

Why Roll Rate Analytic System?

Roll Rate Analytic System: Universality, Multi-functionality, Integrity

Efficient retail credit portfolio management

Roll Rate Analytic System

Efficient retail credit portfolio management is a highly important task for banks all over the world. A process of finding an optimal strategic solution is hindered by both internal management limitations and external factors uncertainty. Automated solutions must be more than just supporting tool for employees of the bank divisions providing their high productivity, they should also have intellectual component which defines multifunctional data analysis, high-precision forecast methods, scenario analysis, and wide range of reports for rational decision making.

All these requirements and many other needs of banking credit risk divisions to the automated analysis and forecast system for retail credit portfolios behavior are satisfied by the Business System Consult solution “Roll Rate Analytic System” (RRAS).

The latest multiuser release of RRAS version 3.1 is implemented as a client-server platform and available for use through a standard list of “thin

clients” like Internet Explorer, Google Chrome and other browsers. Different versions of the product are currently implemented and successfully used in a number of Russian TOP 50 and even TOP 5 banks.

Analytical service

RRAS is one of the best retail credit portfolio analysis tools as it uses innovational algorithms based on matrix decomposition with separation of influence factors and taking into account the type of such influence. This method allows separation of each distinct effect on retail credit portfolio performance and thus to build conveniently working model for different scenario analysis and forecasts.



System multi-functionality

The various built-in system tools empower user to solve a lots of complicated tasks. In particular, besides the above mentioned separation and analysis of distinct influence factors this system also automates the following functionality:

- data analysis
- scenario modelling (the so called what-if analysis)
- reserves modelling and forecast
- macroeconomic analysis
- analysis of risk evaluation models
- credit and market risk assessment
- optimal price policy
- funding plan
- vintage break-even rates calculation
- estimation of different risk metrics interdependencies
- estimation of the fees collection efficiency of the past-due amount
- stress-testing

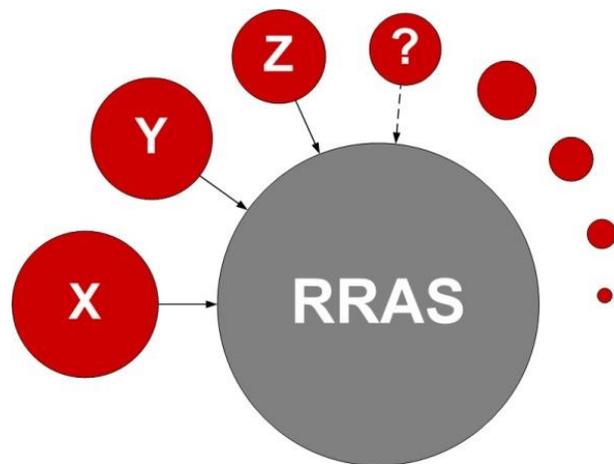
and many others tasks connected with the credit portfolio management

¹ Consumer lending modeling and stress-test. Analytical Bank Journal №10 (212) October 2013

It is hard to overestimate the value of statistical data for retail banks

Availability of the retail portfolio behavior data and capabilities to analyze that data are a vital necessity for competitiveness of credit organizations.

On one hand there is an opinion that focus should be aimed at use of very large data volumes ("Big Data"). The more data you have the better. On the other hand, according to the common practice, it is very important to concentrate on reliable and highly informative data with deep understanding



of the present business processes as well as various external influential factors. When modeling credit portfolio behavior one should determine the key parameters and dependencies, study the processes, check data relevancy and only then start creating mathematical algorithms, which allow to solve complicated analytical tasks and build high-precision forecasts.

Informative and data structural integrity

Properly structured data already provides almost half of an automated modeling solution. Redundant data will only create obstacles, for one should pay attention on it as well.

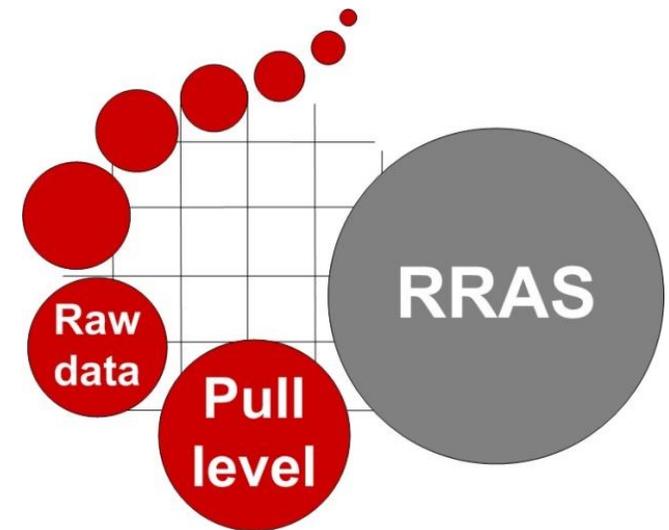
What data do we need? The answer largely depends on the task setting. Task management of the credit portfolio risks can be divided into two types:

- decision demands account level data
- decision demands pool level data.

RRAS uses special format for data structuring and aggregation,

which provides the following advantages:

- decreases the processed data volume in hundreds and thousands times
- decreases confidentiality level of the processed data
- increases data unification degree
- the data remains informative for a wide range of tasks
- decreases demand in individual estimation of each borrower without any damage to modelling and forecast quality of the credit portfolio behavior as a whole.



² Theory and practice in retail lending. Financial Risk Management №1 (37) March 2014

Universality

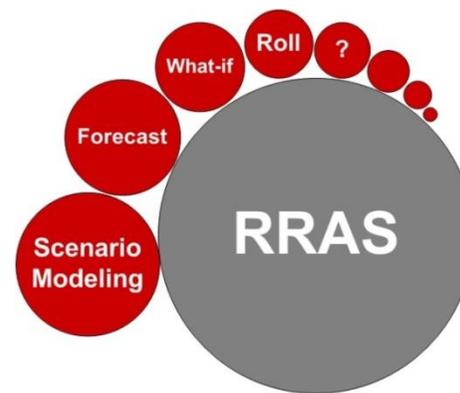
Universality of the retail credit portfolio modelling in RRAS allows to solve the following important tasks:

- comparative analysis of economics in regions/countries based on dynamics of the credit portfolio behavior
- research of specifics of the credit portfolio behavior depending on borrowers geography, time intervals of monitoring and portfolio types
- comparative analysis of the credit portfolios
- studying sensitivity of portfolios to various influencing factors
- determining optimal strategy
- evaluating various crisis effects on the retail credit portfolios.



Multifunctionality

Multifunctionality of RRAS is achieved through modeling of transfer matrixes for different scenarios: either business scenarios or macroeconomic external influence scenarios on the credit portfolio. This formalizes the process of long-term behavior forecast solution for the credit portfolio as well as a stress-testing. Besides, there is also a comfortable tool for modeling and forecasting of reserves realized in RRAS. User can create personally different reserves models, make forecasts for various scenarios as well as organize comparative analysis of reserves models.

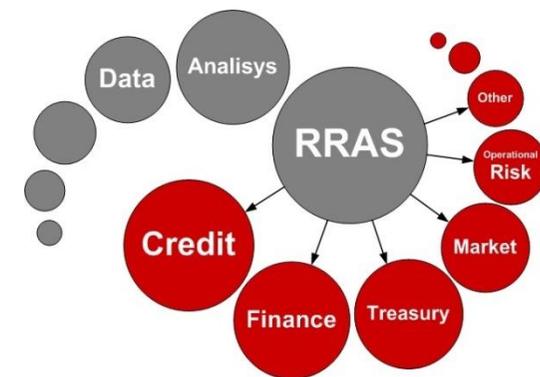


Integrity

RRAS allows to interconnect and integrate analytical tasks of various bank divisions, automate the decision-making process as well as to provide high-quality analytical reports, which overcome the similar ones of competitors.

All the following stages of data processing and modelling are simple and clear for the user:

- data structuring and uploading
- data verification and analysis
- credit portfolio modelling
- building scenarios
- preparation of analytical reports
- back-testing.



Those tasks cannot be solved using traditional analytic systems

There are no ways to solve these tasks simultaneously and completely using known approaches. Those approaches are usually very narrow-oriented and effective only under certain conditions. The use of those models or attempts to develop their more complicated and perfect analogues of the credit portfolios leads to problems like:

- the process of relevant data search is long and costly. It might take months to determine appropriate data to analyze and it might take literally years to develop a working model of retail credit portfolio, which is capable to estimate losses and make long-term forecasts with a satisfying quality
- there might appear to be a need to change data structure, which may cause currently used algorithms to become inapplicable or might appear to be a need in some essential model correction, which will take much of precious time and resources in turn.
- development of user-friendly and simple interface takes time, while working with unfriendly UI sets a requirement to an end user to be an advanced specialist
- regular system functional upgrades would be quite expensive.



Why Roll Rate Analytic System?

RRAS is a mighty tool which is easy and comfortable to use. Business System Consult developers made credit portfolios analysis so simple that user only needs a base knowledge. It takes just several mouse clicks to produce deep analysis of credit portfolio's specifics or build analytical reports. On the other hand, there is also a huge potential for advanced specialists with their complicated tasks, which are to find powerful solution tools. A variety of methods and deep analysis provide an opportunity to "peep around the corner", which was impossible earlier. This helps to take correct management decisions in advance. Built-in algorithms allow detailed research of complicated credit portfolio's dynamics. Our mission is to provide bank analyst of different levels with a strong tool for retail credit portfolio analysis.

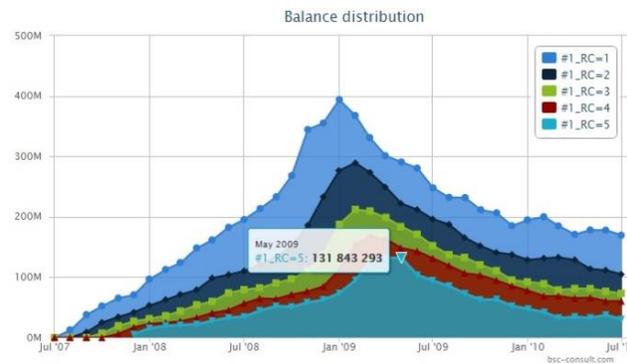
Data preparation

As an input, RRAS uses quite a standard set of data on the credit portfolio's state

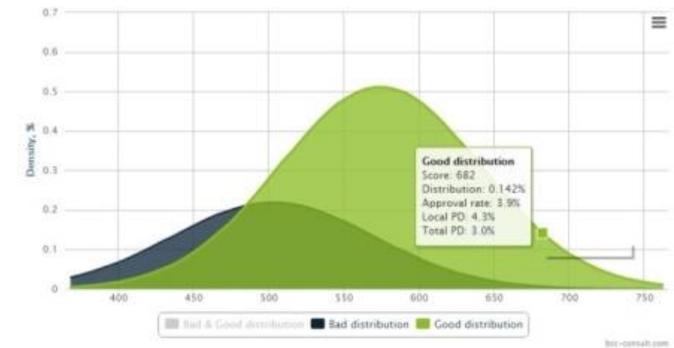
dynamics, There is an important step in upload process when data is verified and checked for errors again. After upload and successful verification user may immediately start research of credit portfolio and modeling. Clear step-by-step process of report preparation is realized in the system: tasks are structured one by one and it saves time and money as well as allows to avoid routine. When data is uploaded to a system, the model is fitted and scenarios are given, user may obtain any automatically generated report.

User interface

RRAS provides easy-to-use and comfortable modern tools for control and visualization. All tables and graphs support methods like "point-and-click" and "drag-and-drop" what makes user



interface intuitive and effective and data and processes easier to understand.



Implementation and support

Our experience in RRAS implementation and exploitation allows us to effectively assist with building and optimizing a retail credit processes. Our professional services not only include consultation about the best approaches to tasks solutions, but also provide:

- preparation and analysis of data quality
- system customization for certain credit portfolios and tasks
- personnel trainings to use the system.

As various new tasks and customers arise over time, periodic system updates of the tool functionality are organized.

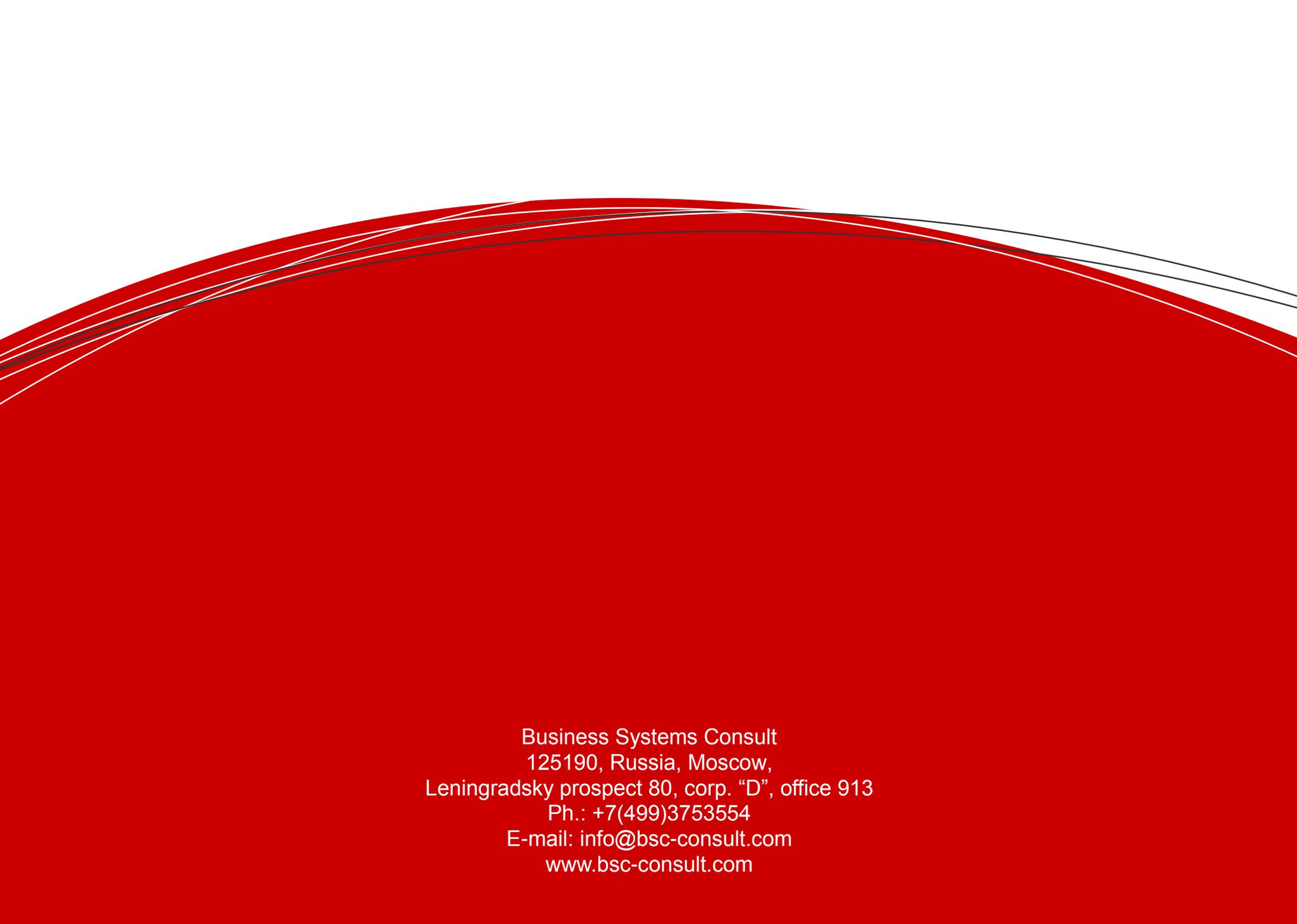


Learn more

Several large and middle-size banks are already using Roll Rate Analytic System to analyze their credit portfolio data. Application of our system for data integration, analysis and visualization regarding retail credit portfolios brings serious benefits for retail banks.

To learn more, visit www.bsc-consult.com

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