

Model behaviour

Tested financial models should be top of a company's priority list, says Stephen Aldridge from Numeritas

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At the centre of PPP projects and many other deals, is a financial model that represents the financial rationale for the deal. The model is key to the deal and regrettably is often the cause of much grief for all parties involved.

Problems with financial models may be attributed to the modeller, through lack of experience or training, but the responsibility really lies with management, and is due to the lack of a policy framework for modelling. Few other critical activities are performed with as little rigour or quality assurance process.

Increasingly, financial modelling has the attention of senior management, who are recognising the key role that the model plays in a successful deal. Some have put in place a framework to properly manage the modelling process; they no longer treat this as a necessary evil, but as an area that can make the difference between a winning bid and an embarrassment, or worse, a financial loss.

Successfully managing the modelling function requires commitment on a number of levels:

- The corporate level, where policies are formulated and disseminated
- The management level at which the decision is made
- The functional level at which competencies are assessed and developed
- The individual level at which the skills are developed (Figure 1)

PFI and PPP models require substantial investment, generally represent long term contracts and deal with significant revenue and capital expenditure. A great deal of time and knowledge are invested in the model, with the aim of producing a winning bid and enabling post contract monitoring. The time taken to code the formulae in the model represents only a fraction of the total time needed if the entire process is to be a success. A decision made using a model can fall down in a number of ways:

- The model logic can be flawed.
- The model can be populated with poor assumptions.
- The interpretation of the model is misguided (often the result of poor documentation about the assumptions).

If your organisation has processes and procedures in place to avoid the occurrence of the above flaws, you are unfortunately in the minority. If you are among the many companies who are risking embarrassment or financial loss resulting from a decision based on an inadequate modelling process, there are a number of actions you can take to manage your risk:

Corporate level

Firstly, recognise the importance of modelling and its impact on decision making. As a supplier of modelling services, I see many companies who consider the investment in a proper process and

in developing skilled modellers to be unnecessary and expensive. But consider the cost of not making this investment; there are plenty of examples of modelling error having caused losses worth millions of pounds, many of which are catalogued at www.eusprig.org.

A board director should be ultimately responsible for financial modelling, which in many companies, will be the finance director. But for companies in the PPP arena, there may be a more appropriate champion, such as a bid director or business development director. Whichever director is recognised as being responsible for modelling should identify the reasons the organisation builds models and determine which of these reasons are mission critical or may influence material decisions.

The director responsible for modelling cannot hope to monitor every use of a spreadsheet within the organisation, so a framework needs to be put in place. This will ensure that critical modelling activity is monitored and controlled at the management level. The framework should also allow managers to identify critical models and should specify how to manage the risk around them. Important ingredients in such a framework are processes and procedures that allow management to control the use of models, management and development of the skills of staff and the requirements for review of financial models.

Management level

The management level is where the responsibility falls for identifying which ‘models’, from the greater range of spreadsheet activity are considered critical. There are two aspects to this; the purpose of each model and the materiality of the decisions it supports. One approach is to look at the decisions taken in the organisation at each level and then to find the spreadsheets or models which support those decisions. These may well be fed by other spreadsheets or data sources. It is possible to identify a hierarchy of all such models, which are supporting decisions.

Our next concern is which of these may have a material impact. The framework should set thresholds appropriate to the organisation’s size to decide what degree of scrutiny each of the decision-supporting models require. In this way we can reduce the critical models to a relatively small number. Appropriate levels of review can then be performed on models, consistent with their criticality and materiality.

There is substantial evidence that the risk of error in models is reduced by independently reviewing them and correcting errors found. The extent of review activity may vary from a ‘sense check’ of the numbers to a full cell by cell review, or even the building of a parallel model to validate the original. The professional financial modelling community has developed techniques which help to minimise the risk of errors; whilst there is no widely recognised standard, there is broad agreement on what many of the good practice techniques are. If a modelling standard, incorporating these techniques, has been defined and adopted, it is possible to assess the structure of the model against the standard to identify risk areas. numeritas has recently launched the ‘Structural Integrity Report’ (SIR) which provides a fixed cost assessment of how a model complies with such a standard and while this does not check the model logic, it will highlight practices that are known to cause errors.

Modelling will be done by many different people

within an organisation, and it is important to develop their skills and to ensure that an individual is competent for a particular modelling task. Managing the development of skilled modellers should be a significant element in an organisation’s modelling policy. Some organisations have a central resource pool or ‘modelling community’ to promote good practice.

There is an unfortunate view in many organisations that financial modelling is something to be undertaken by junior staff. This view fosters the belief that after ‘serving time’ as a modeller, one should progress to other ‘more valuable’ aspects of deal making. However, financial modelling is often a key determinant in pricing PFI contracts. Surely then, financial modelling deserves significant management attention and this in turn should provide the potential for a career path for talented modellers who wish to progress, but to maintain a significant modelling content in their role.

Individual Level

At this level, there is usually great enthusiasm for modelling and for acquiring skills. Most training available in this arena focuses on either Excel skills or finance and accounting, but few teach the techniques needed to reduce risk in building financial models. Modellers should attend a training course and should also be encouraged to share knowledge and experience with other modellers in the organisation. Regular review of their models by suitably qualified and experienced professionals will provide feedback that can help to develop their skills.

So far, we have considered financial models in terms of their criticality and materiality, the skills of the staff who build them and how they should be reviewed. However the model is only as good as its input data. It is important that the model builder should not work in isolation, and that subject matter experts within the organisation are properly engaged in providing assumptions and data to drive the model. This typically requires significant project management skills to ensure that these experts or ‘data owners’ devote enough time to the modelling process.

Conclusion

There have been several attempts to replace the spreadsheet as a planning tool, but it remains ubiquitous because of its flexibility and ease of use. To reduce the risk of error, the directors of organisations that use modelling for critical decisions can benefit from a corporate level policy to put financial modelling on a more professional footing. ■

Figure 1: Multi-level modelling commitment

