Proposed Change to Unsecured Credit Scoring Model

John Jucha
Senior Credit Analyst, Corporate Credit

Billing, Accounting and Credit Working Group

August 24, 2018, KCC

Agenda

- Background
- Oliver Wyman Review of Scoring Model
- Findings and Recommendations
- Proposed Model Enhancements
- Next Steps

Background

- In order to qualify for unsecured credit, a Market Participant must meet certain minimum financial, credit rating and on-time payment history requirements.

- A credit rating matrix is used to determine the percentage of tangible net worth that will be used to calculate the initial amount of unsecured credit.

NEW YORK INDEPENDENT SYSTEM OPERATOR

Background

- The NYISO then performs a Credit Assessment, which may increase or decrease the amount of unsecured credit the NYISO grants a Market Participant, using a scoring model, which applies quantitative and qualitative factors to determine a credit score adjustment.

- This scoring model was developed in 2009, in collaboration with Oliver Wyman, in an effort to minimize default exposure and potential bad debt losses for all NYISO Market Participants.

- As part of a scheduled review of the scoring model, NYISO engaged Oliver Wyman in June 2018 to re-assess the model performance and determine if it should remain the same, be enhanced or re-developed.

Oliver Wyman Review of Scoring Model

- **Data gathering and foundation setting for model testing**
  - Reviewed historical financial statements and credit scoring model outputs of Market Participants.
  - Created a testing dataset based on financials from public companies to perform out-of-sample tests.
- **Assessment of model accuracy and review**
  - Assessed performance by comparing credit scores to external ratings.
  - Utilized single-factor analysis on select financial ratios to determine those which exhibited the highest predictor of default.
- **Tested enhancements to current model**
  - Assessed whether qualitative and quantitative factors utilized are still appropriate.
  - Assessed if current public and private entity weights are still appropriate.

Findings and Recommendations

- **Findings:**
  - The performance and results of the model are still within an acceptable range on the portfolio overall.
  - The current 15% and 30% weights applied to the public and private qualitative assessment were not revised.
  - ‘**Revenue / Market Cap**’ fell below an acceptable range as a predictor of default.
  - Size variables have strong predictive power individually but are not represented in the current model.
  - All Market Participants are rated using the same scorecard, therefore the model may not fully reflect differences across corporates, financial institutions and government entities.
  - The qualitative module is based on an open-ended assessment of the Market Participants, which may increase subjectivity.

- **Recommendations**:
  - Replace ‘**Revenue / Market Cap**’ with ‘**Total Assets**’ for public entities in the quantitative assessment due to it’s strength and intuition as a predictor of default.
  - No changes to quantitative variables for private entities were noted.
  - Proposed additional process changes to automate data entry and improve model transparency.
  - Consider using alternative rating approaches (e.g. external ratings) for non-corporate segments (e.g. municipalities, financial institutions).
  - Create additional structure or rules to the criteria used for the qualitative assessment of Market Participants.

NEW YORK INDEPENDENT SYSTEM OPERATOR

Proposed Model Enhancements

Public	Weight
Qualitative Assessment:	15%
Quantitative Assessment:	
Market Indicators	
Absolute CDS Spread	21.3%
Relative stock decline from 3 mo. High	4.3%
Stock return volatility (3 mo. Stdev)	12.7%
Performance	
Revenue / Market Cap	12.7%
Retained Earnings / Assets	8.5%
Debt Coverage	
Total debt / EBITDA	12.7%
Leverage	
Debt / (Total Debt + Equity)	8.5%
Liquidity	
Cash / Total Assets	4.3%
	100.0%

Public	Weight
Qualitative Assessment:	15%
Quantitative Assessment:	
Market Indicators	
Absolute CDS Spread	21.3%
Relative stock decline from 3 mo. High	4.3%
Stock return volatility (3 mo. Stdev)	12.7%
Size	
Total Assets	12.7%
Performance	
Retained Earnings / Assets	8.5%
Debt Coverage	
Total debt / EBITDA	12.7%
Leverage	
Debt / (Total Debt + Equity)	8.5%
Liquidity	
Cash / Total Assets	4.3%
	100.0%

Next Steps

▪ BIC	September 2018
▪ MC	September 2018
▪ Board of Directors	October 2018
▪ FERC 205 Filing	October 2018

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system

www.nyiso.com

NEW YORK INDEPENDENT SYSTEM OPERATOR