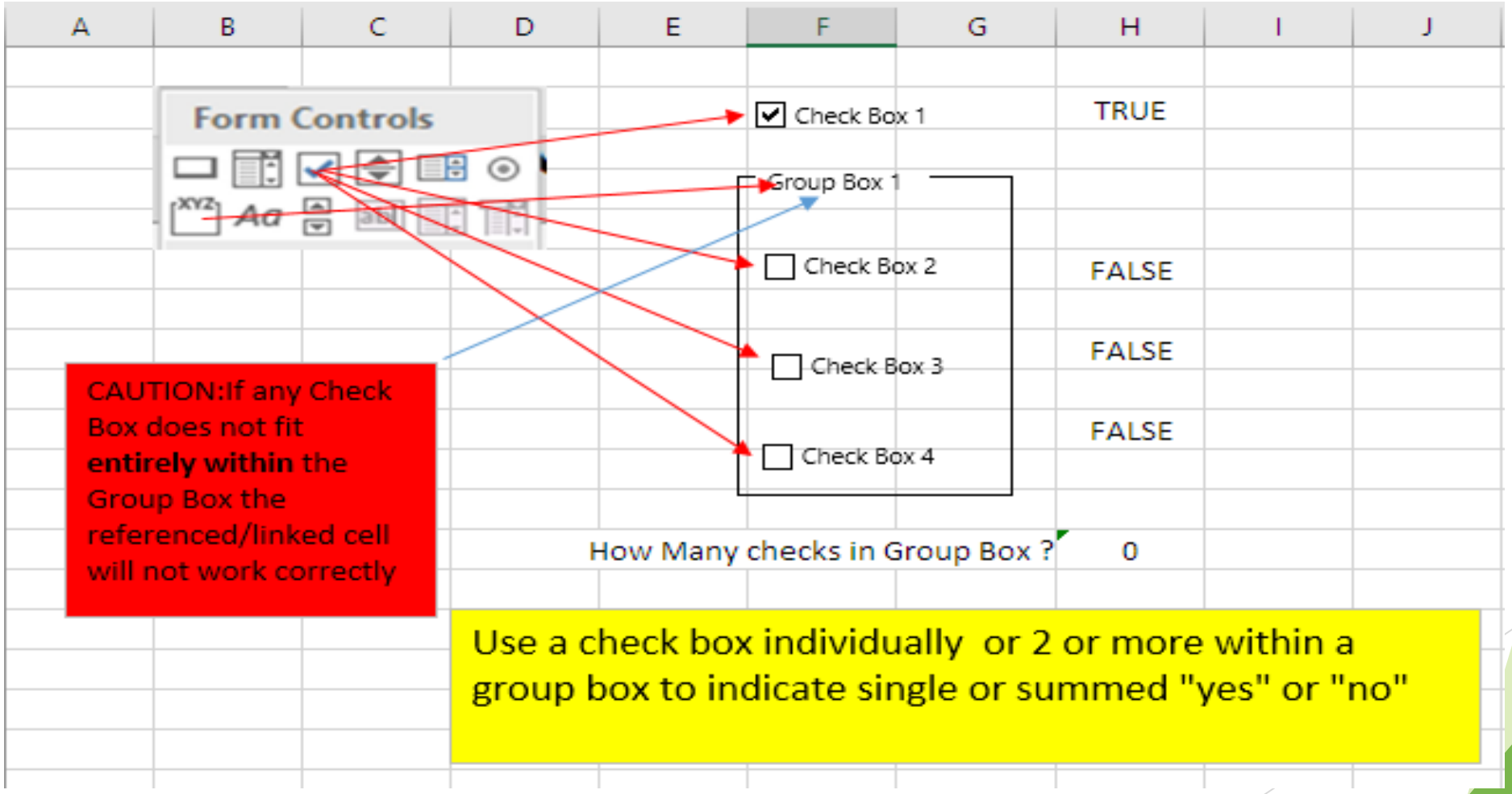
You can only change data entry, data and selection of check and button cells. All other cells are locked. However there is no password to unlock the cells. You may unlock them anytime but please backup the locked file first !

2. Making Entries in the Data Entry Worksheet

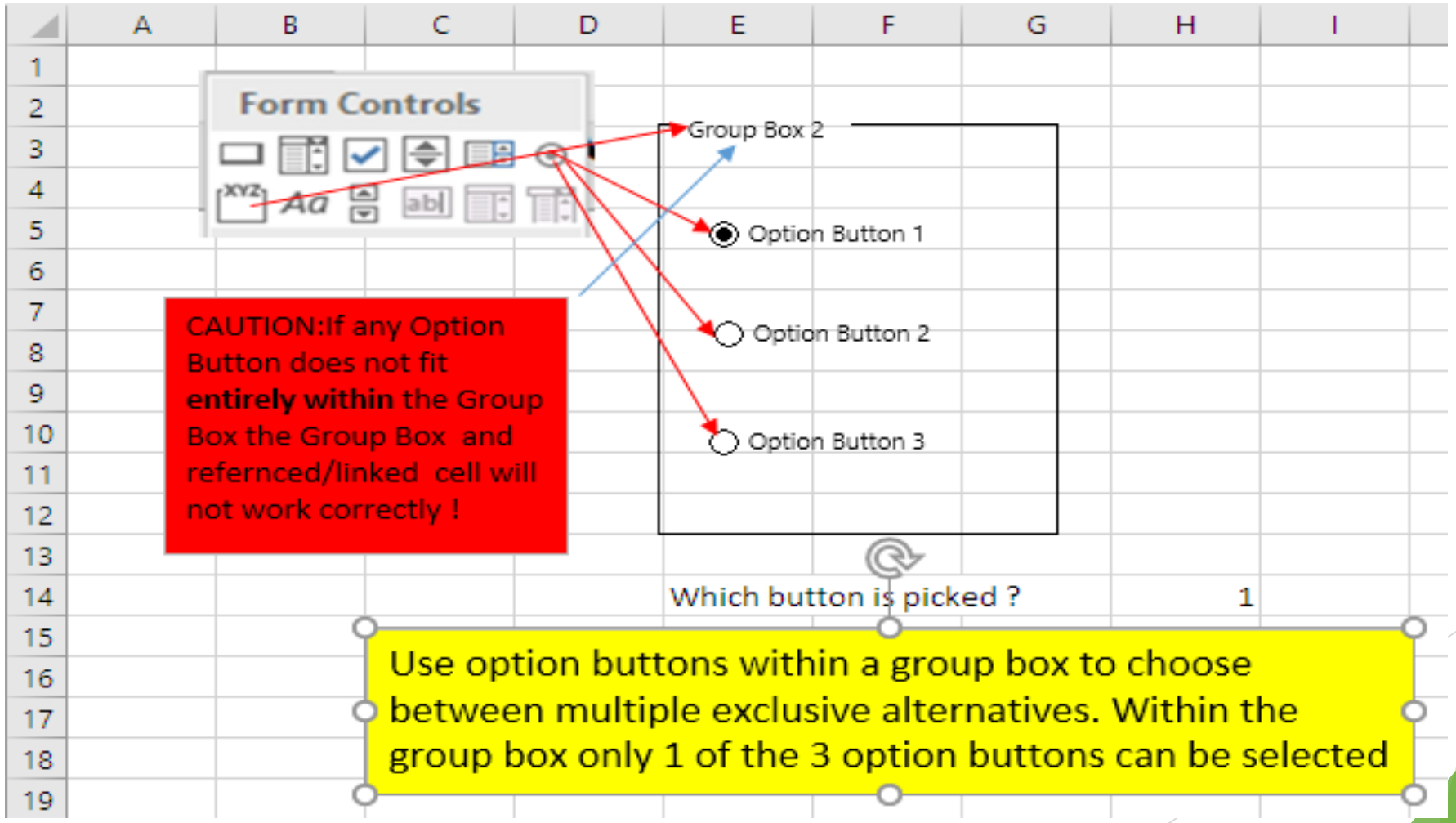
Besides Data entry you will encounter several types of cells for data selection



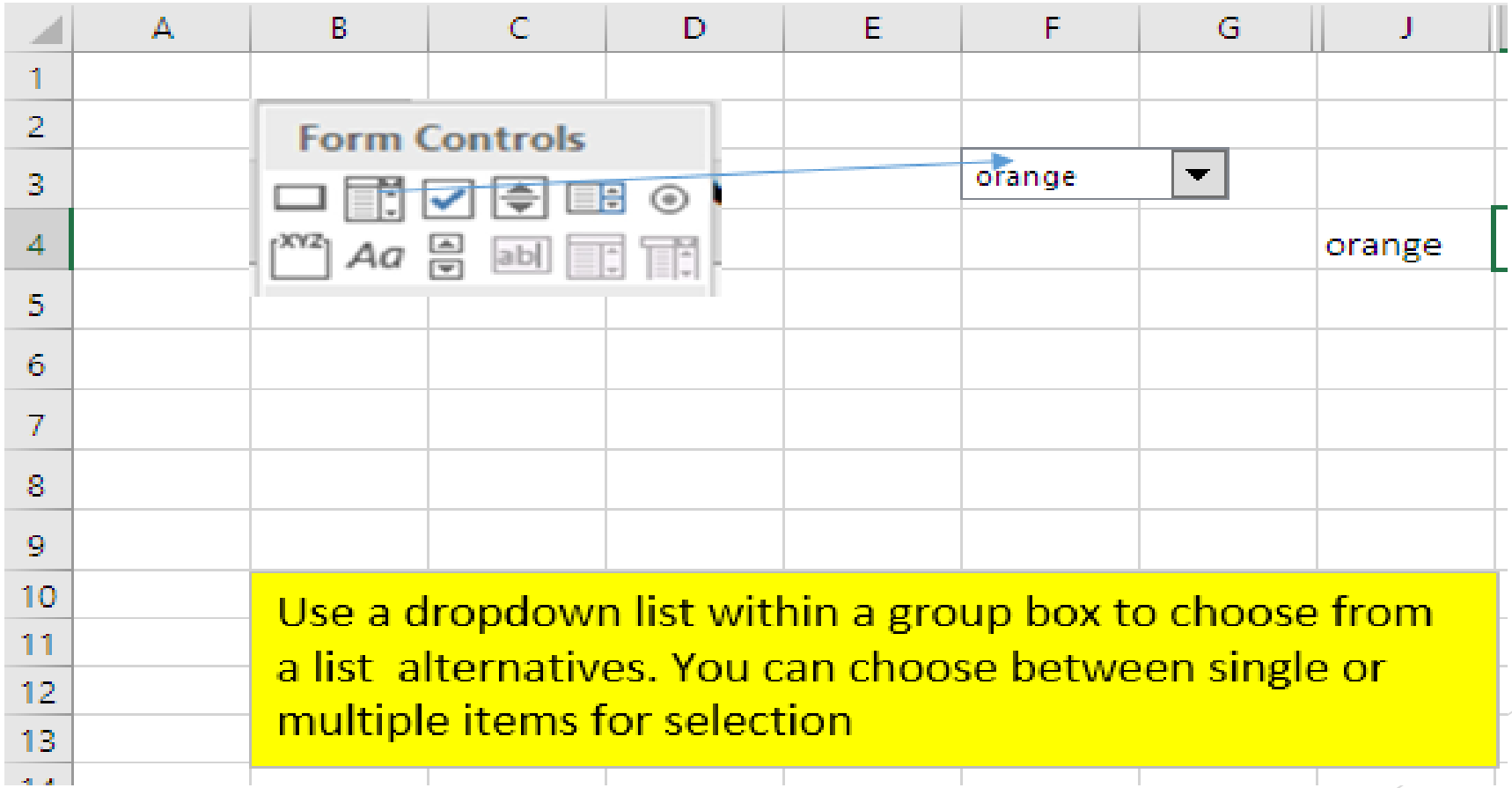
Using Excel Form Tools Checkbox



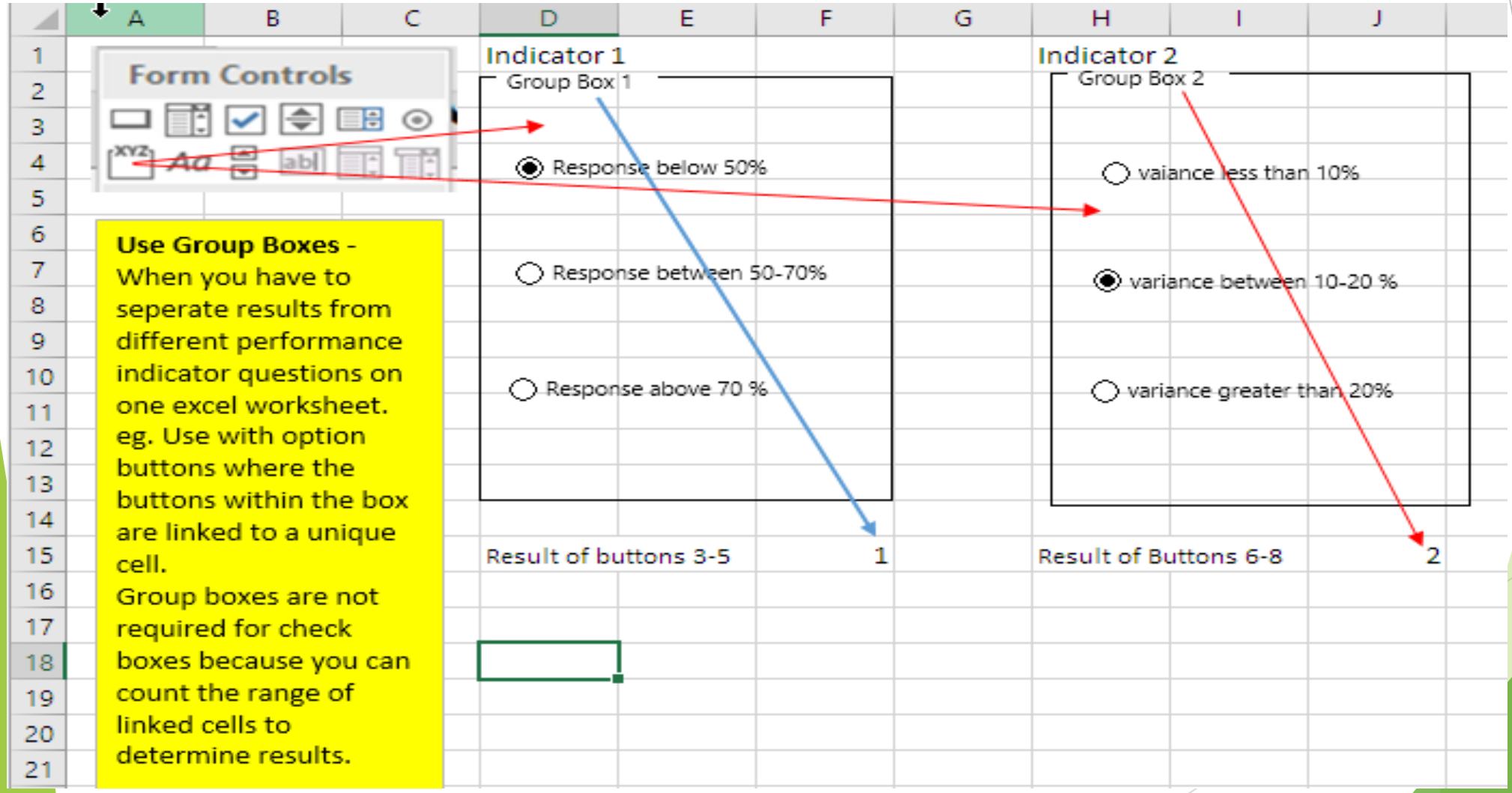
Using Excel Form Tools Option Buttons



Using Excel Form Tools -Drop Down Lists



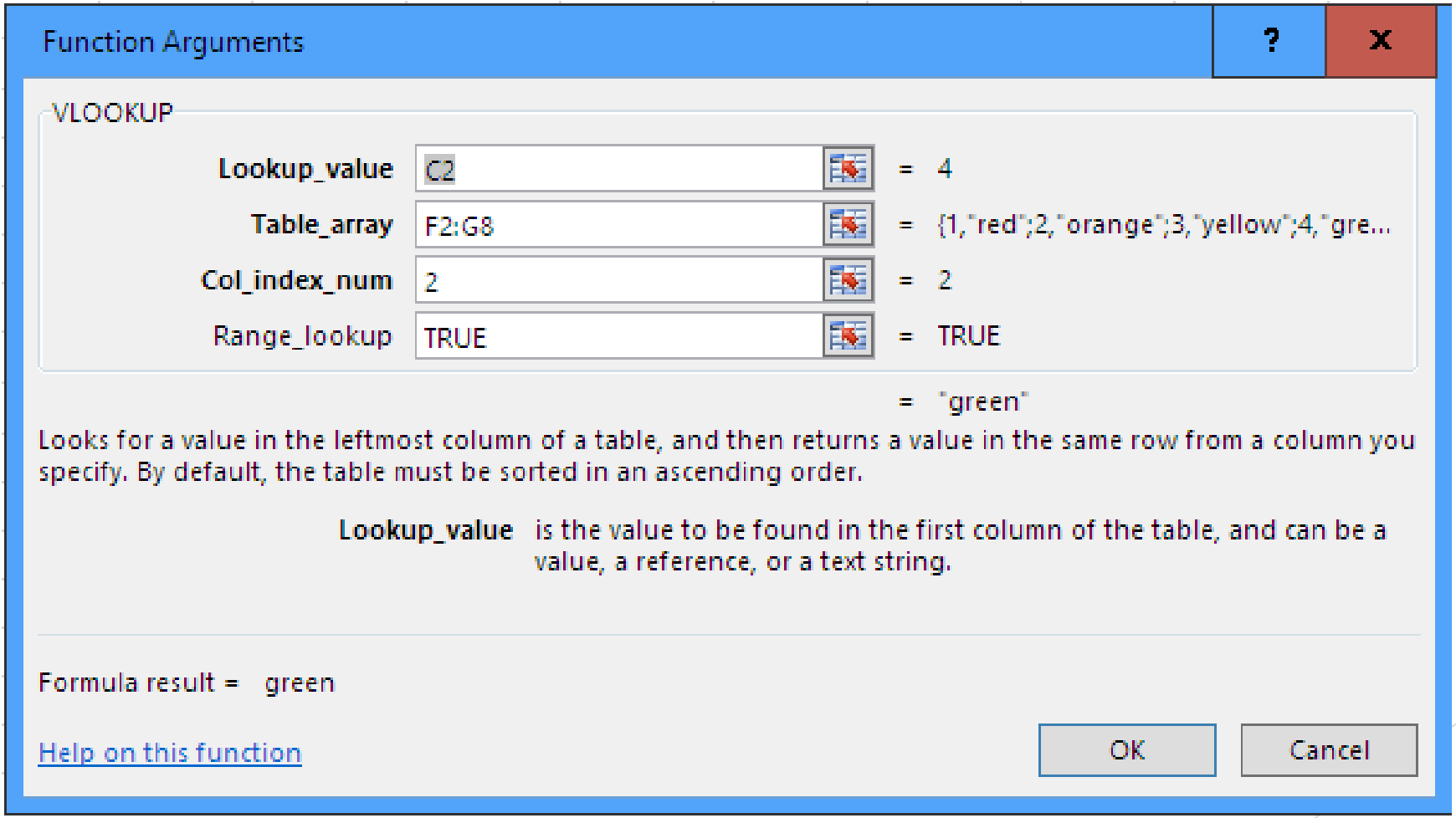
Using Excel Form Tools-Group Box



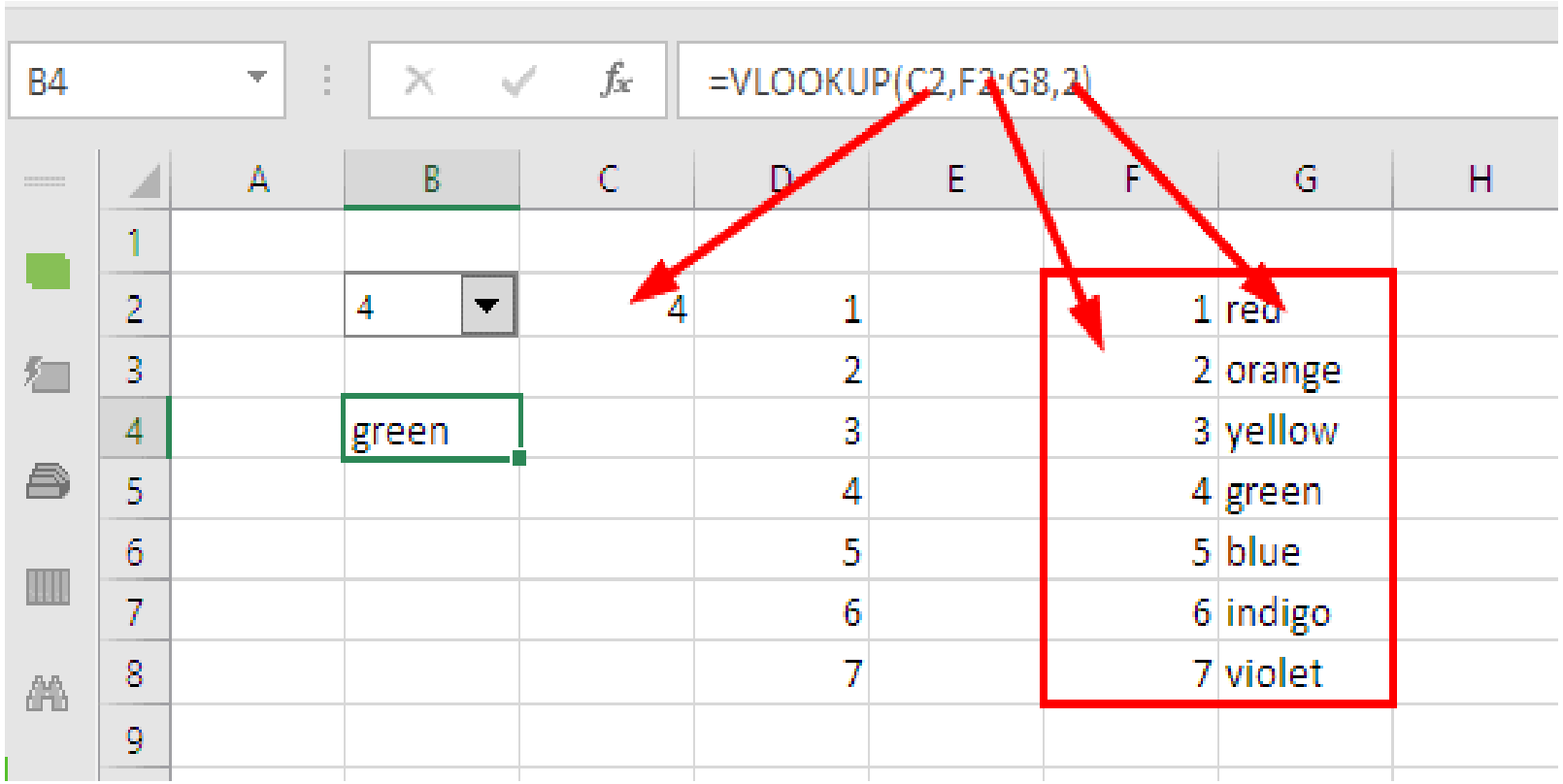
Frequently Used Excel Formulas

Title	
VLOOKUP	Looks up value for an assigned cell from a table
IF	Returns a value in response to a condition
Sum & Count	Sum or count of range and variants Such as “sumif” or “countifs”

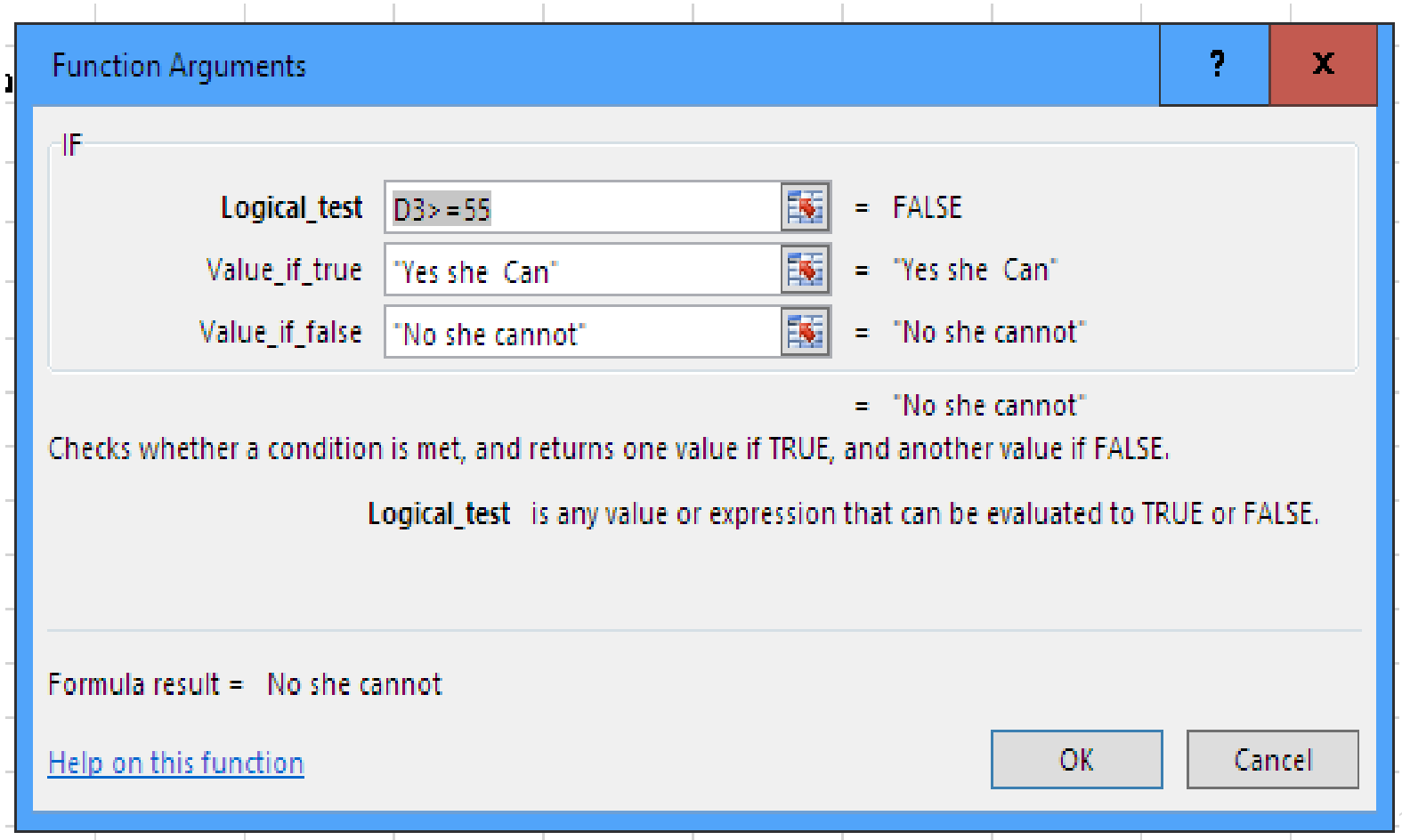
“Vlookup” Function Arguments



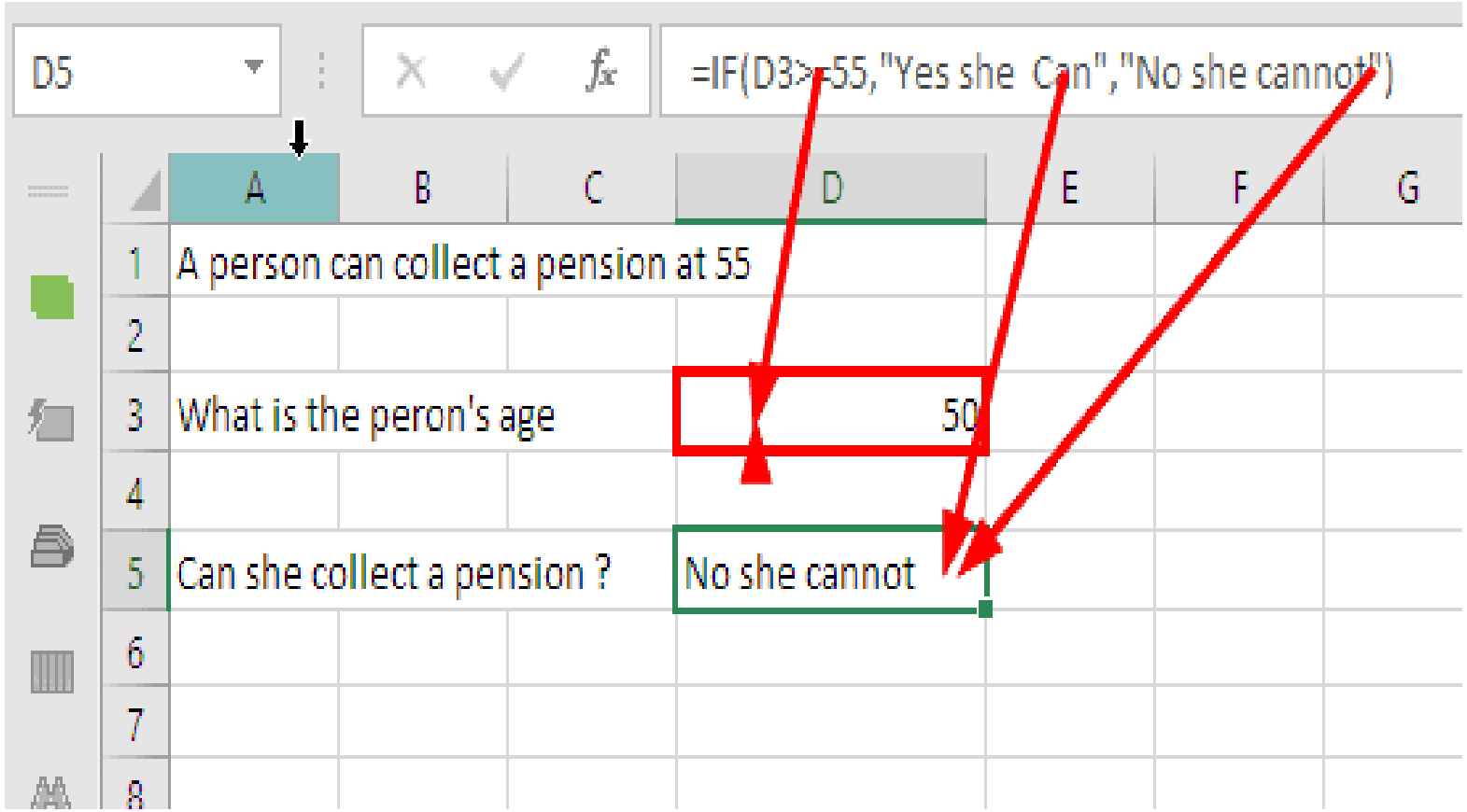
“Vlookup” Function Arguments



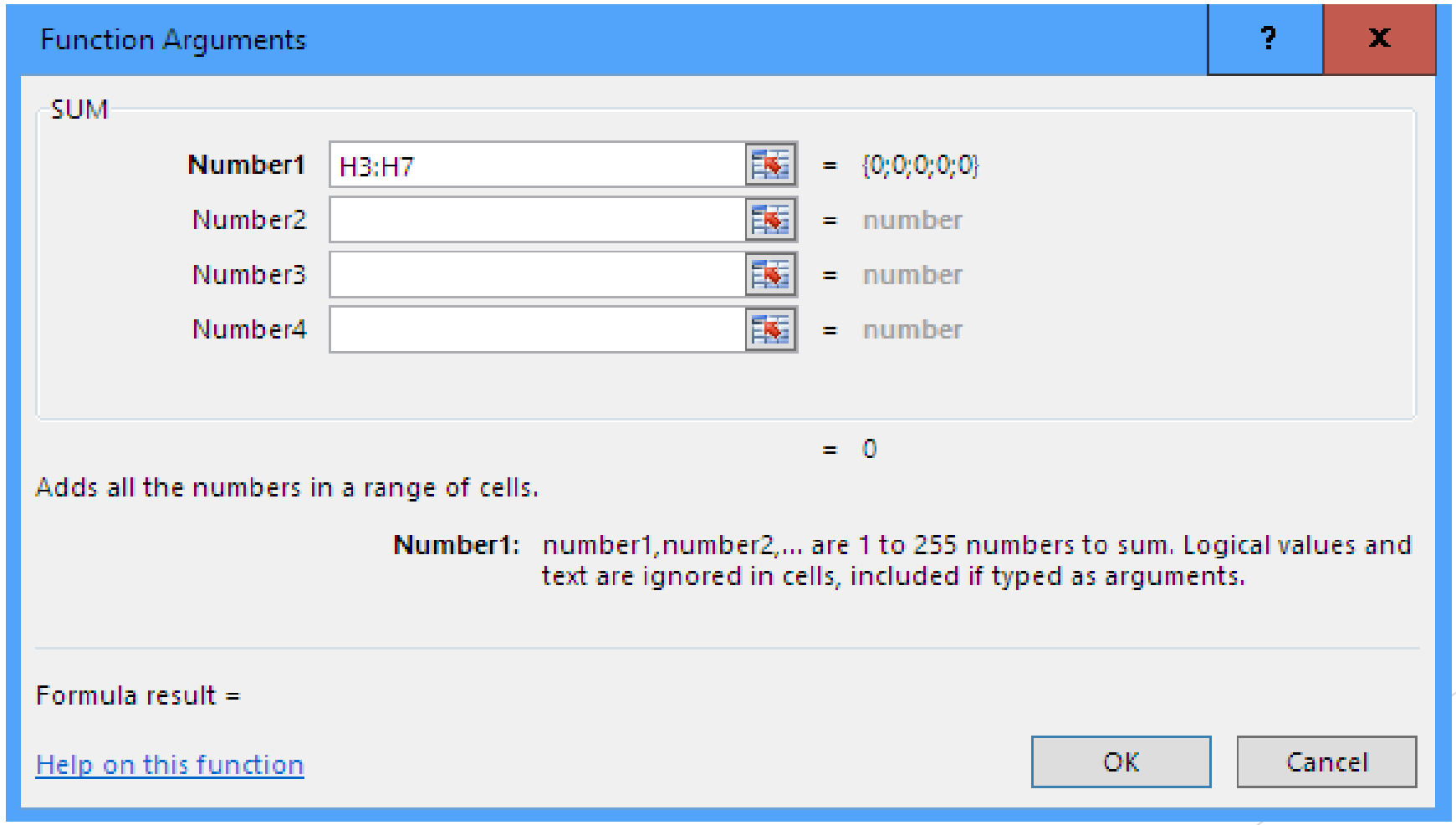
“IF” Function Arguments



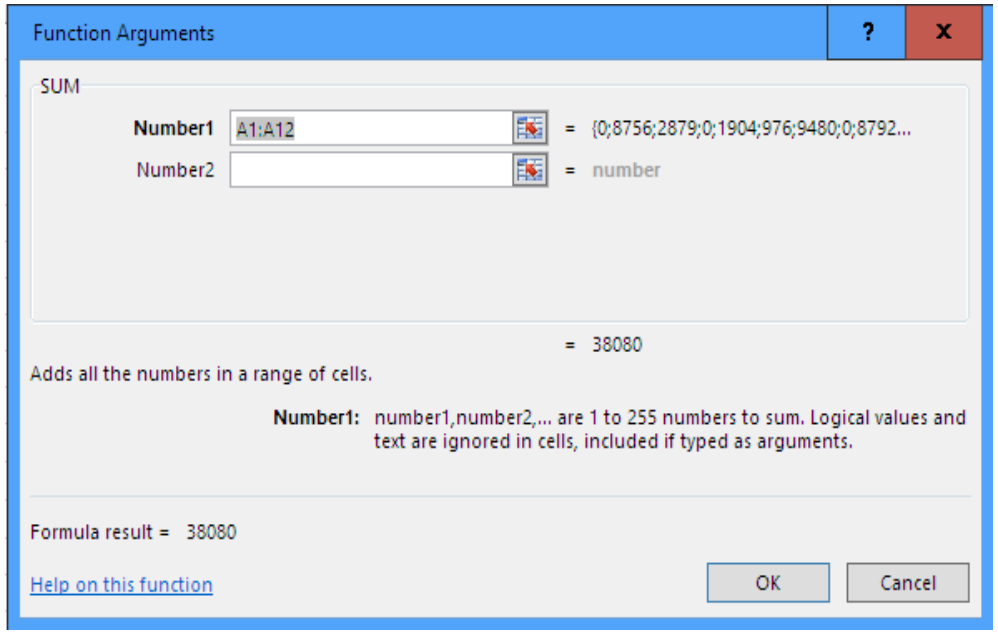
“IF” Function Arguments

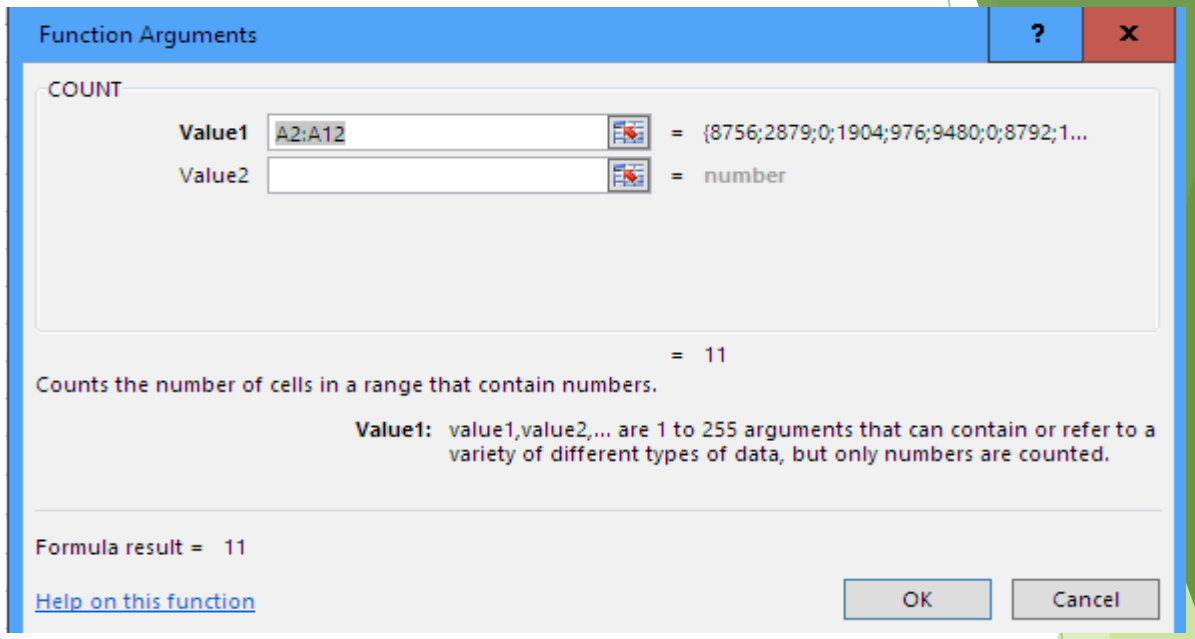


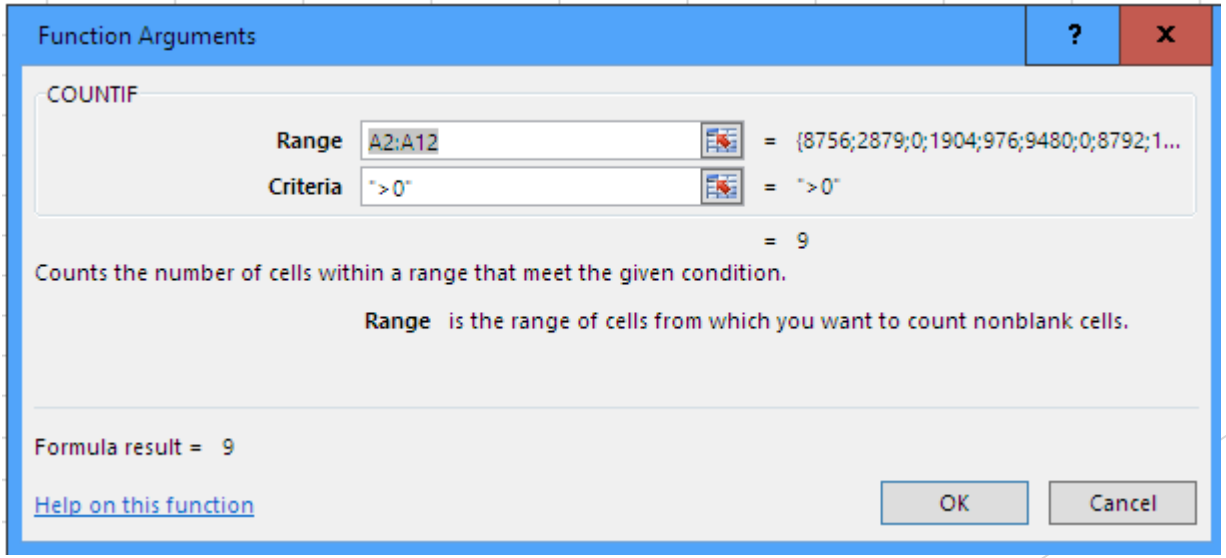
“Sum” & “Count "Function Arguments (+ variants)



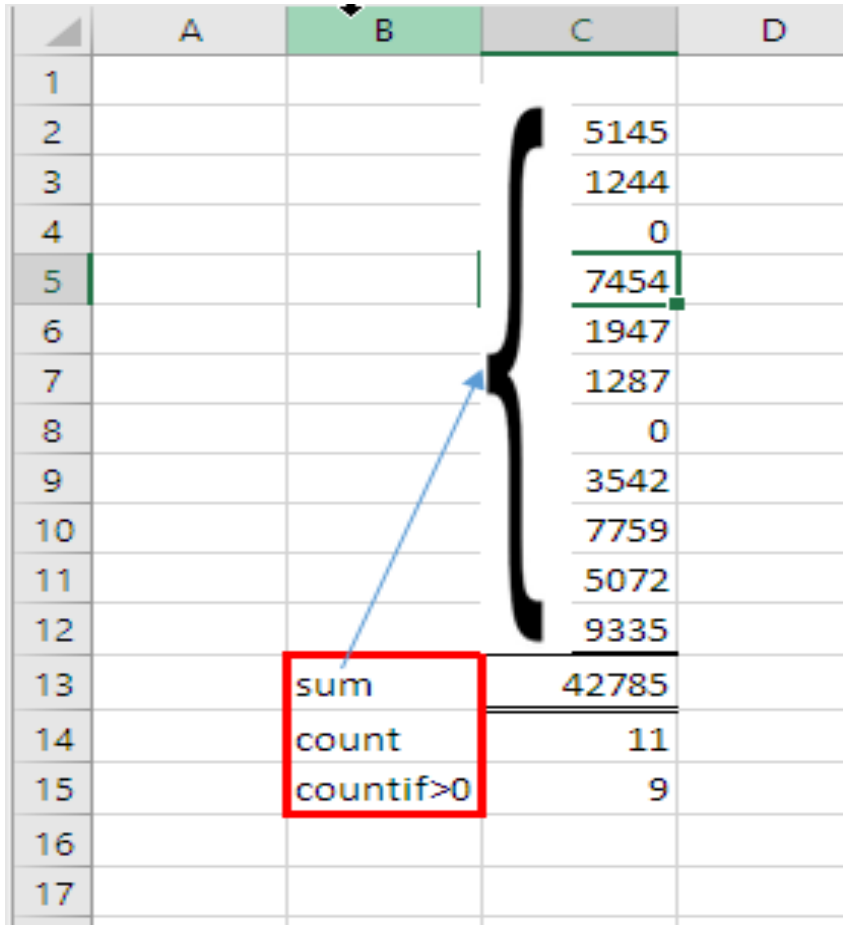
“Sum” & “Count "Function Arguments (+ variants)





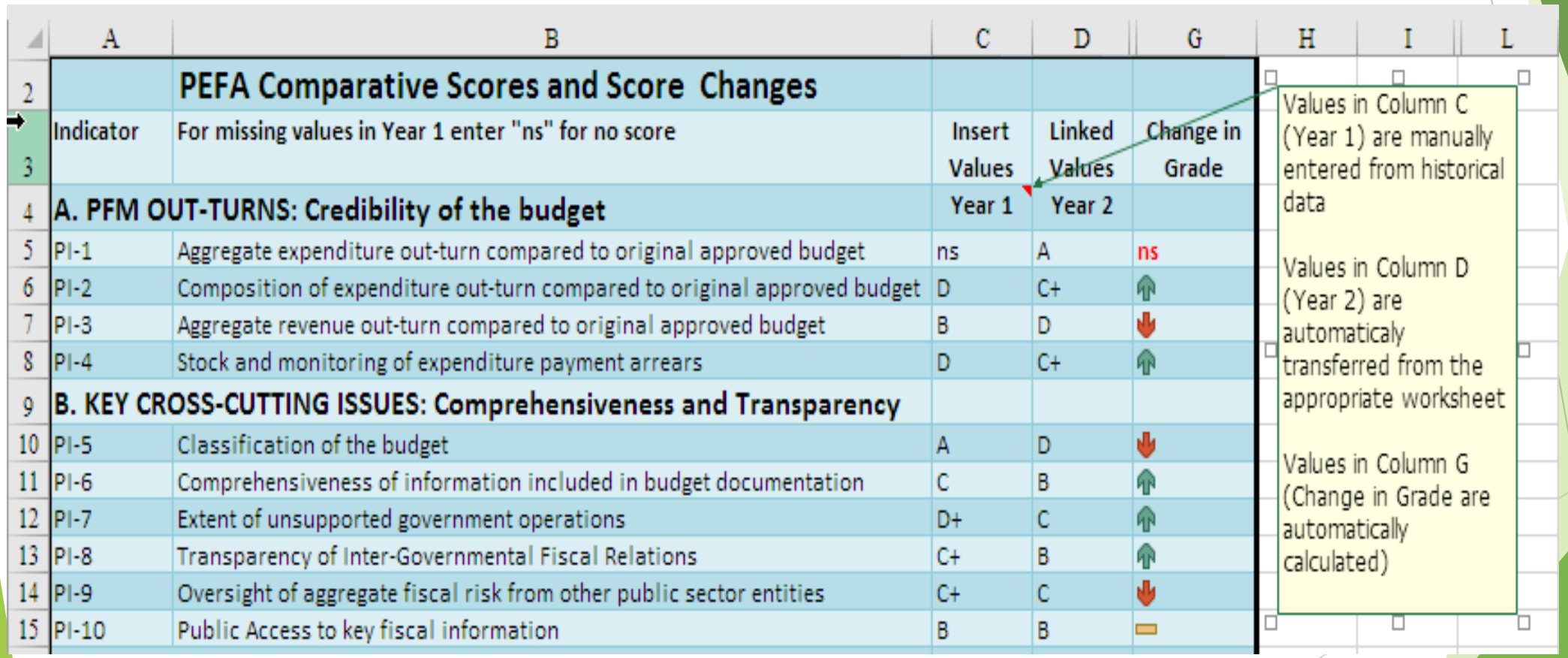


“Sum” & “Count "Function Arguments (+ variants)



	A	B	C	D
1				
2			5145	
3			1244	
4			0	
5			7454	
6			1947	
7			1287	
8			0	
9			3542	
10			7759	
11			5072	
12			9335	
13		sum	42785	
14		count	11	
15		countif>0	9	
16				
17				

Comparative Scoring Sheet



	A	B	C	D	G
2		**PEFA Comparative Scores and Score Changes**			
3	Indicator	For missing values in Year 1 enter "ns" for no score	Insert Values	Linked Values	Change in Grade
4	**A. PFM OUT-TURNS: Credibility of the budget**		Year 1	Year 2	
5	PI-1	Aggregate expenditure out-turn compared to original approved budget	ns	A	ns
6	PI-2	Composition of expenditure out-turn compared to original approved budget	D	C+	
7	PI-3	Aggregate revenue out-turn compared to original approved budget	B	D	
8	PI-4	Stock and monitoring of expenditure payment arrears	D	C+	
9	**B. KEY CROSS-CUTTING ISSUES: Comprehensiveness and Transparency**				
10	PI-5	Classification of the budget	A	D	
11	PI-6	Comprehensiveness of information included in budget documentation	C	B	
12	PI-7	Extent of unsupported government operations	D+	C	
13	PI-8	Transparency of Inter-Governmental Fiscal Relations	C+	B	
14	PI-9	Oversight of aggregate fiscal risk from other public sector entities	C+	C	
15	PI-10	Public Access to key fiscal information	B	B	

Values in Column C (Year 1) are manually entered from historical data

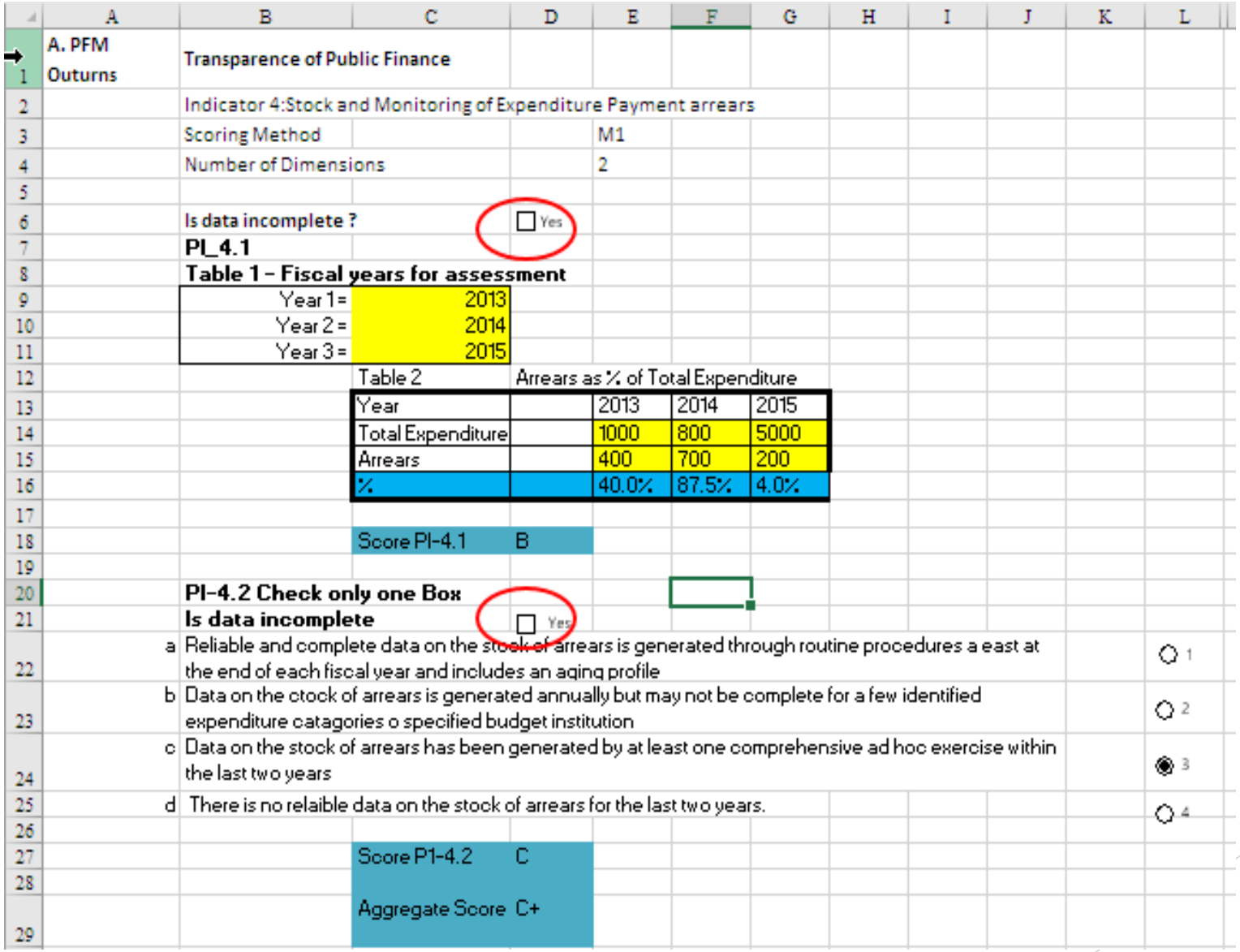
Values in Column D (Year 2) are automaticaly transferred from the appropriate worksheet

Values in Column G (Change in Grade are automatically calculated)

Example Sheet A – Narrative (indicator3a)

An accurate revenue forecast is a key input to the preparation of a credible budget. Optimistic revenue forecasts can lead to unjustifiably large expenditure allocations and to larger fiscal deficits should spending not be reduced in response to an under-realization of revenue. On the other hand, pessimism in the forecast can result in the proceeds of an over-realization being used for spending that has not been subjected to the scrutiny of the budget process. As the consequences of under-realization are more severe, especially in the short term, the criteria used to score this indicator allow comparatively more flexibility when assessing revenue over-realization.

Example Sheet B Calculation (4)

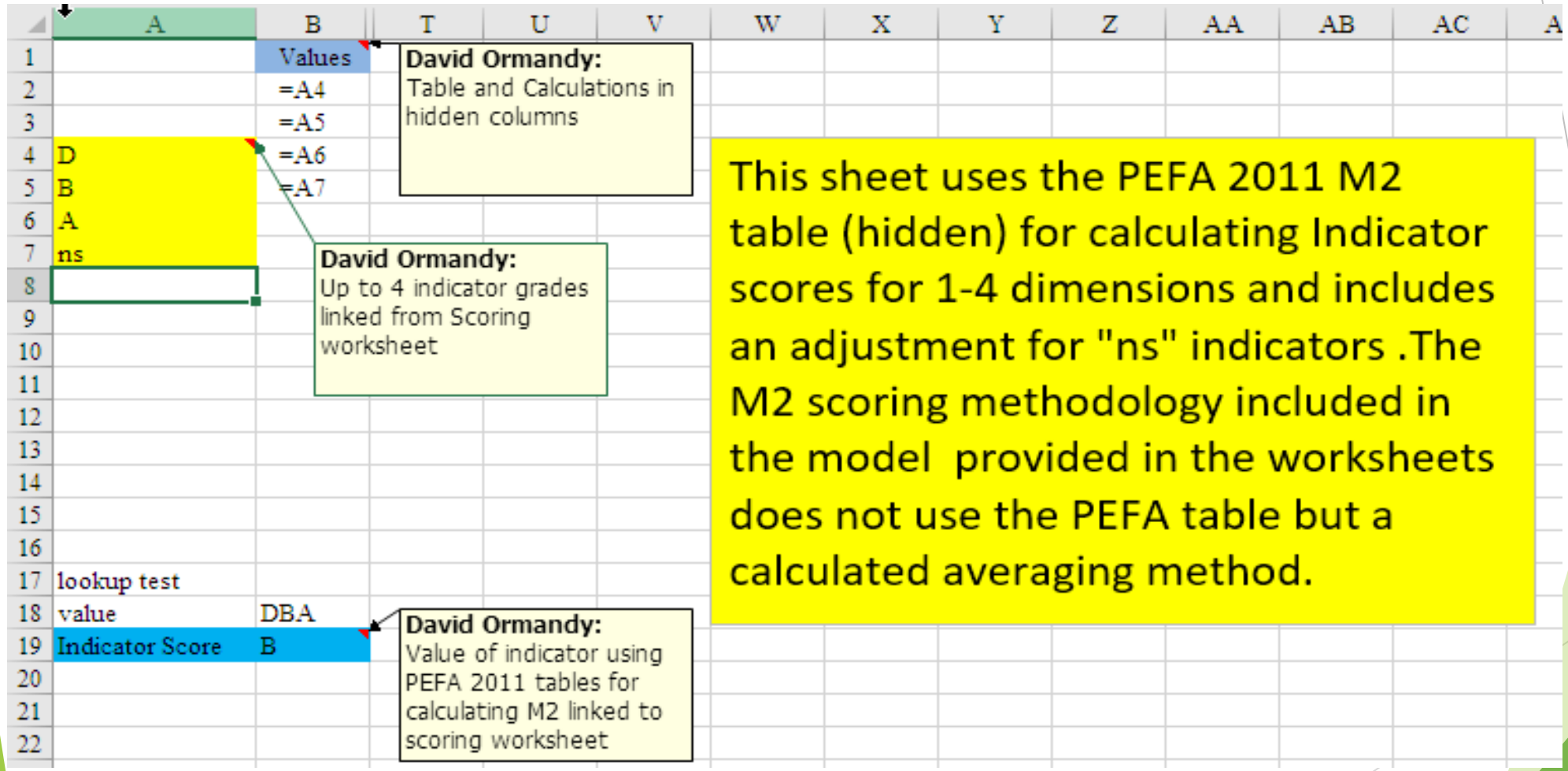


1	A. PFM Outurns	Transparence of Public Finance										
2		Indicator 4:Stock and Monitoring of Expenditure Payment arrears										
3		Scoring Method			M1							
4		Number of Dimensions			2							
5												
6		Is data incomplete ?		☐ Yes								
7		**PI_4.1**										
8		**Table 1 – Fiscal years for assessment**										
9			Year 1 =	2013								
10			Year 2 =	2014								
11			Year 3 =	2015								
12			Table 2	Arrears as % of Total Expenditure								
13			Year		2013	2014	2015					
14			Total Expenditure		1000	800	5000					
15			Arrears		400	700	200					
16			%		40.0%	87.5%	4.0%					
17												
18			Score PI-4.1	B								
19												
20		**PI-4.2 Check only one Box**										
21		**Is data incomplete**		☐ Yes								
22	a	Reliable and complete data on the stock of arrears is generated through routine procedures a east at the end of each fiscal year and includes an aging profile										○ 1
23	b	Data on the ctock of arrears is generated annually but may not be complete for a few identified expenditure catagories o specified budget institution										○ 2
24	c	Data on the stock of arrears has been generated by at least one comprehensive ad hoc exercise within the last two years										◉ 3
25	d	There is no relaible data on the stock of arrears for the last two years.										○ 4
26												
27			Score P1-4.2	C								
28												
29			Aggregate Score	C+								

Example Sheet Master Grading Sheet

	A	B	C	D	E	F	G	H
1		SCORING Indicators						
2	**1 Dimension Indicator**							
3								
4		Is Scoring Method M1 or M2 ?					M1	
5								
6		Single Dimensional Indicator					B	
7								
8		Overall Score					B	
9								
10								
11	**2 Dimensional Indicator**							
12								
13		Is Scoring Method M1 or M2 ?					M2	
14								
15		1st Dimension Indicator					C	
16								
17		2nd Dinension Indicator					A	
18								
19		Overall Score			M2		B	
20								
21					M1		C+	
22								
23	**3 Dimensional Indicator**							
24		Is Scoring Method M1 or M2 ?					M1	
25								
26		1st Dimension Indicator					NS	
27								
28		2nd Dinension Indicator					NS	
29								
30		3rd Dimension Indicator					B	
31								
32		Overall Score			M2		B	
33								
34					M1		B	

Example Sheet PEFA Grade Table



Detailed Examples from 2011 National PEFA

1. Indicator 3 - 1 Dimension based on data entry
2. Indicator 5 1 Dimension based on option buttons
3. Indicator 6 1 Dimension based on check boxes
4. Indicator 12 - 4 dimensions, M2 method, using option buttons
5. Indicator 19 – 4 dimensions , M2 method, using data entry, check boxes and option buttons

Indicator 3

- Similar to Indicators 1 and 2 Requires data entry and compares actual with expected results. The resulting grade is determined by the recent (3 year) variance between actual and expected amounts.

Indicator 5 Option Button

- Single dimension with option buttons

Indicator 6 Check Boxes

- Check Boxes with single dimension

Indicator 12 Multiple Form Tools

- Option buttons with three dimensions

Indicator 19 Multiple Form Tools

4 dimensions multiple tools, (data entry, check box and option buttons) and choice of scoring methodology using option buttons

Conclusion

- Methodology needs an update to PEFA 2016 and for Excel 2016 formulas (simplified “if” data entry)

- The format of PEFA scoring is such that once the use of four Excel tools and formulas are mastered for entries 3, 5, 6 12 and 19) adding additional indicators are easy to develop as are making changes to master score sheets.
- Use of the should promote more internal reviews of progress on PFM reform at national or sub-national levels.

Contacts and Links

- dormandy@gmail.com

DropBox Link to this presentation and Excel Workbooks for national and Sub national PEFA-

https://www.dropbox.com/sh/e2gchrrr7zp98bo/AACxDZ_JqtsrX03syqonN3aha?dl=0

- And , of course, the definitive - PEFA website