ramco

Corporate Credit Rating System

Scope Document

1. Executive Summary

1.1 Introduction

The fundamental challenge faced by lending institutions is analysing the repayment abilities of the borrower to whom the credit is being extended. The scope of such analysis is made complicated by the fact that capabilities of expected future repayment are to be analysed, based on historical data of the borrower, current status and future projections. Further, such analysis needs to done on various internal dimensions like past financials, management, etc and external dimensions like industry outlook and market.

Credit analysis is a measure to minimize the credit risk of the bank or financial institution. Credit risk is a risk of non-payment, by the borrower of a principal debt and interest due to the financial institution, on scheduled dates set by transaction conditions. In other words, credit risk is the probability of the depreciation of assets of financial institutions, represented with an amount of outstanding loans or probability of an actual return, from the given part of assets, appearing much below the expected settlement level.

One of the important tools used by financial institutions, to assess a borrower's creditworthiness, is Credit rating technique. Credit rating is the qualified assessment and formal evaluation of a company's credit history and capability of repaying obligations. It measures the default probability of the borrower and his ability to repay fully and on time his financial debt obligations.

Typical credit ratings have the following characteristics

- They group credits to discriminate among possible outcomes
- They rank the perceived levels of credit risk

1.2 Credit Rating and Base II Compliance

As a means to adopt a more comprehensive approach towards assessing credit and other risks, Basel committee, in 2001, released the new Basel capital accord (Basel II norms). The new accord is more extensive and complex than the earlier one. The new framework is intended to align regulatory capital requirements more closely with underlying risks (credit, market and operational) and provide banks with several options for assessment of capital adequacy. Another major improvement over the earlier accord is the wide spectrum in which risk weights are defined, based on the creditworthiness of the borrower. Banks could go for an internal assessment, based on the historical data of the borrower's characteristics or map risk weights on assessments, provided by external agencies like Moody's, S&P, etc. The proposal is based on three pillars:

- Minimum capital requirement
- Supervisory review
- Market discipline

The committee has provided two approaches for Credit Risk

Standardized approach: This is similar to the earlier accord in calculating the capital, through risk weights assigned to assets. However, the scope here is much wider with relative risk weights among borrowers.

Internal Rating-based approach: Under this approach the risk is evaluated using four parameters:

- PD - Probability of default - the risk that a borrower would default within a given time horizon and is associated with the borrower's grade
- LGD - Loss given default - the proportion of exposure that would be lost if default occurs, essentially a measure of the underlying facility
- EAD - Exposure at default - the amount that the borrower legally owes to the bank at the time of default
- Maturity - remaining economic life of the exposureassets belonging to the enterprise

Thus internet credit rating systems are one of the key elements in compitation of probability of defaults.

1.3 Ramco Roadmap in enabling Base II Compliance

Ramco's approach towards addressing the IRB requirements is depicted in the figure below.
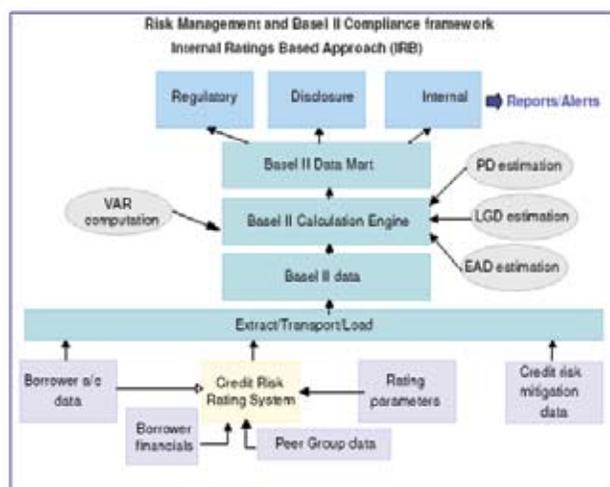
The key components in this case are:

• Develop a Rating System that can assign individual exposures to borrower grades or pools. This is a critical and mandatory component and an outline of this system is described in a separate document.

• Compute PD (for advanced IRB), LGD, EAD and Maturity

• Compute PD and LGD, based on historical data

• PD and EAD can also be computed using 3rd party statistical models

• The IT requirements, relating to creation of the Basel II raw data, from multiple sources and generation of reports and alerts, can be performed using Ramco DecisionWorks

This scope document describes the Corporate Credit Rating System as envisaged by Ramco systems

2. Corporate Credit Rating System

2.1 Approaches to Credit Rating

There are multiple approaches to credit rating

Expert judgment: This technique involves analysis of relevant information and assigning appropriate risk rating. In this case, the rater makes informed judgment, based on his knowledge and experience.

Modeling: In this technique, huge amount of historical and current data is churned out using statistical techniques and rating models are defined. The rating is assigned in reference to the models derived.

Constrained judgment: This technique is more common and involves exercising judgment about risks, subject to policy guidelines containing quantitative criteria. For example, the criteria like minimum current ratio is defined and the rater assigns the rating in comparison to such standards.

The corporate credit rating solution of Ramco is based on the constrained judgment approach.

2.2 Solution Scope

Ramco Corporate Credit Rating Solution evolves around six areas of assessment:

1. Financials

2. Business Performance

3. Industry Outlook

4. Management Quality

5. Conduct of Account

6. Project Risk

The solution will have two functions –

• The credit rating function, wherein the rater will assign the scores and compute the rating

• The master function, wherein the maintenance needed for credit rating is specified

2.3 Masters and Administration

As mentioned earlier, the solution will be based on constrained judgment approach. This component will facilitate specifying the boundaries and rules, based on the institution's internal policies.

2.3.1 Maintain Company

This activity will facilitate capturing basic details of the companies to be rated. Business addresses, contact details can be captured among others.

2.3.2 Maintain Risk Rating

This activity enables specifying the ratings, their descriptions, the score and weightage associated with the rating.

2.3.3 Maintain Sub Areas

Under every area of assessment, users will be able to define multiple sub-areas.

2.3.4 Maintain Risk Determinants

Risk determinants are the most granular parameters on which the rater assigns the score. Multiple risk determinants can be specified for every area-subarea combination and their weightage can be specified.

All the areas except the 'Financials' involve risk determinants that are scored by the rater, using the constrained judgment method. The score of the risk determinants in the area 'Financials' is determined by two methods. The rater scores certain risk determinants under

'Financials', e.g. timely submission of financial statements; while for certain risk determinants the system will compute the score, based on maintenance (discussed elsewhere in this document), e.g. Score for DSCR based on the financial data of the borrower.

Those risk determinants, which form a part of the financial analysis and are used in the Formula builder (discussed elsewhere in this document), are marked as 'Include in Financial Analysis'.

2.3.5 Financial Spread Formula Builder

Unlike other areas, 'Financials' derives the ultimate rating, based on scores that are both subjective and quantitative in nature. For example, the risk determinant 'Ability to raise funds

from the market' needs to be subjectively scored by the rater. On the other hand, the score for risk determinant "Current Ratio" will be assigned by the system, based on rules (formulae) maintained, as shown in the following screen.

The financial data that is needed for calculating various risk determinants will be captured by the user, from the financial statements submitted by the corporate and the Formula builder facilitates the user to construct rules, to calculate various parameters, which need to be scored.

The financial data can be captured for a maximum of three periods.

2.3.6 Maintain Financial Scores

For the risk determinants, which need to be auto scored, the scores and the respective values will be specified in this activity. The values can be expressed in numbers, millions and thousands in case of amounts, or as percentage. For every auto scored parameter, the value, score and weightage can be specified.
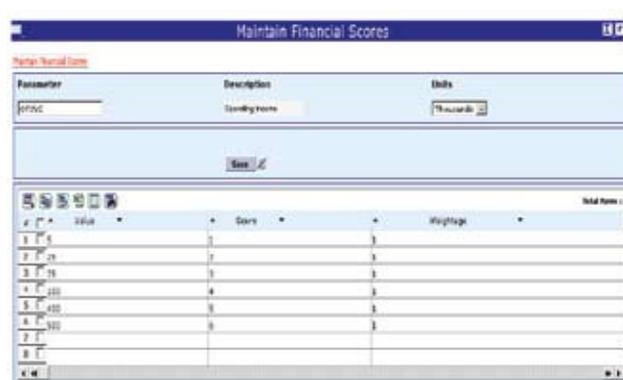

2.4 Manage Risk Rating

Based on the maintenance under the master and administration component and the capture of financial data, the rater will work in this component, to assign the scores to risk determinants and the credit rating of the company will be computed by the solution.

2.4.1 List Page

The list page will enable the user to narrow down the data that needs to be analyzed and drill down into a particular record.
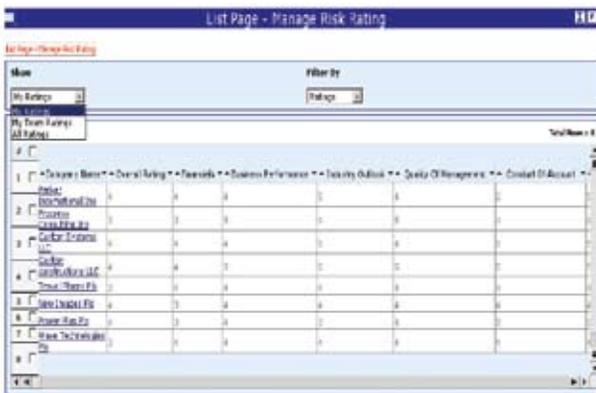
2.4.2 The Rating Cockpit

The rating cockpit will provide the user with a 360-degree view of the rating, based on ratings of risk determinants rolled-up into sub areas and later into Areas. From the Cockpit, the user can navigate into the specific area, to assign scores or view the ratings.


2.4.3 Scoring and Rating

The rater will typically visit the screens meant for every area and assign scores for every risk determinant. Based on the score assigned and the weightage, ratings are maintained under

master component. The system will compute the rating for every sub area and roll-up the subarea ratings into Area rating. It will also facilitate capturing rating remarks.

Scoring Screen

The approach is similar to all areas except 'Financials'. The approach for Financials is discussed separately below. A view of the scoring screen is given below.
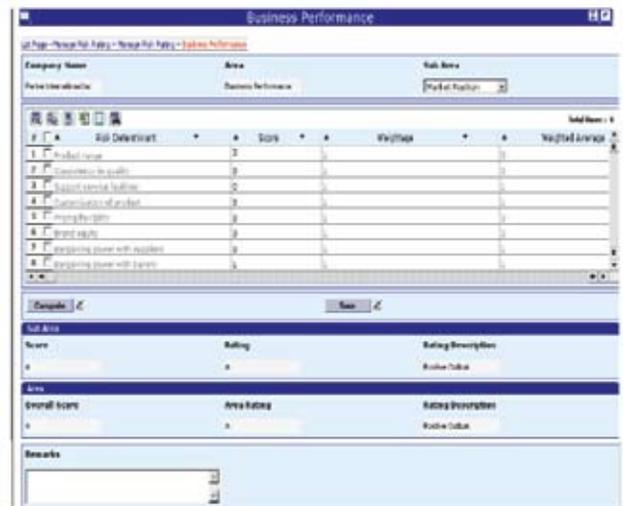
2.4.4 Financial Rating

The approach for rating the area, 'Financial', is different from the previous discussion. The financial rating is based on three types of risk determinants

Subjective Risk determinant:

Risk determinants that are subjective in nature and are scored by the rater. For e.g., ability to raise funds from the market.

Constrained Risk Determinant:

Financial data captured and auto scored, based on predefined boundaries.

E.g. Operating Income is captured by the rater and based on the maintenance, scores are defaulted by the system.

Computed Risk determinant:

Computed risk determinants are based on financial data captured and auto scored are based on predefined boundaries. E.g. DSCR. The formula builder specifies the rule to be applied, to calculate the DSCR, based on the captured financial information.

The maintenance of financial scores specifies the thresholds and the respective score for DSCR. Based on these, the system auto-computes the score for the risk determinants.

The system facilitates direct scoring of subjective risk determinants. It enables users to capture financial data for a maximum of three periods and compute the scores and ratings, based on the capture and rule maintenance.The screen for subjective risk determinants is similar to the scoring screens of other areas. The Financial rating cockpit, a screen to capture financial data and a screen to view the computed spreads is provided below.

Financial Rating Cockpit

Financial Data Capture

Computed Financial Scores

3. Key Benefits

The corporate credit rating system will empower financial institutions to take initiatives towards Basel II compliance.

The unique features of the system are

- Completely web-based, ensuring wider coverage and reach

- Total freedom for the users to define sub areas and risk determinants

- Flexibility to define rules for calculation and scoring, based on internal policies

- Plug-in solution that can co-exist with core banking solutions