



# Welcome to the jungle – the complexity of end-user computing

Welcome to the Excel jungle. In this article we take a closer look at the implications of end-user computing (EUC) and how to keep it manageable.

As auditors, we determine the reliability of the data (flow) from the initiation of an insurance policy through to the presentation of the financial impact in the external reporting. For this, we start by understanding the process steps and how the insurer safeguards the reliability of data. We observe that, from the smallest pension fund to the largest insurance company (collectively hereafter: the insurers), all apply some kind of EUC in their processes.

With EUC, we mean that the user is in a position to manipulate data in some form outside the initially designated systems and processes. Excel is the popular EUC choice as it is a tool that offers agility and is something everyone is familiar and comfortable with and has access to.

## WHY IS EUC APPLIED SO FREQUENTLY?

We understand there are several reasons, including:

- Previously validated calculation models are not always able to process all policy conditions adequately, especially when product features are changed or when an insurer acquires a new portfolio.
- Insurers often use multiple systems for administrating their different products. These core systems often do not generate identical outputs that, subsequently, need to be harmonized.
- Calculating sensitivities and ‘what-if’ scenarios can be done quickly in Excel.
- If an issue is identified, users want to solve it as soon as possible. EUC (Excel) creates the flexibility and opportunity to do so.
- Users apply their own EUC model to perform a check on automated calculations.
- Excel is an output format that can easily be shared with other parties.

EUC ranges from very basic (harmonizing data columns and reporting formats) to complex programming (sensitivities & ‘what-if’ scenarios). We mainly see EUC in the actuarial domain regarding the assumption setting: usually an annual process that requires ad hoc changes to

reflect new insights and for the calculation of technical provisions. We also observe EUC in the financial reporting process, such as for the disclosure of sensitivities, creating a bridge between (IFRS) equity & provisions and Solvency II Own Funds & Best Estimate provisions, and prudential reporting.

## THE PARADOX, RISKS AND CHALLENGES

The paradox is that the EUC user may be convinced the identified problem is solved, whereas the business owner of the process sees a number of (other) problems / risks being created when the EUC is put in place.

The inherent risk of error is higher due the fact that EUC falls outside the standard process. Often we observe that EUC is insufficiently documented and evidenced and is not validated by a second person (four-eye principle), which further increases the risk of error. Have the right inputs been applied? Does the EUC work as intended? Is it a frozen EUC or is there ongoing development? Are the interdependencies with other systems/ process steps known? Is the output correctly brought forward to the next step in the process? These are all questions that should be considered.

EUC solutions often result in extensive reperformance by the 2nd/3rd line and the external auditor to verify the correctness of the input- and output data & calculations. Our personal experiences reveal that on multiple occasions, incomplete or outdated data sets were applied in EUC models, leading to incorrect outcomes. In these instances, this was neither identified by the user performing the EUC nor by the insurer.

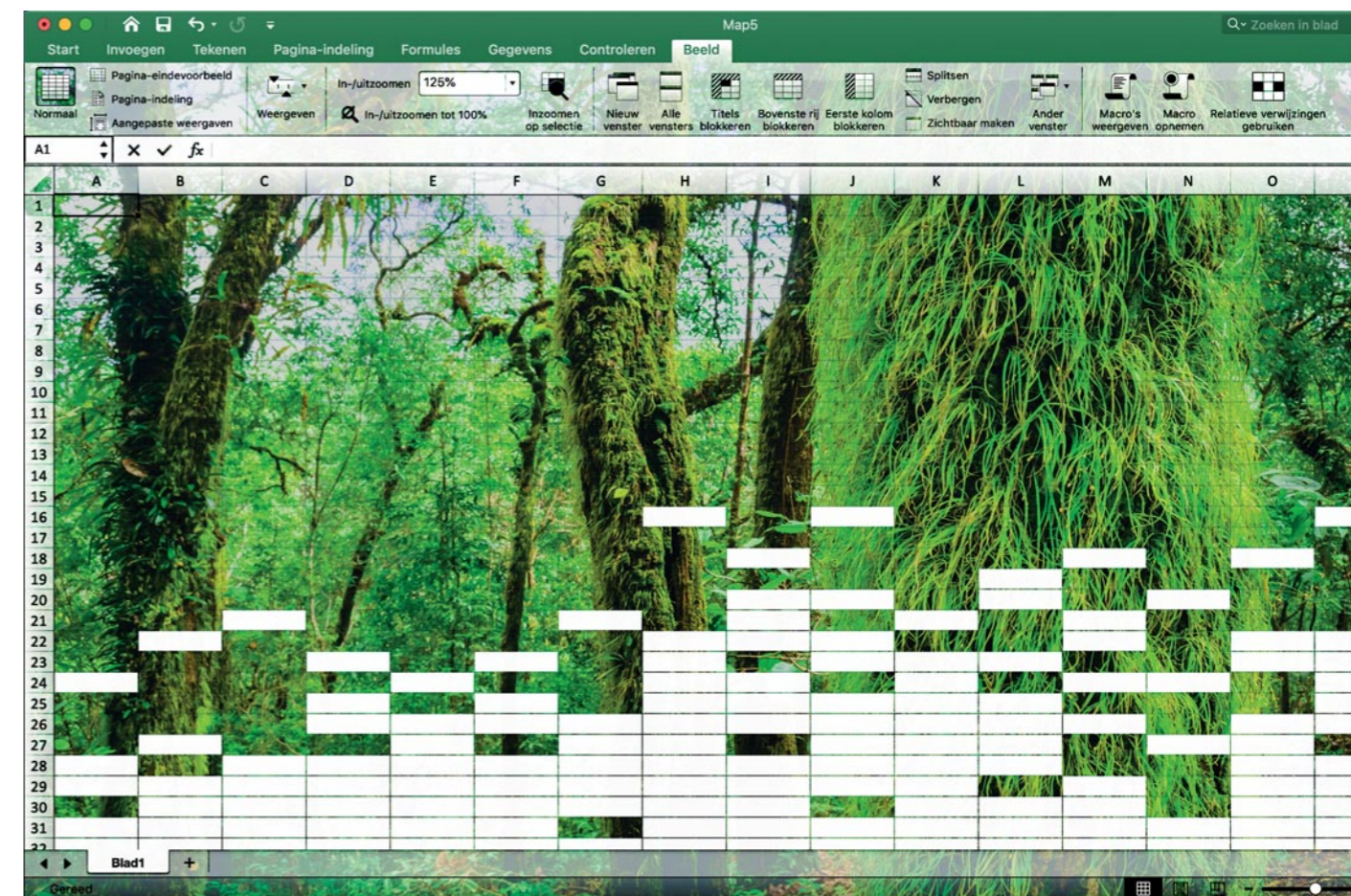
EUC is also a challenge for the actuarial function holder (AFH). A response we observe, especially at smaller insurers, is that the AFH makes a separate calculation via an EUC and compares the outcome to that of the first line. This is regularly considered to be easier than to validate the effectiveness of the calculation process. Although this can generate the desired level of confidence, doing things twice is often not the most (cost) effective way.

Also EUC can create compliance risks regarding data accessibility, privacy & security controls, as it can extract information from protected databases into an unprotected environment.

Lastly, we also experienced that it can lead to a key person risk, as the insurer becomes dependent on the knowledge of the user who has developed the EUC.

## WHEN ARE EUC SOLUTIONS LIKELY TO BE IMPLEMENTED?

EUC is likely to occur in new or changing processes. The reason for this is that when an insurer sets up a new process (including migrations and acquisitions), the IT-solution is often not yet available (internally or in the market) and follows after the process has to be run for the first time. An EUC is then used as a temporary solution. Another reason can be that a user identifies a shortcoming in the process and wants to solve it pragmatically.



For example, we observed new EUC solutions during the implementation of Solvency II in 2016. At that time various best-estimate and SCR calculations were performed via workarounds. Over the last years these workarounds have step-by-step been incorporated into the (governed) model landscape and as a result the risk of errors has decreased. Still, we continue to observe EUC being present in the Solvency II processes, including the assumption setting and data flows between policy administration, best-estimate calculation and reporting.

When the temporary EUC solution generates the desired outcome, the sense of urgency for a more governed and embedded solution reduces significantly. Especially in view of the costs and time it will take insurers to fully embed certain solutions into their standard process and systems.

Currently, the (IFRS part of the) insurance community is designing and implementing IFRS 17. As a lot of elements of IFRS 17 are new territory, including determining of methodologies, defining data requirements and creating processes. We have already observed new (EUC) workarounds being put in place, some of them based on still present Solvency II EUC solutions.

## THE JUNGLE IS LIKELY TO STAY AND CAN BE VERY PRECIOUS IF MANAGED PROPERLY

EUC, and with that Excel, is likely to continue to play a crucial role in calculation and reporting processes, and for valid reasons. EUC offers insurers the flexibility to resolve issues and have agility when needed.

We think it is important that the insurer is aware of the EUC solutions that are being developed and applied in the processes. The insurer

should have an EUC policy in place to safeguard which development, documentation and internal review requirements have to be met before an EUC can be implemented. Advisably, it is important to create clear model documentation and user guidance to mitigate key person risk and ensure that other people can obtain knowledge on how the EUC is designed and operates.

Once the EUC is in operation, it is important that there is a periodic assessment of the purpose and model validation of the EUC. Arrange a four-eye principle with visible documentation of the checks performed: has the right data has been used, has the data been entered correctly into the EUC / Excel spreadsheet and have the outcomes been approved? These checks should be performed and documented each time the EUC is applied.

The strength of EUC is that it creates agility, which is exactly what you need in order to survive in the jungle. If insurers adhere to the above, the jungle can be very precious. ■

Drs. M.S. Kasander RA (left) and mr. drs. J.N. Vos are both audit partner at KPMG Accountants.



This article is written in their personal capacity.