

# Claims Reserve Calculator

## Basic information

The Claims Reserve Calculator is a software tool developed in MS Excel. Its goal is to help actuaries with the process of claims reserving that is crucial especially for non-life insurance companies. We believe that this application will make your actuarial work **easier, more comfortable, faster** and **more complex**.

It is based on the analysis of the aggregated data expressed in the form of a development triangle and the extrapolation of the aggregated values to the future using variety of development factors.

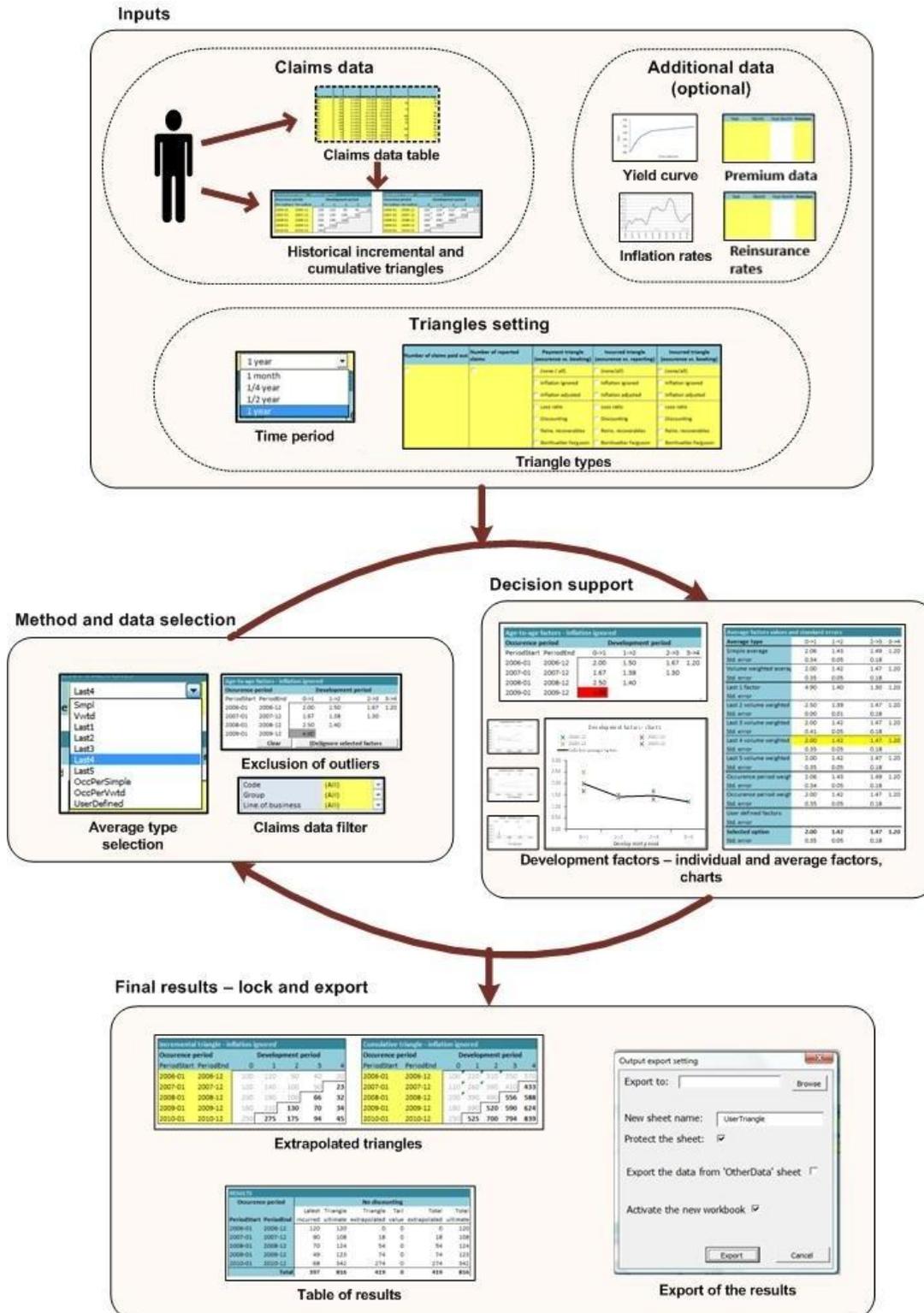
Its main functions are as follows:

- To **extract the appropriate data** from the claims data table and **arrange them in a form of development triangle**, according to the user's requirements. The customization consists mainly in the choice of:
  - the length of the triangle time period – 1 month, 1/4 year, 1/2 year, 1 year;
  - the triangle types to be calculated – 5 different methods of a data aggregation (Payment triangle – occurrence vs. booking, Incurred triangle – occurrence vs. reporting, Incurred triangle – occurrence vs. booking, Number of claims paid out triangle, Number of reported claims triangle).
- To calculate several variants of average development factors with their immediate application to the extrapolation of historical triangles.

Other useful functions of the application:

- inflation adjustment of the data;
- discounting of extrapolated values;
- loss ratio triangles calculation;
- calculation of reinsurance recoverables (as a percentage of claim payments);
- graphical representation of the individual development factors and residuals;
- identification of the extreme values of individual development;
- application of Bornhuetter-Ferguson method.

## Process flow diagram



Incremental triangle - inflation ignored		Cumulative triangle - inflation ignored	
Occurrence period	Development period	Occurrence period	Development period
PeriodStart	PeriodEnd	PeriodStart	PeriodEnd
2006-01	2006-12	0	1
2007-01	2007-12	100	2
2008-01	2008-12	150	3
2009-01	2009-12	200	4
2010-01	2010-12	275	5

Table of results						
Occurrence period	Development period	Label	Triangle	Triangle T&T	Total	Total
PeriodStart	PeriodEnd	occurred	extrapolated	value	extrapolated	ultimate
2006-01	2006-12	120	120	0	0	120
2007-01	2007-12	90	108	18	0	108
2008-01	2008-12	70	124	54	0	124
2009-01	2009-12	49	125	74	0	125
2010-01	2010-12	88	142	274	0	274
Total		387	619	419	0	619

Output export setting

Export to:  Browse

New sheet name:

Protect the sheet:

Export the data from 'OtherData' sheet:

Activate the new workbook:

Export Cancel