

Zurich, 15 May 2015

Statistics

Using consistency rules in subject-specific survey documents

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Rules based on subject-specific data model

1. Purpose

For technical reasons, there are no calculations in the data entry fields of subject-specific Excel survey documents. Therefore, consistency rules have been included in the Excel survey documents to help reporting institutions ensure that the data in their reports are consistent.

If XML is used as a delivery format, the consistency rules used in the Excel survey documents are for information purposes. It is also possible to import an XML report into an Excel survey document, thereby validating it using the integrated consistency rules.¹

This document outlines the structure, the meaning and the use of the rules included in the survey documents.

2. Structure

2.1. Errors and warnings in the Start sheet

The *Start* sheet summarises the number of errors and warnings in each sheet (cf. chart 1). If errors are indicated as soon as an empty file has been opened, these generally relate to data cells that should not be empty. Once data entry has been completed, there should no longer be any error reports. Warnings should be checked.

The reports will also be checked for consistency during processing at the SNB. Should errors or warnings be detected at the SNB, the report may be rejected and have to be resubmitted.

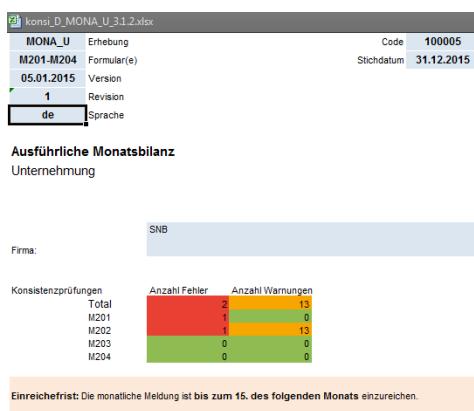


Chart 1

¹ See information at www.snb.ch, *Statistics/Surveys/Delivery formats /XML delivery formats*.

Rules based on subject-specific data model

By double-clicking the number of errors or warnings in the *Start* sheet, the user is taken to the relevant sheet.

Excel's reaction to a double click depends on how the Excel options have been set, and in particular on whether, in the *Advanced options* window, *Allow editing directly in cells* has been checked or not.

For the explanations in this guide, *Allow editing directly in cells* is unchecked (cf. chart 2). This is recommended when using this Excel survey document as it prevents consistency rules being changed unintentionally. Illustrations in this guide are based on Excel 2010.

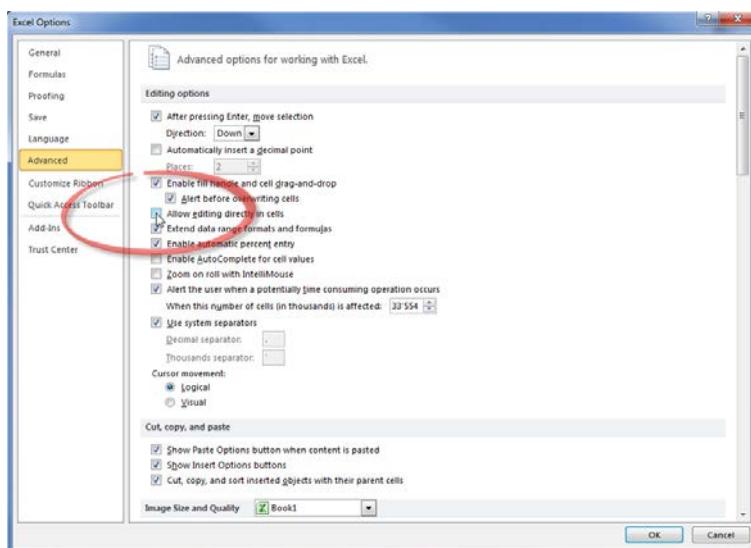


Chart 2: Unchecking Allow editing directly in cells.²

2.2. Consistency rules in form sheets

The number of errors and warnings is shown at the top left of every form sheet (cf. chart 3).

konsi_D_MONA_U_3.1.2.xlsx	
MONA_U	Erhebung
M201	Formular
100005	Code
31.12.2015	Stichtdatum
1	Anzahl Fehler
0	Anzahl Warungen

Chart 2

² Excel 2010 was used for this guide.

Rules based on subject-specific data model

Consistency rules within a form sheet – in relation to the data entry field – can be found in three places: to the right, below and diagonally to the bottom right (cf. chart 4).

- To the right of the entry field are rules which check the items within a row.
- Below the entry field are rules which check the items within a column.
- Diagonally to the bottom right of the entry field are other rules, e.g. rules which compare items from different sheets.

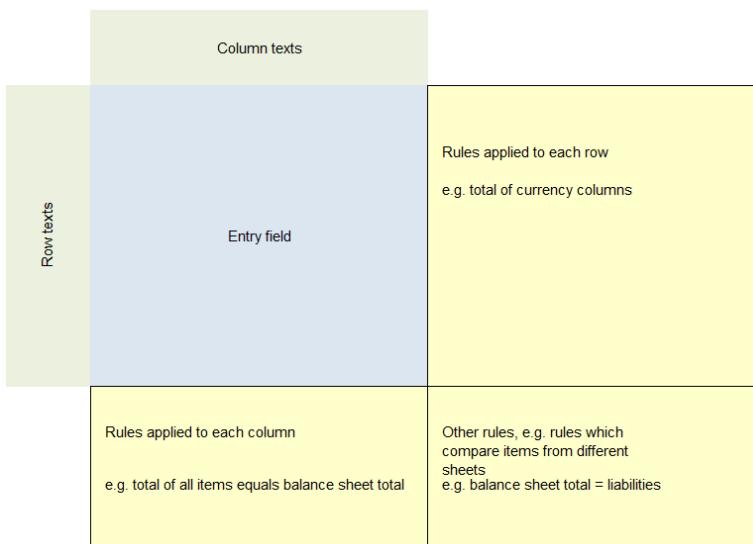


Chart 3: Arrangement of the rules within a form sheet.

During data entry, errors can occur which should disappear again once all data have been entered. Should there still be errors or warnings, you can click *ERROR* or *WARNING* (cf. chart 5). This will highlight the data entry fields to which the respective consistency rule applies (as long as they are all in the same sheet).

	Total	Sitze	Filialen	
			Total	davon: Vertretungen
	K	L	M	N
Zürich	21		10	
Bern	22			
Luzern	23			
Uri	24			
Schwyz	25			
Obwalden	26			
Nidwalden	27			

Chart 4: An error message will be generated when there is no figure under Total.

Alternatively, you can click the Editor row (cf. chart 6) and the items calculated will be displayed as well. This alternative is, however, not recommended, as formulas can be overwritten.

Rules based on subject-specific data model

SUMME		=WENN(K21=L21+M21;"OK";"K21: ERROR")
JAHR_U	Erhebung	Ausführliche Jahresendstatistik
J208	Formular	Unternehmung
XXXXXX	Code	Zahl der Geschäftsstellen
TT.MM.JJJJ	Stichdatum	
3	Anzahl Fehler	Anzahl
0	Anzahl Warnungen	

		Total	Sitze	Filialen	
				Total	davon: Vertretungen
		K	L	M	N
Zürich		21		10	
Bern		22			
Luzern		23			
Uri		24			
Schwyz		25			

Chart 5: By clicking the Editor row, affected items will be displayed.

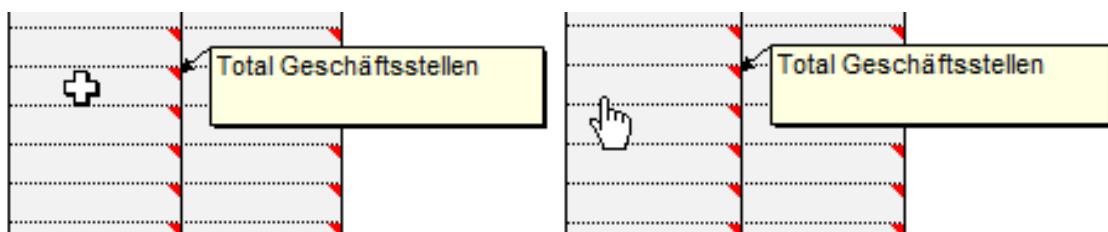


Chart 6: Displaying items used in a rule cell also works when there is no error message in the field. Make sure, however, to place the mouse to the left of the cell (the hand must be visible).

The corresponding rule will also be calculated in the *Validation* sheet (cf. 2.3).

To find out how a rule was calculated, go to the Excel Formulas tab, and select *Evaluate Formula* in the *Formula auditing* group (cf. chart 8). To use the other functions in the group, the worksheet needs to be *unprotected*.

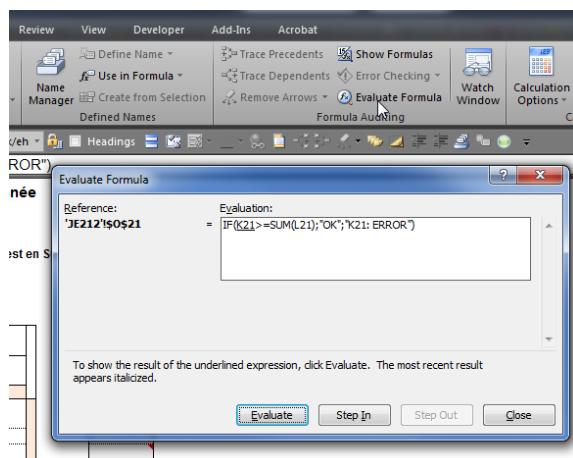


Chart 7: How to use Formula auditing.

Rules based on subject-specific data model

2.3. List of all the consistency rules in the *Validation sheet*

All the consistency rules in the Excel survey documents are listed again in the *Validation sheet*. In the upper left-hand corner is a summary of the errors and warnings for each form sheet. By double-clicking the cell that displays the number or errors (red) or warnings (orange) you can access the corresponding sheet.

In the lower part of the table all the rules are listed row by row. There is a hyperlink in the *Rule ID* column which leads to the corresponding sheet and displays the cells affected by the rule (provided that they are all in the same sheet).

The *Subject-specific rules* column defines items with subject-specific keys intended for those reporting data in both XML and Excel format.

The evaluation column displays the evaluation of the rule (*OK*, *ERROR* or *WARNING*).

To facilitate the display of errors or warnings, the sheet can be filtered.

The filter may need to be updated (reset) if the values in the sheet have been changed in the meantime.

The screenshot shows an Excel spreadsheet titled "Konsistenzprüfungen". The first section contains a summary of errors and warnings for various rules (J201, J202, J203, J204, J205, J206, J207, J208) across different categories (Total, ERROR, WARNING). The second section lists individual rules with their names, Excel formulas, descriptions, and evaluations. A filter dialog is open, showing options to filter by Rule ID, Name, Excel Regel, Fachliche Regel, and Auswertung. The 'ERROR' checkbox is selected. The detailed table includes rows for J201, J202, J203, J204, J205, J206, J207, J208, and a total row for J208.

A	B	C	D	E	F
1	Konsistenzprüfungen				
2					
3					
4	Total				
5	ERROR	5			
6	WARNING	2			
7					
8	J201				
9	ERROR	1			
10	WARNING	0			
11					
12	J202				
13	ERROR	1			
14	WARNING	0			
15					
16	J203				
17	ERROR	0			
18					
19	J204				
20	ERROR	0			
21					
22	J205				
23	ERROR	0			
24	WARNING	1			
25					
26	J206				
27	ERROR	0			
28					
29	J207				
30	ERROR	0			
31	WARNING	1			
32					
33	J208				
34	ERROR	3			
35					
36					
37	Tabelle	Regel-ID	Name	Excel-Regel	Fachliche Regel
801	J201	JAHR_U.K03	Total Aktiven, Total Inland und Ausland, Total Währung > 0	Y108>0	BIL.AKT.TOT(T,T)>0
1656	J202	JAHR_U.K18	Total Passiven, Total Inland und Ausland, Total Währung > 0	Y98>0	BIL.PAS.TOT(T,T)>0
2400	J208	JAHR_U.D18	Total Geschäftsstellen	K21=L21+M21	STK.GST(ZH,T)=STK.GST(ZH,SIT)+STK.GST(ZH,FIL)
2461	J208	JAHR_U.D20	Total Inland	L48=L47+SUM(L39,L36,L35,L22,L33,L32,L30,L45,L28,L38,L46,L23,L44,L27,L26,L37,L34,L31,L25,L40,L41,L24,L42,L43,L29,L21)(<=0.5)	STK.GST(T,SIT)=STK.GST(T,I,E,SIT)+SUM(STK.GST(T,G,SIT),STK.GST(T,BL,SIT),STK.GST(T,AR,SIT),STK.GST(T,BE,SIT),STK.GST(T,GE,SIT),STK.GST(T,GL,SIT),STK.GST(T,GR,SIT),STK.GST(T,JU,SIT),STK.GST(T,LU,SIT),STK.GST(T,NE,SIT),STK.GST(T,N,W,SIT),STK.GST(T,O,W,SIT),STK.GST(T,G,SIT),STK.GST(T,H,SIT),STK.GST(T,O,SIT),STK.GST(T,Z,SIT),STK.GST(T,T,SIT),STK.GST(T,I,SIT),STK.GST(T,R,SIT),STK.GST(T,D,SIT),STK.GST(V,SIT),STK.GST(ZG,SIT),STK.GST(ZH,SIT))(<=0.5)

Chart 8: Validation sheet and use of filter.