

# AKS

AKS (Actuarial Knowledge System) offers an effective solution for composing and calculating actuarial formulas for life and disability insurance. Actuarial factors, composed of internationally standardised actuarial symbols, can be calculated in the traditional way, based on life tables, or based on the calculation technique with Markov chains. AKS has been developed as component based on the service oriented architecture.

## Actuarial business tool

Actuarial experts often use Microsoft® Excel, in which each person manages his/her own (programmed) formulas. The link between AKS and Excel enables users to directly call formulas defined within AKS in Excel, in which one can use f.e. assumptions and interest rates in a flexible way. Through this, making prognoses and other calculations in Excel is simplified. Also the uniformity and controllability of the formulas have been optimised.

## Actuarial component

AKS can also be integrated as a component with existing or newly to be developed information systems. This way the actuarial expert can influence actuarial calculations by operational information systems.

## AKS

- fits the way of working and thinking of the actuarial expert
- manages actuarial formulas for various applications in one place
- reduces software maintenance; no need to integrate actuarial formulas within the programming code
- increases flexibility, shortens Time-to-Market
- facilitates application/spreadsheet development through integration in Microsoft® Office
- is a powerful tool for the actuarial expert.

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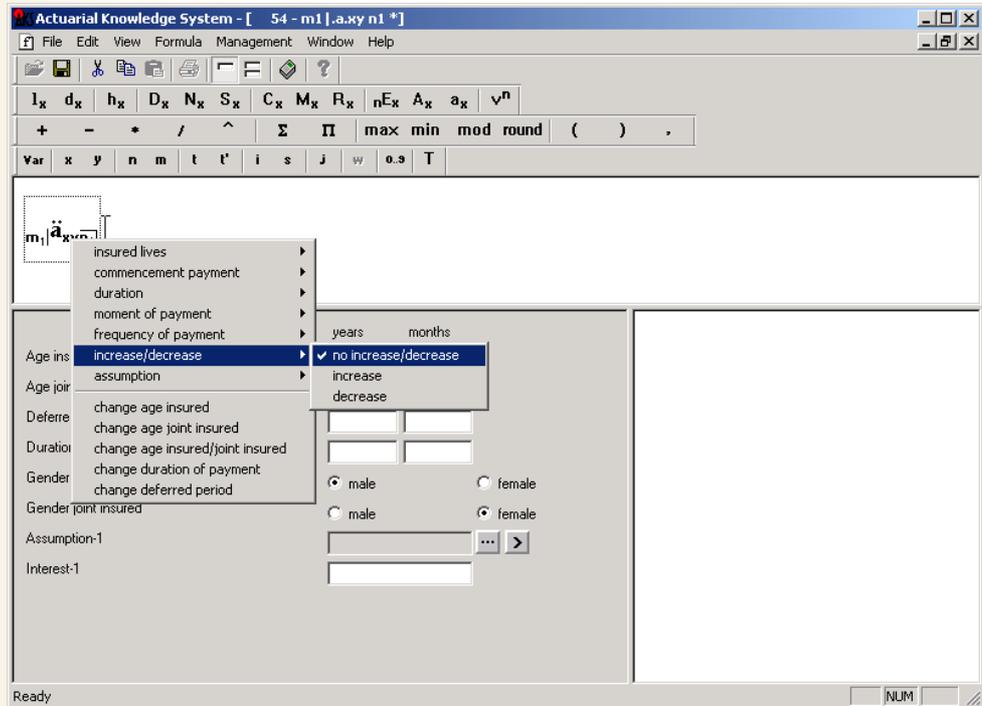
# Composing and calculation of formulas

Actuarial symbols, operators, statistical data and constants are available to compose formulas. Due to the graphical interface these symbols are presented as expected by the actuarial expert. Using mouse or keyboard actuarial symbols and operators can be coupled composing a complete actuarial formula.

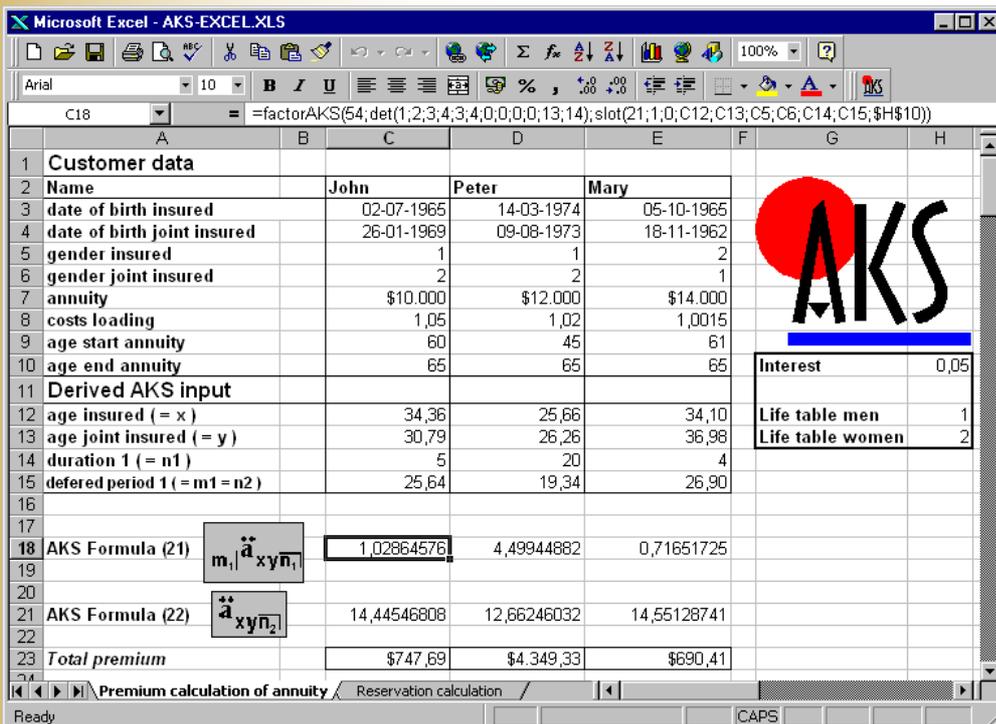
Each symbol can easily be extended with all relevant actuarial properties as insured persons, moment of payment, allowance period and start date of risk. A gross formula can be composed by adding surcharges to a net formula, which itself can contain net formulas.

Composed formulas are saved in a central database and are directly available for calculations.

The formulas available in the formula database are conveniently arranged in a tree structure. From here a formula can be selected for calculation. The formula appears on screen with a number of fields for the required variables. On top a choice can be made to calculate one or many results. Immediately the result is shown.



# Execute actuarial calculations with Excel



Within Excel an AKS add-in can be used.

Through this add-in an AKS-formula can be used in Excel instead of a 'programmed' formula. Calculating pensions Excel will deliver input data from different cells to AKS for results. Upon modification of one or more cells within Excel AKS will deliver the required results immediately.