Riskalculator

Riskalculator is an integrated, flexible, modular Risk Management application for the banking sector that covers all types of risks. The application computes Regulatory Capital as per Basel I / Basel II / Basel III norms prescribed by a regulator. Riskalculator operates on a single platform with a single underlying data model, insulated from a bank's information architecture. Various modules of Riskalculator work on that same database. A bank may choose to subscribe any portfolio of modules as per its preference.

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Q. WHAT IS RISKALCULATOR?

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Q. WHAT ARE THE MODULES AVAILABLE IN RISKALCULATOR?

A. Modules available in Riskalculator are:

a. Credit Risk
   i   Standardized approach
   ii.   Foundation IRB Approach
   iii. Advanced IRB Approach

b. Market Risk
   i   Standardized Duration-based approach
   ii.   Internal Model (VaR) based approach

c. Operational Risk
   i.   Basic Indicator approach
   ii.   Standardized approach
   iii. Advanced Measurement Approach
      • Key Risk Indicator - identification, measurement and monitoring
      • Risk control and self-assessment process
      • Loss Data Capture
      • VaR computation by compounding frequency and severity distribution

d. BASEL III (Liquidity Reports)

e. ICAAP Process
   i.   Credit Risk Stress Testing
   ii.   Market Risk Stress Testing
   iii. Strategic and Reputation Risk
   iv.   Credit Concentration Risk
   v.   Liquidity Risk
   vi.   Interest Rate Risk on Banking Book (IRRBB)

f. Reports
   i.   Regulatory Capital Adequacy Reports
   ii.   MIS Reports for various risk categories
   iii. ALM reports

g. Regulatory Compliance Reporting Solution

Q. HOW CAN RISKALCULATOR SERVE BANKS?

A. Riskalculator can serve Bank in many ways:
   i.   Meet Regulatory requirements for risk capital computation
   ii.   Help a bank to conduct ICAAP process
   iii. Lower Operating Cost

Q. HOW DOES RISKALCULATOR WORK?

A. It accepts Data from the Core banking system which a bank can put into a designated area, called staging area, from where our application picks up data without any manual intervention in a batch mode. The application requires data in a fixed format through which a bank can generate data from their CBS or any other structured production system (treasury, loan origination, etc.). Data validation and data quality assessment are carried out in the staging area. Hereafter, data flows directly into Riskalculator's own database seamlessly.

Q. WHAT HAPPENS WHEN THE REQUIRED DATA IS NOT AVAILABLE IN ANY OF THE PRODUCTION SYSTEM RUNNING IN A BANK?

A. Riskalculator provides a customizable Graphical User Interface (GUI) through which a bank can enter missing data. Excel upload is also possible. The application provides maker-checker, rectification and modification facilities for such data entered by end-user.

Q. HOW SAFE WILL BE MY DATA?

A. Riskalculator uses the following information security standards for maintaining high level of security and confidentiality of data

- User management is based on user role-rights e.g. role called 'Make' have an access to 'GUI Form' functionality. Similarly, 'Checker' has an access to Approval of 'GUI Form' functionality.

- Maker / Checker functionality helps to authenticate transactions. e.g. role called Maker of the Bank can submit data for verification to Checker, who can review / authenticate the data.

- Audit Trail reports are available to verify and track any previous transactions. e.g. admin user can verify the login history with IP address of users through Audit Trail Report functionality.

- Password Management with encryption to authenticate the users e.g. end-user cannot see the password during the login and also the password saved in the database is in encrypted format.

- Single sign-on can be implemented across the organization for the application e.g. end-user can log onto the Riskalculator application with the same login credential of his organization. Hence, no need to maintain different login credentials for different activities / applications.

- User-friendly interface for ease of the end-user e.g. the help file is provided on all the menus. Also, tool tips are provided for formulas for easy reference of the end-user.

Q. WILL RISKALCULATOR PROVIDE REPORTS / MIS?

A. Bank-specific customized MIS can be developed based on data available in Riskalculator.

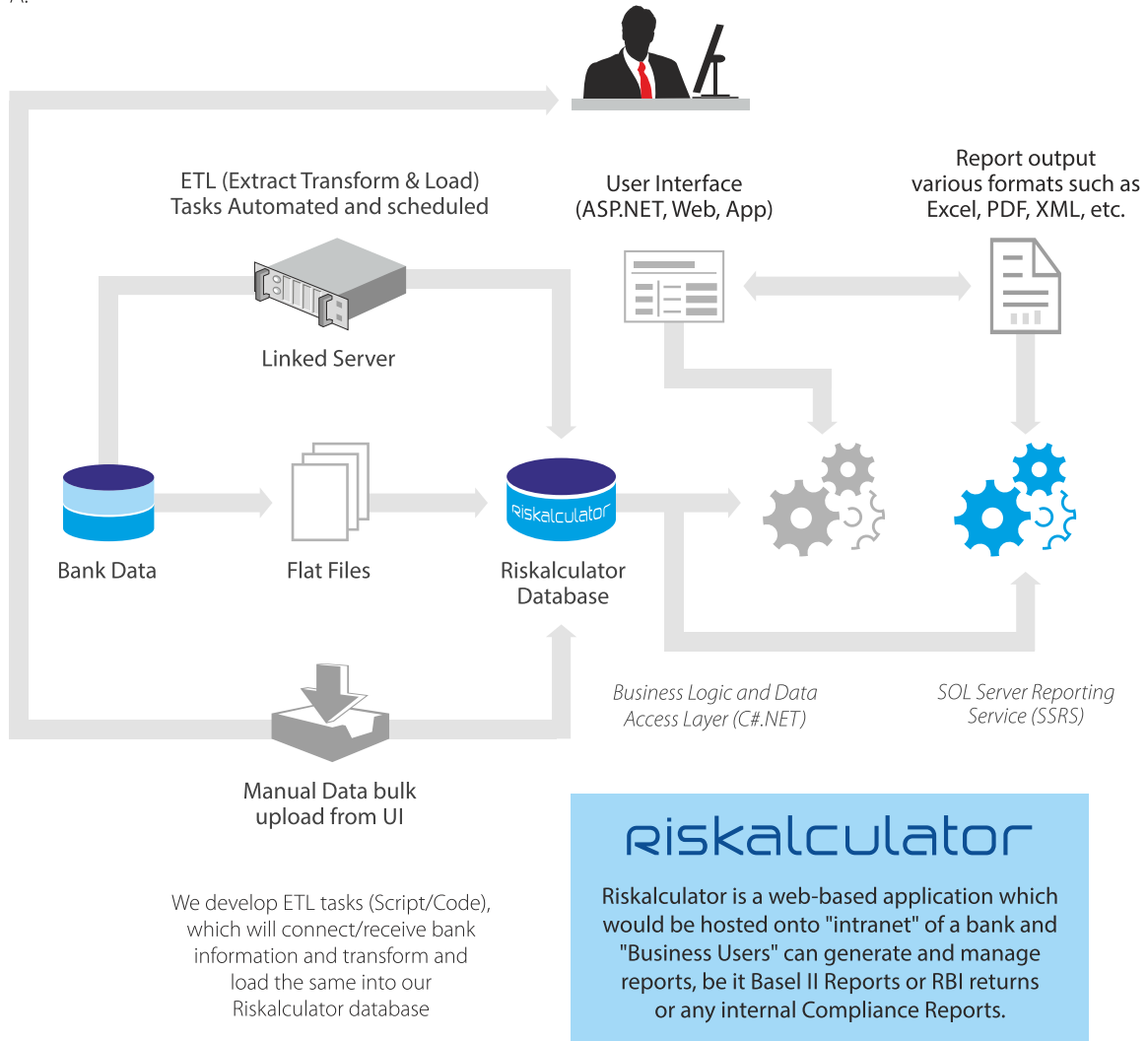**Q. WHO AND HOW MANY PEOPLE IN AN ORGANIZATION CAN USE RISKALCULATOR?**

A. Riskalculator does not have any inherent restrictions on the number of users of the application.

Q. HOW DOES YOUR ARCHITECTURE SUPPORT ROLLBACK, RECOVERY AND FAULT TOLERANCE?

A. Application is set to get information from upstream production system and load the same using database utilities and / or scripts. In case of any failure to load extracted data from the production system to the application database, the reason behind failure is logged and user can see the exact reason behind the rejection and can re-invoke the scripts or utilities post remedy. Also, a daily backup is scheduled on database server. In case the whole database needs to be restored, a whole month backup would be available.

Q. HOW DOES A WORKFLOW OF RISKALCULATOR APPLICATION LOOK?

A.

ETL (Extract Transform & Load)
Tasks Automated and scheduled

User Interface
(ASP.NET, Web, App)

Report output
various formats such as
Excel, PDF, XML, etc.

Linked Server

Bank Data

Flat Files

Riskalculator
Database

*Business Logic and Data
Access Layer (C#.NET)*

*SOL Server Reporting
Service (SSRS)*

Manual Data bulk
upload from UI

We develop ETL tasks (Script/Code),
which will connect/receive bank
information and transform and
load the same into our
Riskalculator database

riskalculator

Riskalculator is a web-based application which
would be hosted onto "intranet" of a bank and
"Business Users" can generate and manage
reports, be it Basel II Reports or RBI returns
or any internal Compliance Reports.

Q. WHAT HAPPENS WHEN REGULATORY NORMS CHANGE? DOES IT REQUIRE NEW CODING EFFORT?

A. The application is metadata-driven and all regulatory parameters are stored in respective masters. As far as possible the application avoids hard coding in the business logic layer.