

ONICRA DEFAULT STUDY

2012

ONICRA ANNUAL DEFAULT STUDY
WE SECURE TRUST

Onicra Default Study - 2012

2012

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TABLE OF CONTENTS

This 2012 edition of Onicra's Default Study contains:	Page No
1. Definitions, Significance and Computation of Default and Other Key Indicators.....	4
1.1. Characteristics of Default	5
2. Onicra Default Study 2012.....	6
2.1. Selection of Data Points	6
2.2. Default Study Analysis.....	7
2.3. Industry wise Analysis	8
2.4. Lorenz Curve and Gini Coefficient.....	9
3. Methodology	10
4. Disclaimer	11

DEFINITIONS, SIGNIFICANCE AND COMPUTATION OF THE DEFAULT AND OTHER KEY INDICATORS

Default

Onicra identifies default at the occurrence of delay in payment / non-payment of any debt obligation including current maturity, interest payment etc. Any recovery of debt obligation later on is not reversed for identification of the account as default.

Default Rate

Default Rate for Onicra has been calculated as the number of defaults among rated firms as a percentage of total firms rated and outstanding under the period of study. Onicra has undertaken a sample study and the default rate have been calculated accordingly. Default rate can be calculated across each rating category.

Lorenz Curve

The Lorenz curve, also known as cumulative curve is a graphical representation of the cumulative distribution function of the empirical probability distribution of the variable. It is useful in business modeling: e.g., in consumer finance, to measure the actual delinquency (Y%) of the population with worst predicted risk scores (X%).

Random Curve and the Line of Inequality

A random curve is the straight line at 45 degrees of x-axis. It is also known as the line of equality and represents a perfectly equal distribution of delinquency over risk scores.

By contrast, line of inequality is the perfect distribution where all the defaults or delinquency is distributed over one risk score, i.e. the lowest rating category. This is an idealistic scenario, where all the defaults should be at the lowest categories. Since no system is perfect, the actual default rate distribution would lie somewhere between the line of inequality and the random curve.

Gini-Coefficient

Gini-Coefficient, also known as Gini index or Gini ratio or Accuracy ratio, is a measure of statistical dispersion. It measures inequality among values of a frequency distribution. Gini-coefficient is measured as the area between the line of equality and the Lorenz curve, as a ratio of the area between the line of equality and the line of in-equality. It is also known as the accuracy ratio. A Lorenz curve nearer to the line of inequality would indicate concentration of the cumulative defaults at the lowest rating categories. Higher the co-efficient, more unequal is the distribution. A higher Gini-coefficient would indicate higher predictive power of the rating model.

CHARACTERISTICS OF DEFAULT

- Business Cycle – Default rates are expected to be high at the times of recession or lean period in business. Similarly, the default rates of the issuer at the time of boom are expected to be lower. Thus, the default rates should only be an indicator while keeping in view the state of the economy
- Ordinality – The test of ordinality is reflected by the inverse relation of the default rates to the ratings awarded by the issuer. This implies that as one goes up the rating scale, the ratings become stronger and resilient w.r.t. risks the entity is exposed to

Why are default rates important?

- **Credit Risk Profile of the rated entities:**

A credit rating is an opinion on the credit worthiness of the rated entity and default rates signify the probability of default at each rating level. A high default rate would imply higher probability of default in the rating category. The default rate of the issuer at a rating level is a measure of the credit risk associated with the rated entity.

- **Efficiency of the rating scale:**

A rating scale assigns the degree of reliability to a rated firm at a rating level. Movement in rating scale is inversely proportional to the default rate. As we move up the rating scale, the default rate should come down and vice-versa.

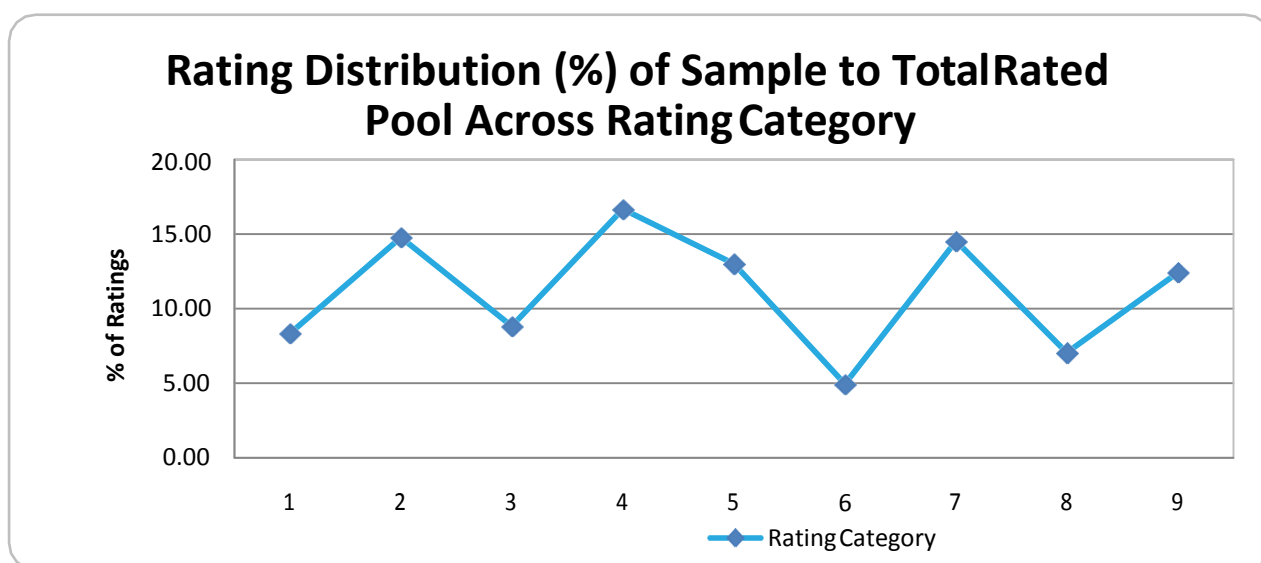
ONCRA DEFAULT STUDY -2012

The Indian economy has been suffering from a slow down for the last two years and recovery is not in near-sight. It is perceptible that in such a scenario, default rates on debt instruments or entities should be high. For any rating agency, this is the best time to test its model for its strength and durability. Onicra has undertaken to conduct the default study exercise with a two-fold objective. While on the one hand, it will be helpful in testing the resilience of Onicra’s ratings; on the other hand, the exercise would give us an insight about any improvements required in the system. The study concluded with a default rate of 2.47% for Onicra assigned ratings. The default rates were higher on the lower ratings, thus indicating a good dispersion. This reflects a healthy rating model being employed by Onicra in awarding its ratings. The Gini coefficient calculated was 0.54, which indicates a good discriminatory power of Onicra’s model.

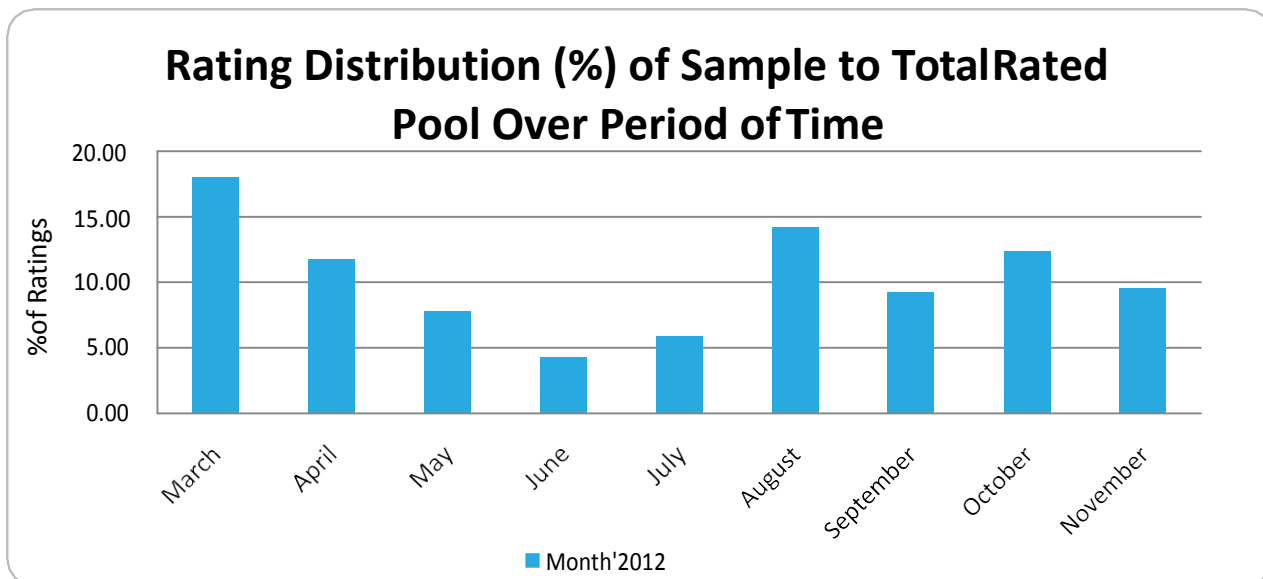
SELECTION OF DATAPOINTS

The first step in the process of calculating the default rate was the selection of sample data points. The objective of the sample data chosen were as follows

- The data should be representative sample of the ratings awarded by Onicra during the period under study. It should be spread across the rating scales. The sample chosen is as depicted in the chart below



- Selection of the data also considered the period of the rating assigned. Onicra chose to take a sample study of cases from the period March’2012 – December’2012. A spread of the ratings across this period has been depicted in the chart below



DEFAULT STUDY ANALYSIS

Onicra’s cumulative default rate has been 2.47% in the year 2012. Considering the weak economic conditions, the defaults in SME has been quite high in the year gone by. For a more meaningful perspective, it is imperative that Onicra studies the default rate at each rating category level.

Rating Category	Restructuring (A)	Declared as NPA (B)	Default (C)	Total Default (A+B+C)	Default Rate across the rating category
1	0.00%	0.00%	0.00%	0.00%	0.00%
2	0.00%	0.00%	0.00%	0.00%	0.00%
3	0.00%	0.00%	0.00%	0.00%	0.00%
4	0.00%	0.00%	0.00%	0.00%	0.00%
5	0.00%	0.00%	15.38%	15.38%	1.06%
6	0.00%	0.00%	0.00%	0.00%	0.00%
7	15.38%	0.00%	30.77%	46.15%	4.41%
8	7.69%	7.69%	7.69%	23.08%	6.12%
9	0.00%	7.69%	7.69%	15.38%	6.06%
	23.08%	15.38%	61.54%	100.00%	2.47%

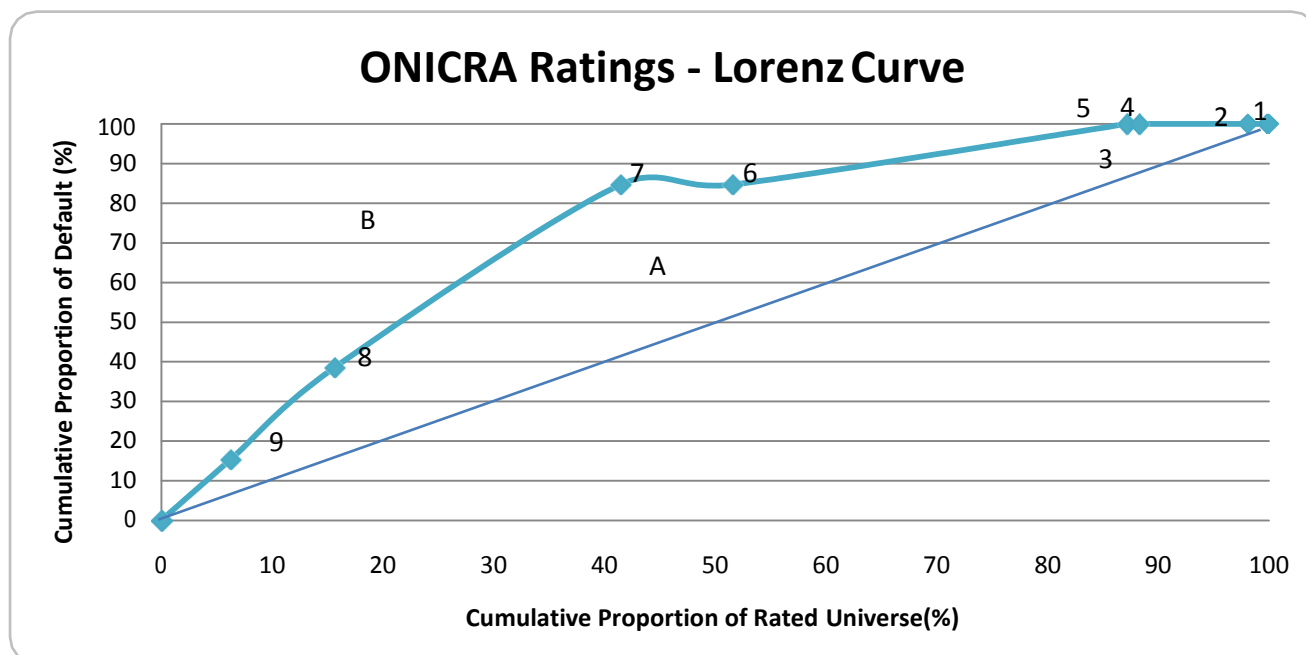
As indicated above, the default accounts have been inversely proportional to the ratings assigned. The defaults have been higher on the lower rating categories. This indicates that the rating model of Onicra is robust and has good discriminatory powers. This dispersion is a test of ordinality of the rating model for the rating agency. Onicra’s default rate remains largely ordinal.

INDUSTRY-WISE ANALYSIS

Industry wise classification of rated entities	% of Default
Agriculture and Allied Products	30.77
Machinery and Equipments	23.08
Packaging	7.69
Engineering	7.69
Textile	7.69
Services	7.69
Construction	7.69
Metal and Metal Products	7.69
	100.00

The defaults have been high in the industries of ‘Agriculture and Allied Products’ and ‘Machinery and Equipment’. This is coupled with high number of ratings assigned in these industries. Agriculture and Allied Products industry has seen a downturn in the entire economy and is going through hard times. Change in seasonal cycle has hampered the growth in this sector. With the depreciation of rupee, the ‘Machinery and Equipment’ industry is also reeling under tremendous pressure. A global slowdown and decelerating industrial growth have been the major causes for the tightening of this industry.

LORENZ CURVE ANDGINI-COEFFICIENT



In the above graph:

A: Area between the random curve and the Lorenzcurve

B: Area between the Lorenz curve and the line of inequality

The above graph can be interpreted as 15.38% of the defaults happened over the 6.27% of the rating assigned pool, and were assigned the rating category '9', which is the lowest rating category andsoon.

Gini-Coefficient (G) of the above curve is 0.54. It is depicted in the graph above as 'A/(A+B)'. G of Onicra indicates superior discriminatory powers of its rating model. At the same time, it is observed that the resilience of Onicra's ratings is high as few of the rating in the higher categories have defaulted, even in the times of economic slowdown.

METHODOLOGY

Onicra has a mandate from NSIC for point –in-time ratings for SMEs. These ratings are not under surveillance, nor are the ratings awarded under the SME (Non-NSIC) scale. Consequently, the ratings are not tracked on a regular basis. The default exercise was carried out for a sample set as discussed earlier. Onicra has conducted a default study exercise on a pool of 526 data sets, chosen across the period and across the rating levels. Onicra selected the database sample of these accounts from its live rated pool. For the purpose of default study, Onicra has collected current status of its sample rated pool by conducting physical visits to banks, obtaining telephonic feedback from banks, and by referring to the data published by ECAs. Structured questionnaire tool was used for collecting data. The data collection exercise was conducted from January'13 to April'13. We believe that the modus operandi of the data collection through telephones as well as through visits is a robust model to ensure the reliability of the data.

Data was collected and converted into excel sheet for the purpose of further statistical analysis and preparation of this report.

Small sample size has been the limitation of the study. Prudence needs to be exercised for generalizing any conclusion(s).

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