

Quantitative analysis and portfolio risk modelling

Dynamic Financial Analysis (DFA) is an essential component of proactive risk management and provides the CFO with an enhanced understanding of their company's risk exposure. Using an advanced mathematical simulation, JLT models your business' risk profile to identify the probabilities of suffering a potential credit default loss based on key parameters, fundamental assumptions and derived payout schedules.

The reports are tailored to identify the contribution of the individual elements within the portfolio as well as the incremental change associated with taking on, or laying off, additional risk.

JLT's in-house actuaries and quantitative analysts can develop a bespoke DFA tool based on your business objectives, requirements and available data. A modelling consultancy

project performed by JLT can operate in two ways we can either develop and deliver a working model which is then operated by you with JLT providing appropriate training, support and updates, or we can develop the model and perform the analysis on a regular basis on your behalf.

The model is tested against a basket of exposure. To date such exercises have been found to be 98% accurate.

Typical applications of the model include:

- Quantitative analysis of current risk management operations
- Optimisation/identification of structured insurance programmes
- Modelling and allocating capital between risk classes
- Assessing future solvency from the viewpoint of regulators, rating agencies and investors.



CASE STUDY

Calculating maximum probable loss for a chemical manufacturer

Using industry claims data and a portfolio-based "value at risk" analysis, JLT provided a global chemical manufacturer with an accurate model of its Maximum Probable Loss exposure. The result was a political risk profile organised by type of risk, country and region including quantitative data identifying how much the firm or project could lose from exposure to specific political and trade credit risks. The data provided the information to construct a balanced portfolio maximising risk and return.