How reliable are your financial models?

Ask us – free model review voucher inside
Financial models are used in many firms to underpin management decisions with significant financial impact. However, such financial models do not always work as expected. Quite frequently they contain material errors. A funny cartoon and a high-impact example of such a spreadsheet error are highlighted here.

Research is not immune to coding errors

In 2010 Reinhart and Rogoff released a research paper, concluding that GDP growth rates for countries with public debt in excess of 90% of GDP are roughly 1% lower than for other countries. This has been one of the most cited studies in this debate. After unsuccessfully trying to replicate the results a graduate student reached out to Reinhart and Rogoff who were willing to share their data spreadsheet (built in Excel).

While examining the data spreadsheet, the graduate student spotted a coding error in the data spreadsheet as depicted in overleaf (i.e. an average formula did not include all data points).

Upon eliminating the coding error the claimed relationship between debt-to-GDP level and economic growth was not supported by the data anymore.

**Challenge**

| Formula error, the sum does not include the full range |

**Our ACE* approach**

* Analyze, Create, Enhance

Our software spots such errors and many more

Source: http://www.nextnewdeal.net/rortybomb/researchers-finally-replicated-reinhart-rogoff-and-there-are-serious-problems
Our approach enables to swiftly identify potential model errors

EY ACE four step approach

1. Analytic/Output review
   - Focused on sense-checking the results as well as assessing whether the model produces the answers needed
   - Includes logical checks of the results as well as actively looking for unusual results
   - Generally considered to be a top down approach to model reviewing

2. Code review
   - Focused on line-by-line review of the spreadsheet calculations and formulae
   - Generally considered to be the backbone of financial model reviews and a bottom up approach to model reviewing

3. Review software
   - EY applies a proprietary solution called ACE*, which allows for an efficient process of verifying all calculations, formulas, cell links and macros within a financial model
   - Among other functions ACE offers so called model maps that highlight inconsistent and erroneous formulae, blank references, incomplete sums and external links

4. Communication/Reporting
   - Comprehensive communication of review findings and best practice hints in a list of findings
   - Final work product is an EY opinion letter or an EY memorandum on your financial model

* Analyze, Create, Enhance
“The example above shows there is an increasing need for diligent reviews of financial models.”