



Risk Controller

Risk Controller is a new-generation credit portfolio model. Supplying a wide range of portfolio and individual-exposure risk measures, the model provides a highly flexible framework for practical business decision-making.

Risk Controller 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 tradeoff 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.

Risk Controller 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.

Model Options - VaR/ES Maxtor_Options_AA

Group Subportfolios By:

MVaR / MES Increment:

Memory Saving Multiplier:

Apply Tail-Fitting:

Calculate Stand-Alone Exposure VaR / ES:

Gaussian Marginal Statistics:

Portfolio VaR / ES Quantile 1 (base) (%):

Portfolio VaR / ES Quantile 2 (%):

Portfolio VaR / ES Quantile 3 (%):

Portfolio VaR / ES Quantile 4 (%):

MVaR / MES / Stand-Alone VaR Quantile 1 (%):

MVaR / MES / Stand-Alone VaR Quantile 2 (%):

MVaR / MES / Stand-Alone VaR Quantile 3 (%):

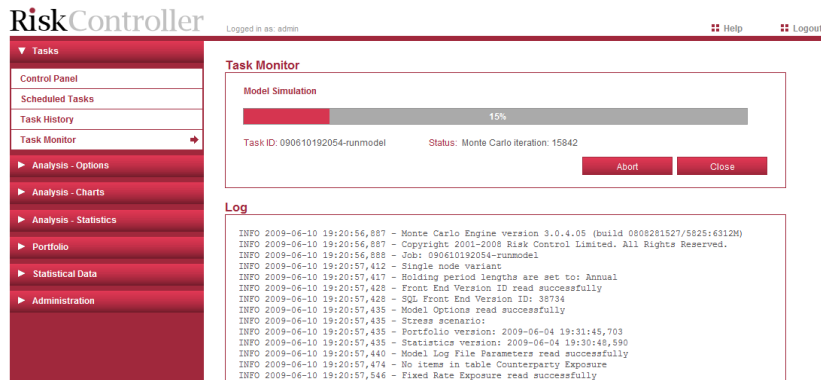
MVaR / MES / Stand-Alone VaR Quantile 4 (%):

Risk Controller is comprehensive in its treatment of risk in that default, recovery, transition, spread, interest rate and exchange rate risk are all consistently and rigorously modeled.

The financial modeling employed in *Risk Controller* is rigorous and avoids simplifying assumptions such as loan equivalent exposures. 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 modeled with detailed specification of cash flow waterfalls, interest rate and collateral triggers. *Risk Controller* may therefore be used for the valuation or rating of securitizations as well as the risk analysis of such exposures.

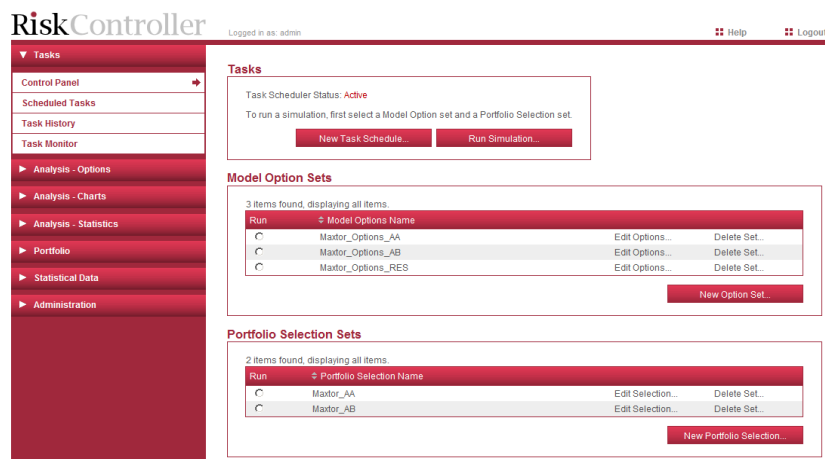
The model supplies a wide variety of portfolio wide risk measures including VaRs and Expected Shortfalls (ES). It also yields Marginal VaRs, Marginal ES, Standalone Single Exposure VaRs and Volatilities for every single exposure each time the model is run.



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.

Risk Controller Highlights

Risk Controller employs a fully transparent methodology. We provide clients with full information about the underlying analytics so you know exactly what is "under the hood". You may choose to employ the high quality statistical inputs that we supply or you may introduce your own statistical input data. The model may be run under a wide range of assumptions. We can work with you to select an approach appropriate to your firm and to the nature of your business.



The marginal risk measures are calculated rigorously and do not rely on commonly employed approximations such as the assumption that losses are Gaussian. Risk measures are reported in any one of 10 currencies.

Risk Controller models exposures symmetrically whether they are held on balance sheet or are included in a securitization pool. This means that the model is ideally suited to the analysis of risk transfer transactions. For example, one can analyze rigorously without approximations how much one will economize in economic capital by changing the thickness of a retained equity in a balance sheet securitization.

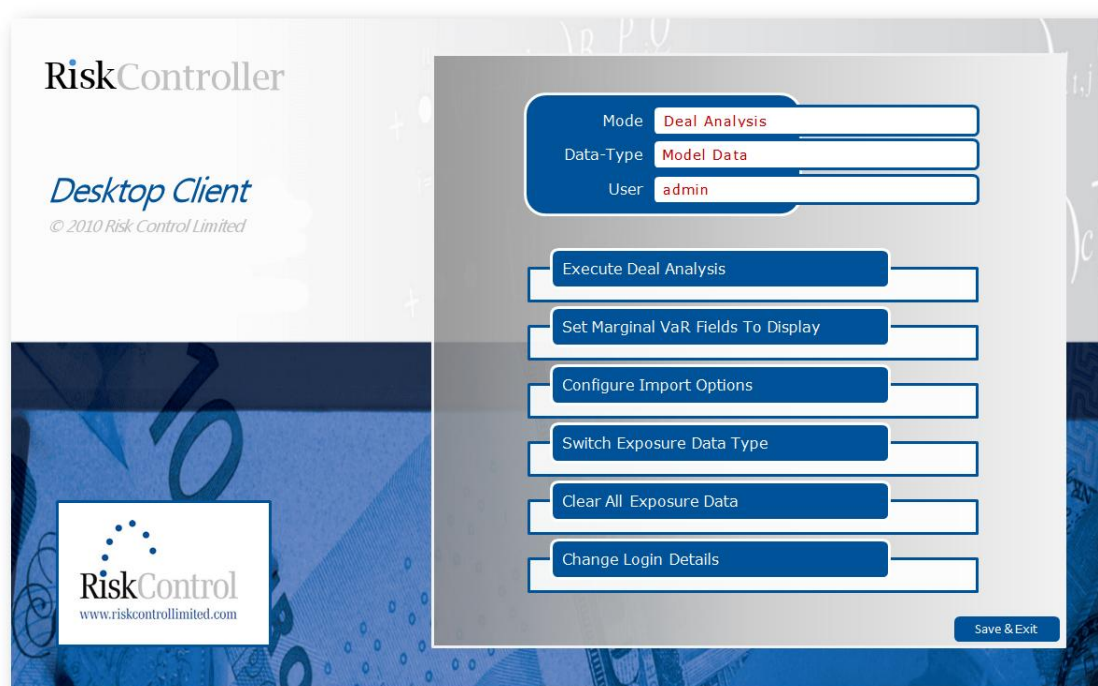
A large group of financial firms has used *Risk Controller* either directly through license agreements or through consulting assignments we have completed on their behalf. We are happy to discuss with you risk or valuation issues you face that our software products and consulting experience could help to resolve.

The Deal Analysis Plug-In

The 'Deal Analysis' plug-in builds on the strong computational capabilities of *Risk Controller* to provide an Excel, "front-office" interface.

Using Deal Analysis, users may import data on one or more new exposures (the "deal"), run the risk-engine and retrieve risk measures in the space of few seconds. The risk measures for the deal exactly equal those the user would have obtained by running the model with the entire portfolio plus the deal all together.

'Deal Analysis' supplies the user with a quick but accurate picture of the riskiness of any without the need to re-run the portfolio as a whole through a lengthy simulation.



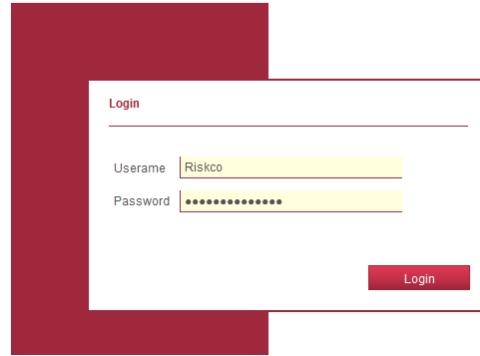
The 'Deal Analysis' plug-in does not introduce any new financial algorithm into the framework but instead leverages the existing tried and tested infrastructure of *Risk Controller*.

Risk Controller Architecture

The software can be run on a variety of operating systems and infrastructure software. It is available under Linux, Unix or Windows operating systems running under any of the major application servers or servlet containers (Tomcat, BEA Weblogic, IBM Websphere and others). It can store data in a variety of databases (MySQL, Oracle, Sybase, SQL Server and others). The software is written in Java and uses J2SE 1.5

Risk Controller scales with your requirements. For moderate sized portfolios, it can be hosted on a single server. For larger portfolios and faster results, the Monte Carlo engine is designed to take advantage of additional servers by distributing its simulation across multiple machines. Whether via a dedicated cluster, or an enterprise Grid, *Risk Controller* integrates seamlessly with standard grid frameworks, including the Sun Grid Engine (SGE) and the Globus Toolkit.

RiskController



Risk Control Limited Solutions

Risk Controller – Excel
Risk Controller – Server

Risk Controller – Software as a Service
Risk Controller – Grid Version

Risk Control Products

Desktop Compute Engine
Grid Compute Engine
Deal Analysis Plug-in

Database Compute Engine
Statistical Data Feed