

6th Seminar on Enterprise Risk Management

Mumbai

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Credit risk – What is a true AAA rated paper, learnings from experience?

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What's making headline?



Busting a myth: Lehman wasn't too big to fail and didn't cause recession

BY BARRY RITHOLTZ

THE WASHINGTON POST

Benchmarks >
Nifty >
Sensex >



NSE Loser-Large Cap >
Tech Mahindra
NSE Gainer-Large Cap >
Godrej Prop



Precious Metal
Gold (MCX) (I)
Forex :
USD/INR

Deccan Chronicle Holdings defaults on loan payments

Deccan Chronicle Holdings has defaulted on its debt obligations, rating agency CARE said, downgrading the firm's short-term borrowings to default grade.

Amtek Auto defaults on Rs 800 crore IL&FS default: Did rating agencies' failure to connect dots lead to crisis?

How reliable are credit ratings?

Recent credit events have raised concerns about the utility of credit ratings. Are ratings not reflecting the actual financial position of the companies?

Q Search

Business

Apple's \$145 Billion in Cash Fails to Win AAA Debt Rating

Bloomberg

Sign In

Sources of Credit Risk in Insurance Companies



Credit risk arises when another party fails to perform them in time i.e. If the party fails to pay the credit. Hence, allowances need to be made for the financial impact from defaulted counterparties, non-payment of reinsurance and of the non-payment of premium debtors.

1

Underwriting

- ▶ The risk of losses from selection and approval of risks to be insured, or the inappropriate application of underwriting rules to risks being insured. These losses may also arise if the underwriting rules are inappropriate for some situations or if they are less specific than may be needed to result in good underwriting discipline.

2

Investments

- ▶ The likelihood or probability that one of those involved in a transaction might default on its contractual obligation and there is also a market-value risk for any security that needs to be sold when its market value is temporarily or permanently depressed.

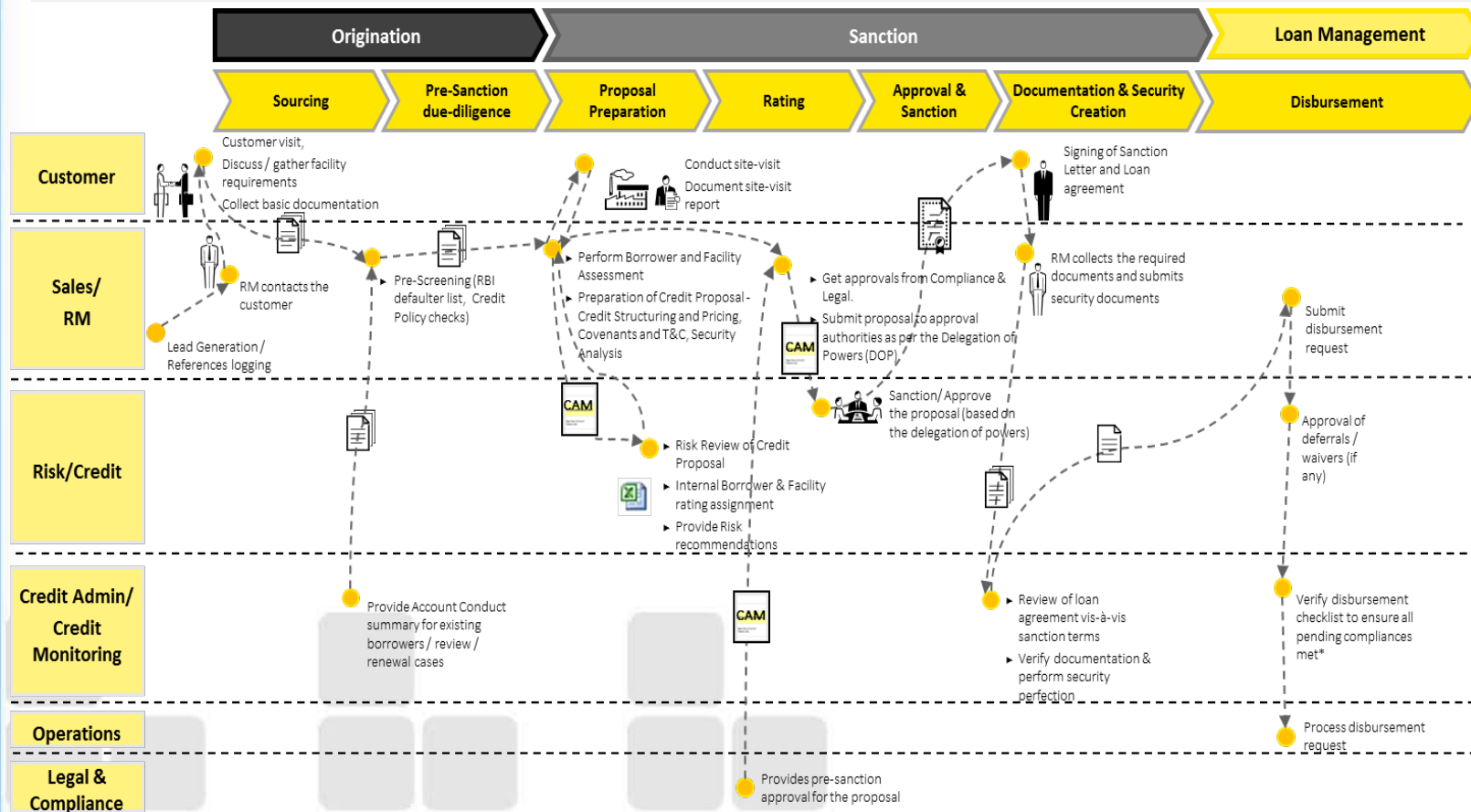
3

Re-Insurance

- ▶ When the insurer reinsures its assumed risks, it assumes the credit risk that its reinsurer will have the financial ability to fulfil its obligations under the reinsurance contract and indemnify the reinsured for losses ceded to the reinsurer under the contract. Credit risk may arise due to rating downgrades of the reinsurer's rating by the insurance rating agencies

Credit Lifecycle Overview

The credit lifecycle commences with sourcing of borrowers and borrower data, due-diligence / KYC checks, preparation of CAM, assigning credit rating basis borrower inputs, approval and loan disbursement.



Overview of Credit Rating Approaches

1

Expert Judgment based Methodologies

- ▶ Expert judgment methodology is used in cases where there is no historical factor data available neither is a historical default information available. Experts provide inputs on the structure, factors, weights etc of the scorecard.

2

Hybrid Models

- ▶ Hybrid models define appropriate target variables and borrower ratings are calculated by combining expert opinion with statistical analysis

3

Development of Statistical Scorecards/Models

- ▶ Scorecard based ratings are provided when enough information on both possible borrower factors and default history is available. A host of statistical techniques (such as Logistic Regression, Discriminant Analysis, CHAID etc) are used to compute ratings

4

Artificial Intelligence and Machine Learning based Scorecards

- ▶ Scorecard based upon AI & ML algorithm can uncover structures and patterns which cannot be generated out of traditional scorecard building approaches. A high predictive power scorecard can be built using AI and ML techniques

Overview of parameters used for Credit rating



Rating parameters help facilitate borrower and facility ratings assessment. The rating parameters broadly focus on assessing the financial, industrial, management, business and account related risks posed by the borrower to gain a view of the borrowers' credit worthiness

Financial Risk	Industry Risk	Management Risk
<ul style="list-style-type: none"> • Growth ratios • Profitability ratios • Leverage ratios • Debt Coverage ratios • Turnover ratios • Liquidity ratios • Cash Flow variables • Financial Flexibility • Sensitivity analysis • Unhedged Foreign Currency Exposure (UFCE) • Quality of disclosures • Reliability of Financials 	<ul style="list-style-type: none"> • Industry trend and Outlook • Regulatory policy issues and implications • Sensitivity to Interest rates • Intensity of competition • Demand decline / Supply constraints • Vulnerability to im • Impact of A • Indust 	<ul style="list-style-type: none"> • Leadership Competency • Management Track Record • Organizational structure • Control systems • Personnel policies / Labor relations • Corporate governance • Succession Planning/ Business continuity • Corporate Strategy • Performance of group concerns
	Business Risk	Account Conduct
	<ul style="list-style-type: none"> • Diversification • Seasonality and Cyclical • Size • Cost Structure • Market Share 	<ul style="list-style-type: none"> • Repayment conduct • Account cash flow/ transaction riskiness • Relationship age

ILLUSTRATIVE

Application and Behavioral Scorecards

Application Scorecard

- It is used by the institutional investors to make the investment decision based upon the financial information available
- Application variables are the variables known at the time of sourcing the investment



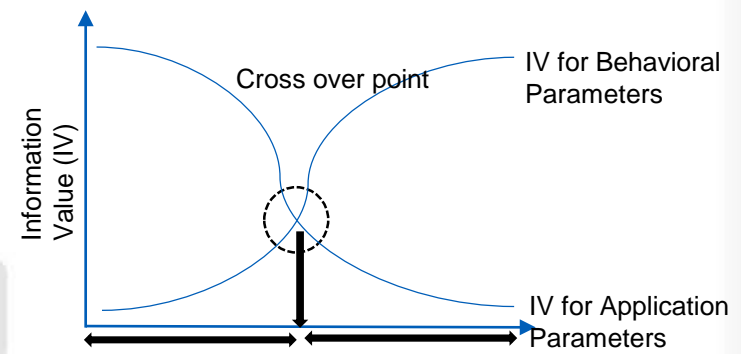
Cross over analysis

- Cross over analysis is performed to identify the number of years till which application scorecards will be used and after that behavioral scorecard will be used



Behavioral Scorecard

- It is used to predict the probability of default of an existing investment
- Behavioral parameters are variables developed over time due to transactional activities..



Regulations



The recent events in global and Indian financial system have underlined the pivotal role that credit ratings play. Basis which SEBI released the guidelines for the rating agencies registered with SEBI.

Rating Process

- CRAs should maintain the records of the rating committee, including voting details and notes of dissent, for a period of 5 years.

Default studies

- CRAs are mandated to publish information about historical default rates of their rating categories and whether the default rates of these categories have changed over time

Dealing with Conflict of interest

- CRAs should ensure that their rating analysts do not participate in any kind of marketing and business development functions including negotiations of fees with the issuer.

Unsolicited Credit Ratings

In case of unsolicited credit ratings (the credit ratings not arising out of the agreement between the CRAs and the issuer), credit rating symbol should be accompanied by the word "UNSOLICITED" in the same font size.

Rating of structured finance products

CRAs while rating structured finance products, are barred from providing consultancy or advisory services regarding the design of the structured finance instrument.

Disclosures

CRAs should also disclose (i) the policies, methodology and procedures in detail followed by them regarding solicited and unsolicited credit ratings, (ii) the history of credit rating of all outstanding securities, (iii) the general nature of its compensation arrangements with the issuers and (iii) the details of any relationship it has with the issuer whose securities are being rated and any of its associate of such issuer and the CRAs or its subsidiaries.

Principles of EWS

Principles of EWS

Early Warning Signals

- ▶ Criteria for selecting Early warning risk and performance indicators would consider the effectiveness, comparability and ease of use of each indicators
- ▶ Indicators should address existing and emerging risks.

Limit Triggers

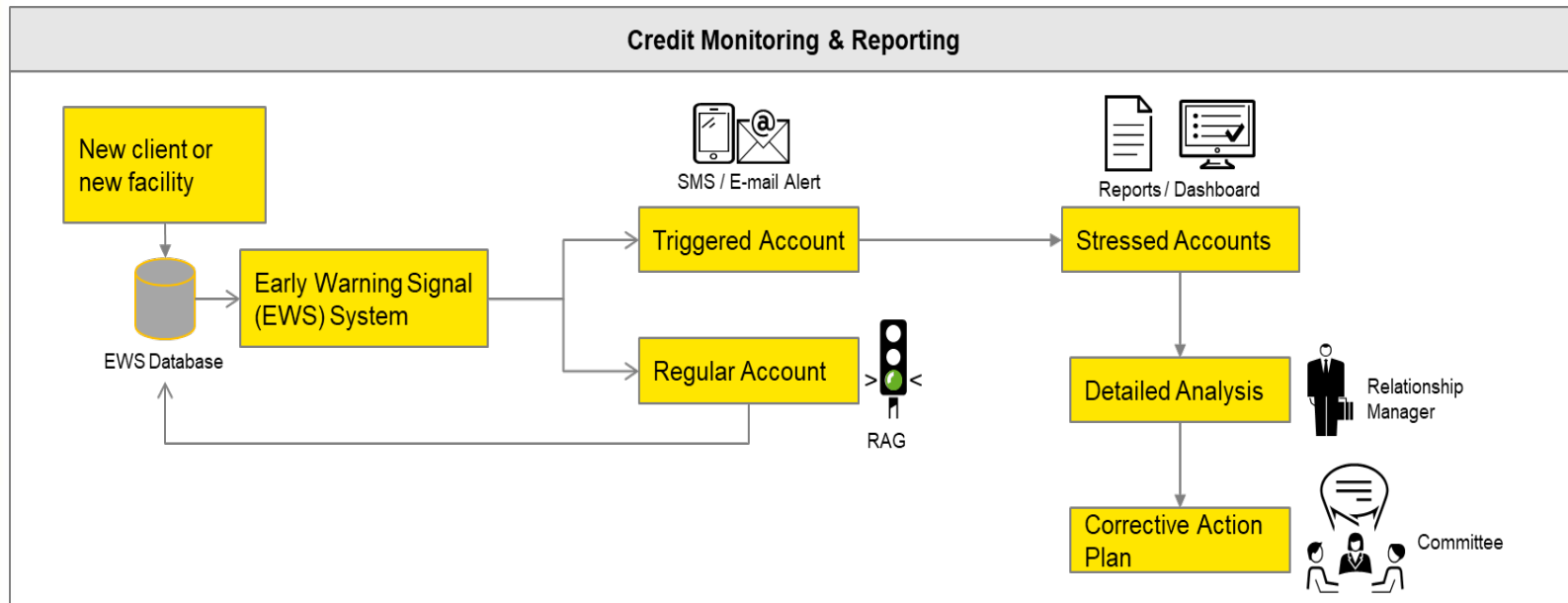
- ▶ Thresholds and triggers to be established that provide a mechanism for monitoring the usage and performance of indicators
- ▶ Typical scorecard triggers / thresholds would include exceeding concentration and override limits, statistical outliers, etc
- ▶ Different ranges of trigger / threshold breaches would call for different kinds of action.

Mitigating Action

- ▶ The level of management must be commensurate to the level of credit exposure and or the criticality of the impact to which the bank is exposed to
- ▶ Roles and responsibilities should be assigned for reviewing and monitoring credit risks and mitigation plans
- ▶ Periodic reviews to be conducted and reported with mitigation actions and plans.

EWS process flow

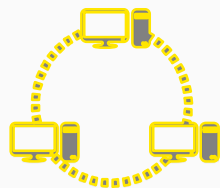
The EWS process involves data collection from various sources, EWS score generation, identification of early warning accounts, development of corrective action plan preparation and monitoring & reporting



Types of sources of EWS data

Financial and market intelligence through a variety of data points can be obtained in order to determine the level of stress in an existing account/relationship.

Financial Institution's Internal Sources



Inputs derived from various Bank Systems

- ▶ Core Banking Systems
- ▶ Trade Finance Systems
- ▶ Document Management System
- ▶ CMS and Channel Finance Systems
- ▶ Borrower Health profile
- ▶ Treasury Systems
- ▶ Collateral / Security Management Systems
- ▶ Financial Statement Filling Input

External Sources



External Financial & Market Sources

- ▶ International Databases
 - OFAC List
 - IMOLIN
 - US Sanction lists
 - UK Sanction lists
- ▶ Financial Websites (Bloomberg, Reuters)
- ▶ External Credit Rating Bureaus (CIBIL, CARE, MOODY'S, D&B, CRISIL, ICRA, Fitch, Brickwork, SMERA, etc.)
- ▶ SMA reports
- ▶ Willful defaulters lists from Banks
- ▶ RBI defaulter list

Thank You

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