

Proposed Change to Unsecured Credit Scoring Model

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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.

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 its 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.

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%



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Next Steps

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

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- 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



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