A "Public Good" Approach to Credit Rating Reform

– the NUS-RMI Default Prediction System for Listed Corporates

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Outline

- The “sell-side” credit rating practice
- Credit rating reform
- A “public good” view of credit rating
- The National University of Singapore Risk Management Institute’s non-profit credit rating initiative
- What has been achieved so far?

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"Sell-side" credit rating

- Credit rating services can be classified into "buy-side" and "sell-side".
- "**Buy-side**" credit rating is basically based on the user-pay principle, and needs no reform.
- "**Sell-side**" credit rating is structured on the issuer-pay principle; for example, Moody's, S&P and Fitch. From the public interest point of view, it has been demonstrated to be a seriously flawed business model.

"Sell-side" credit rating (continued)

- "Sell-side" credit ratings are:

  (1) referenced in regulatory frameworks that affect capital requirements;

  (2) used in commercial contracts to set collateral requirements; and

  (3) employed to determine eligibility of debt instruments in, say, pension portfolios.

- "Sell-side" credit rating agencies have been heavily criticized in the 2008-09 financial crisis.

"Sell-side" credit rating (continued)

- **The US congressional hearings have revealed internal emails such as**

  "I am getting serious pushback from Goldman on a deal that they want to go to market with today," wrote a Moody's analyst in April 2006.

  "They've become so beholden to their top issuers for revenue they have all developed a kind of Stockholm syndrome which they mistakenly tag as Customer Value creation," wrote a S&P employee.

"Sell-side" credit rating (continued)

- Because major CRAs are for-profit, they need to keep rating methods proprietary which can hinder methodological developments.
- Major CRAs have been reluctant to downgrade a firm in distress (e.g., Enron, Lehman, Tokyo Electric Power)
- The business model of CRAs is based on the issuer-pay principle. This could lead to moral hazard and rating shopping.

Credit rating reform

- The US approach (Dodd-Frank Act) strips off the legal immunity of CRAs so that they can be sued for the quality of ratings. Also remove regulatory references to credit ratings.
- EU has passed law that requires CRAs operating in EU to register and be subjected to a set of EU rules. There is also a proposal to set up a government-sponsored European Rating Agency.
- China's rating agency (Dagong) has made a push to establish itself as an alternative voice in sovereign ratings. (In its July 2010 sovereign ratings, it gave the US AA and China AA+.)

Credit rating reform (continued)

- Several credit rating reform ideas have floated; for example, NYU's White, Altman, etc.
  1. Eliminating regulatory reliance on ratings
  2. More nuanced credit information instead of a simple letter grade
  3. Reduce potential conflict of interests by a independent clearing house to randomly assign rating jobs
- George Cooper's idea of rating "on a curve" to contain rating inflation.

A "public good" view of credit rating

- Tinkering with technical aspects of the current "sell-side" credit rating business model won't make any real difference in the end.
- We must change the dominance of the current for-profit credit rating business model.
- I contend that "sell-side" ratings should be viewed as a "public good".

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A "public good" view of credit rating (continued)

- Envision a roadway system of a country that is entirely run as a for-profit business and is dominated by three players.
- Credit ratings are so essential to the functioning of the financial system that we must treat it as a basic financial infrastructure.
- A non-profit approach to "sell-side" rating makes sense.

The NUS-RMI approach

NUS-RMI's credit rating initiative sets out to

- **Advance scientifically sound credit rating methodologies.**
- **Provide alternative, not-for-profit ratings on listed firms around the world.**

In addition to contributing to the infrastructure of the world financial system, we strive to

- **Promote NUS-RMI as a global credit risk research center.**

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The NUS-RMI approach (continued)

- RMI builds the rating research and production infrastructure – a comprehensive data base, and advanced IT system and a team of support staff.
- Researchers have been invited from around the world to take part in the rating model development. Being not-for-profit, researchers will be able to keep their IP.
- Researchers will share the common research infrastructure but compete to get their models adopted for the RMI ratings.
- The RMI rating model will remain current, evolutionary and organic, responding to continual suggestions and/or challenges.

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The NUS-RMI approach (continued)

- RMI maintains the research infrastructure: (1) a comprehensive database of about 90,000 listed firms globally (including delisted ones); (2) implementation team and computing facilities.
- RMI will run parallel implementations for different rating models under consideration.
- The adopted rating method is meant to be the evolutionary contributions made by a world-wide research community interested in credit risk analysis.

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The NUS-RMI approach (continued)

- Being a not-for-profit rating undertaking, the RMI rating methodology will be non-proprietary and completely transparent.
- The model selection will be based on the commonly accepted scientific principle – statistically superior on a common dataset.
- The selected rating model will be independently validated.
- Our rating model implementation will be free of ad hoc human judgment, apart from dealing with occasional data errors that are expected from time to time.

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The NUS-RMI approach (continued)

- RMI has set up an internal management process to sign off responsibilities in order to ensure data and implementation integrity.
- There is no plan to set up an independent governing committee. Instead, quality assurance relies on millions of eyes watching much like Wikipedia.
- RMI will not apply for any officially sanctioned credit rating agency status. It will remain as a scientific pursuit, advancing rating methodology and offering alternative credit information. No one will be compelled to use the RMI ratings.

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The NUS-RMI approach (continued)

- **RMI's CRI team**: project lead, deputy lead, operations lead, development team, production team, validation team, market monitor team, and Global Credit Review editorial staff, a total of around 30 staffs.
- **Volunteers**: 15 model development teams from around the world and about 70 credit analysts participating in repeated surveys.
- **IT system**: a 300-computer grid and 3 GPU computers, and 2 data servers.
- **Data source**: electronically fed by Bloomberg, Reuters complemented by many research databases.

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What have been achieved so far?

- The beta version of the RMI rating system was released in July 2010 with a coverage of 12 Asian economies with over 17,000 listed firms.
- Daily updated forecasts for default probabilities ranging from one month to two years ahead are provided. The current coverage includes over 28,000 active firms in Asia, North America and Europe. A complete world coverage is expected by the end of 2011.
- The provisional rating model is based on Duan, Sun and Wang's (2010) forward default intensity model. Staying true to the spirit of Wikipedia, the provisional credit rating method is meant to be challenged and improved.

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Screenshots of web portal

www.rmi.nus.edu.sg/cri/

www.rmi.nus.edu.sg/cri/

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English 中文

NUS National University of Singapore RMI Credit Rating Initiative beta

Hello user bizdjc@nus.edu.sg
Welcome to the NUS RMI Credit Rating Initiative!
LOGOUT

HOME ABOUT AGGREGATE FORECAST COMPANY FORECAST CALCULATOR DOWNLOADS MY ACCOUNT

Aggregate Forecast

SELECT A GROUP:

Choose an economy
North America
United States

Choose a sector
All sectors ...

Show chart

COMPARE CHART WITH ANOTHER GROUP:

Choose an economy
All regions ...

Choose a sector
All sectors ...

Compare with selected group

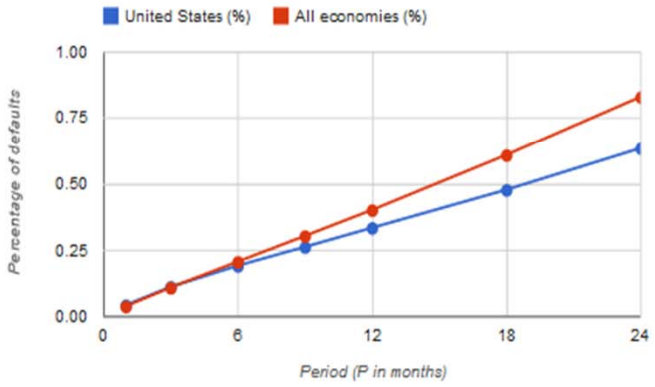
Recent selections
- United States (Different forecast horizons)
- All economies

Comparing All listed companies in United States and All listed companies in All economies

The expected percentage* of defaults for companies in the selected groups (first group with 4012 companies, second with 28653 companies) within period (P), of the date: 11 May 2011

Click and drag the slider to change date

1991 2011



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Screenshots of web portal (continued)

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HOME ABOUT AGGREGATE FORECAST COMPANY FORECAST CALCULATOR DOWNLOADS MY ACCOUNT

Aggregate Forecast

SELECT A GROUP:

Choose an economy

North America

United States

Choose a sector

Financial

Show chart

Recent selections

- United States/Financial (Different forecast horizons)
- United States vs. All economies (Different forecast horizons)
- United States (Different forecast horizons)
- All economies (Different forecast horizons)
- Canada vs. United States (Historical time-series)

Financial companies in United States

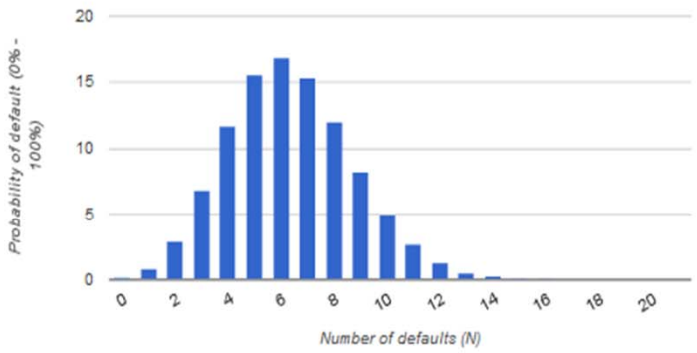
The probability that exactly N companies out of a total of 910 companies from the selected group will default within the next:

1 month | 3 months | 6 months | 9 months | 1 year | 18 months | 2 years

of this date: 11 May 2011

Click and drag the slider to change date

1991 2011



Reference table:

Number of defaults	Probability

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Screenshots of web portal (continued)

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HOME ABOUT AGGREGATE FORECAST COMPANY FORECAST CALCULATOR DOWNLOADS MY ACCOUNT

Company Forecast

CHOOSE A COMPANY:

Pick a region, then an economy:
North America
United States

Pick a sector (optional):
Industrial

Companies from the above economy (and sector, if chosen):
General Electric Co

Show chart for company

OR SEARCH BY COMPANY NAME:

Search keyword(s):

Search

COMPARE CHART WITH A GROUP:

Choose an economy
North America
United States

Choose a sector
All sectors ...

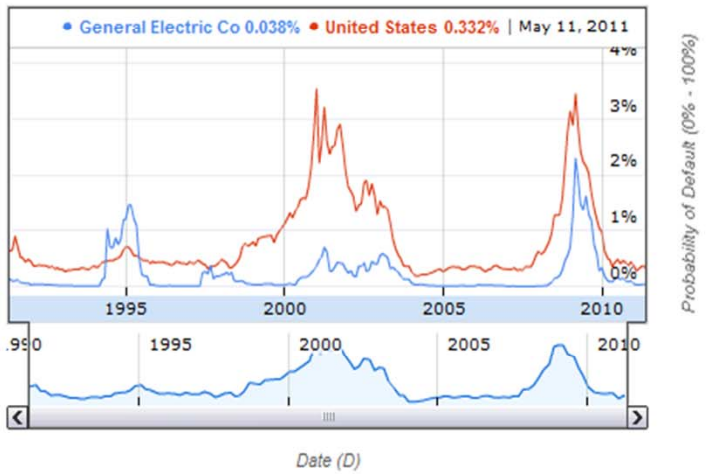
Compare with selected group

OR COMPARE CHART WITH ANOTHER COMPANY:

Comparing General Electric Co and All listed companies in United States

The time series of: The probability that the selected company will default vs. the expected percentage of defaults in the selected group, within the next:

1 month 3 months 6 months 9 months 1 year 18 months 2 years



Data Note: The most recent output is using model parameters calibrated on 03 May 2011 with data that is up to 30 April 2011.

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Thank you!

For more information, go to:

www.rmi.nus.edu.sg/cri

Feedback and enquiries:

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