

TCM
CAPITAL MODEL

**Enabling better
business decisions**



Tyche
FINANCIAL MODELLING

Tyche Capital Model

Background

Capital modelling is recognised as a core part of effective risk management. It helps insurance companies make the most efficient use of capital and optimise their portfolio.

A mature capital modelling function can be integrated into many strategic areas of the business such as planning, pricing and performance management. But it also needs to be dynamic enough to keep up with the business' changing operating environment and risk profile. Regulatory pressure such as Solvency II has put additional focus on the robustness and integration of firms' capital modelling capabilities.

Developing and maintaining such modelling capabilities is a material investment and it is vital that the right tools are used.

The Tyche Capital Model (TCM) is a capital model built using the Tyche modelling platform. It contains a suite of pre-built capital model functionality that can be used "out of the box" or to form the basis of a customized model implementation. TCM allows a general insurance company to forecast its performance into the future using Monte Carlo simulation, taking account of all material components of the business' risk profile.

TCM has been built to support businesses in their use of the model for:

- Setting capital using a full Internal Model implementation under Solvency II
- Forward Looking Assessment Of Own Risk (FLAOR),
- Internal economic capital and risk profile assessment,
- Capital allocation and risk-adjusted performance measurement
- Business planning
- Reinsurance analysis

Prebuilt calculation modules in Tyche

Flexible model design allows a wide range of risk profiles to be modelled
Comprehensively tested and fully documented
Extremely fast, making optimal use of Tyche's processing speed
Modular design allows easy reuse and customisation of code

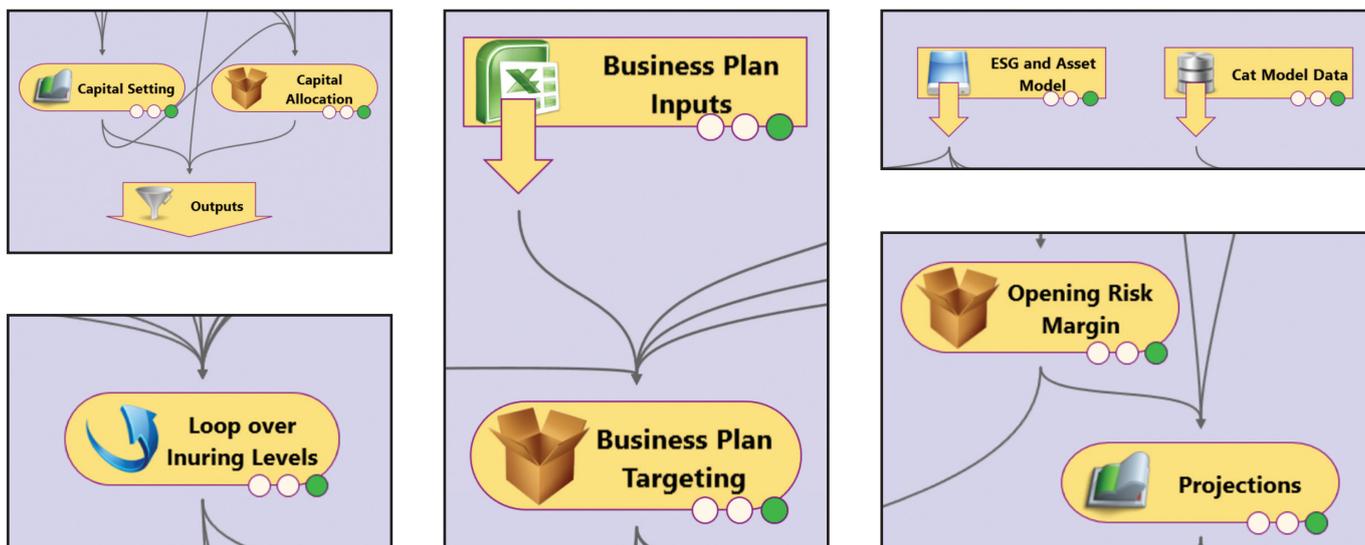
Workflow tools to help calibrate, run and use the model

Comprehensive suite of reporting dashboards and results storage
Control panel for automating and batching runs for production or testing
Easy integration with data systems with automated data flow
Business planning support and scenario testing

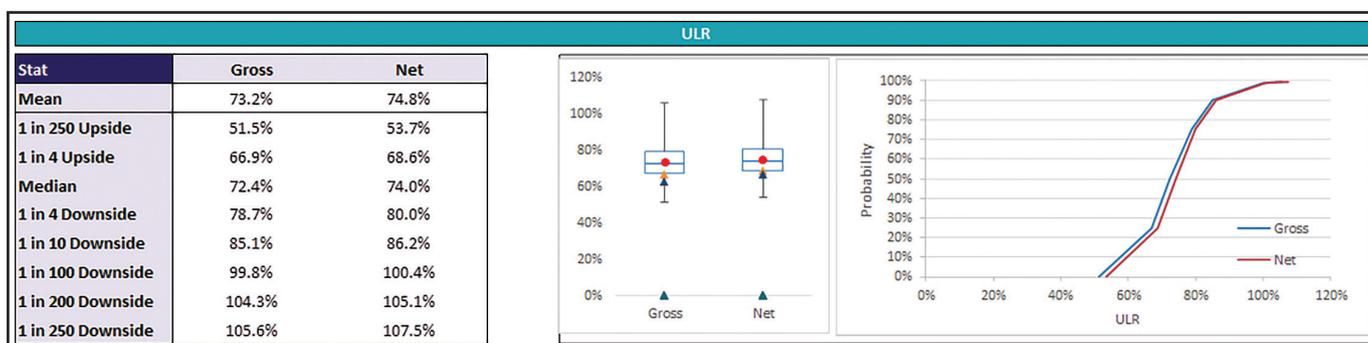
Training, Development and Support

Workflow tools allows in-house team to be self-sufficient
Ongoing development of TCM to provide additional features and improvements
Experienced capital modelling consultants

Key building blocks, easily accessible from Tyche's modular Flowgram design



Reports and dashboards, presenting key risk metrics



Key Features

TCM is rapid to set up and easy to maintain. Its dynamic data input mechanism and parametric model design makes it easy to update the model in line with changes in risk profile such as adding a class or moving forward a year.

- Runs on a wide range of hardware with best-in-market performance
- Can be used for a standalone entity capital model or a complete group model with intragroup reinsurance arrangements
- Extremely flexible outwards reinsurance modelling allowing for arbitrary inuring structures and complex contract features
- Fully transparent, customisable and extendable – all written in Tyche's easy to use T# language
- Easily integrated with source data formats such as SQL, Excel, CSV for easy linking of Cat or ESG data
- Modern best practice for model development and testing of both Tyche and the TCM
- Used by general insurance companies, groups and Lloyd's Syndicates as the basis of their approved Internal Models

About RPCC and Tyche

RPC Consulting (RPCC) is a specialist actuarial consultancy providing regulatory, risk and pricing analytics across the life and non-life sectors using our Tyche solution.

Our team of 50 consultants and 25 software engineers include market leaders in their respective fields.

Tyche is a modern, high quality and easy-to-use software platform. It runs at blisteringly fast speeds.

Our Partners

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