

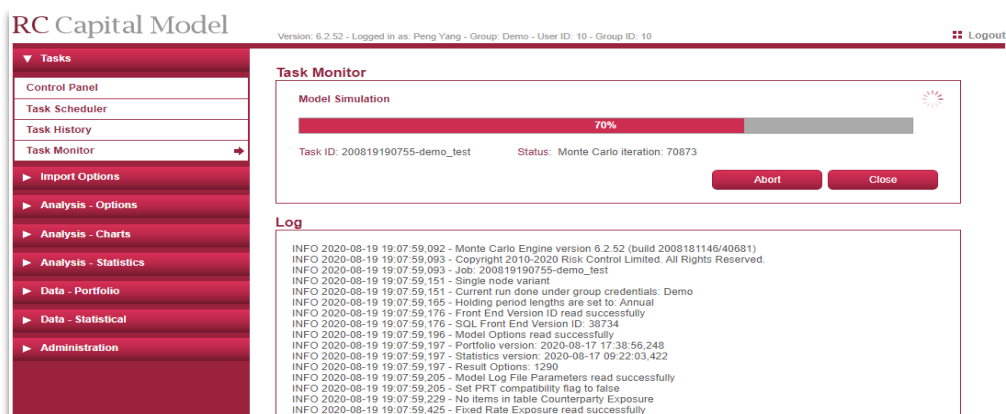
Note

RC-Capital Model

Risk Control's RC-Capital Model is a powerful Monte Carlo model for analysing credit and interest rate risk in a wide variety of portfolios. RC-Capital Model is ideally suited to resolving key choices faced by financial firms including:

- Deciding overall capital for a financial enterprise or a single division within an enterprise.
- Calculating RAROC-style how individual exposures contribute to enterprise wide risk and how this should be reflected in pricing new business.
- Allocating assets so as to trade off risk and return efficiently (for example in loan trading by a bank or strategic portfolio selection by a hedge fund or asset manager).
- Designing risk transfers through securitization or portfolio reinsurance.

RC-Capital Model is a dynamic multi-period model. Risk measures such as Value at Risk (VaR) or Expected Shortfall (ES) may be calculated over horizons ranging from 10 days to 30 years. Risk is measured consistently and seamlessly over different horizons.



RC-Capital Model Product Features

- Multi-asset class portfolio model
- Credit, equity, IR, FX risk supported
- Methods nest most standard models
- Fully configurable statistical inputs
- Diversified pool models for portfolios
- Risk horizons from 10 days to 30 years
- VaR and Expected Shortfalls outputs
- Multiple Marginal VaR/ES methods supported
- Flexible scheduling for imports, runs etc
- Support for wide range of stress scenarios
- Look-through modelling of securitisations
- Configurable cash-flow waterfalls for securitisations
- Rating analysis for securitisations
- Rigorous counterparty risk modelling including wrong way risk
- Rigorous modelling of secured debt
- User-friendly and powerful GUI
- Excel clients for data manipulation, upload and download
- Support for Deal Analysis
- Data Connector for integrations
- Different data input formats

RC-Capital Model is comprehensive in its treatment of risk in that default, recovery, transition, spread, interest rate and exchange rate risk are all consistently and rigorously modelled. The financial modelling employed in RC-Capital Model is rigorous and avoids simplifying assumptions such as loan equivalent exposures. The expected loss and valuation qualities it supplies are therefore highly accurate and may be employed in provisioning and fair value reporting.

Structured products are carefully modelled with detailed specification of cash flow waterfalls, interest rate and collateral triggers. RC-Capital Model may therefore be used for the valuation or rating of securitizations as well as the risk analysis of such exposures.

The model supplies a wide variety of portfolio wide risk measures including VaRs and Expected Shortfalls (ES). It also yields Marginal VaRs, Marginal ES, Standalone Single Exposure VaRs and Volatilities for every single exposure each time the model is run.



The model supports a wide range of exposure types including many varieties of traditional banking assets such as loans, bonds, letters of credit etc., single name credit derivatives such as CDS, interest rate and currency swaps, structured products including balance sheet and arbitrage CDOs, ABSs and synthetic CDOs, and generic counter-party credit exposures.

Technical Information

The RC-Capital Model comprises four primary components:

- 1. RC-Capital Model**
The web app provides a GUI for users to interact with the system, schedules and coordinates models runs through a substantial back-end code-base.
- 2. RC-Desktop Client**
An Excel-based client, communicating via REST services with the web app, may be used, for added flexibility, to upload-down data (as an alternative to other available approaches). The client may also be used to evaluate the capital for individual exposures or sub-portfolios, a high speed, without re-running the entire portfolio.
- 3. RC-Data Connector**
A separate Java application is provided for preparing and submitting data via REST services to the web app when automated integration with up-stream data sources is required.
- 4. RC-User Management Application**
User management is provided by the RC-User Management Application (UMA) which authenticates and authorises users and interacts with LDAP services such as Active Directory and Azure AD.

All four components of RC-Capital Model are configured to work together to deliver a highly scalable and secure set of functionalities. The components use J2SE 1.9 and are compatible with different operating systems, application servers (or servlet containers), and database software. The system can be installed under Linux, Unix or Windows operating systems, can use Tomcat, BEA Weblogic, IBM Websphere and others, and can store data in any one of Postgres, Oracle, SQL Server or other databases.

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