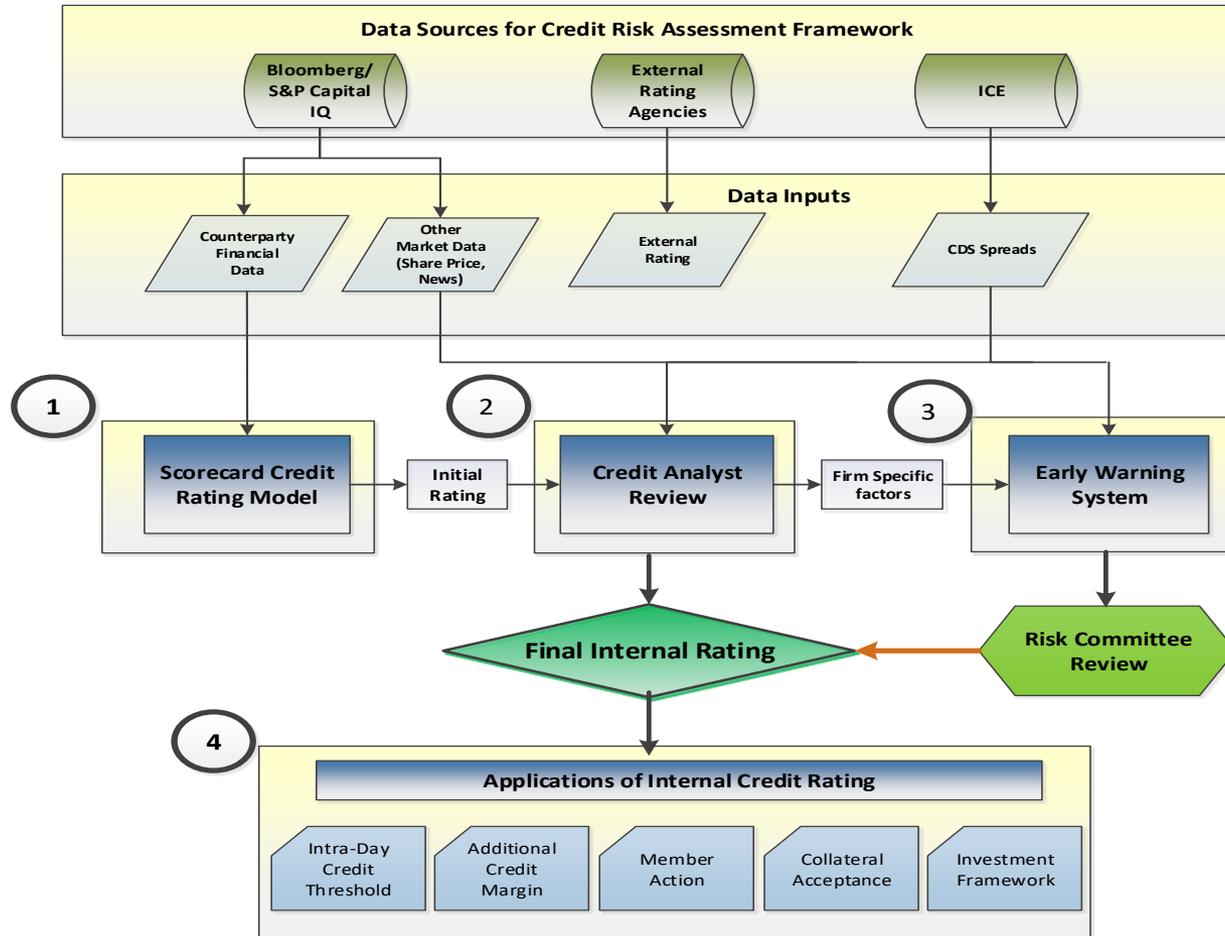


Credit Risk Assessment Framework

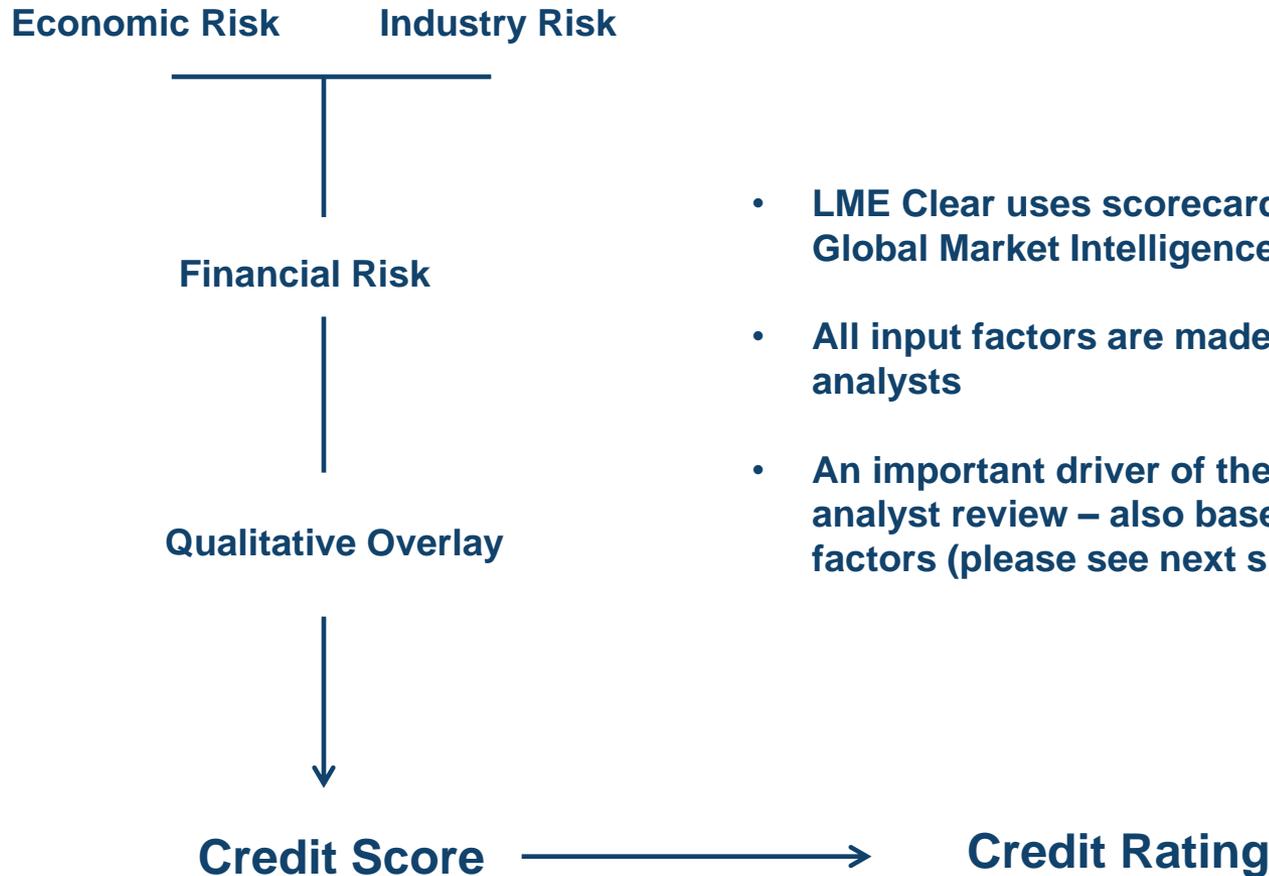
Credit Risk Assessment Framework

A consistent, transparent and dynamic approach driven by LME Clear's credit judgement to 1) Assess, 2) Quantify and 3) Monitor, the level of credit risk LMEC is materially exposed to from each counterparty it deals with.

The assessment framework will drive member limit setting, collateral and investment decisions, with the goal to prevent credit loss.



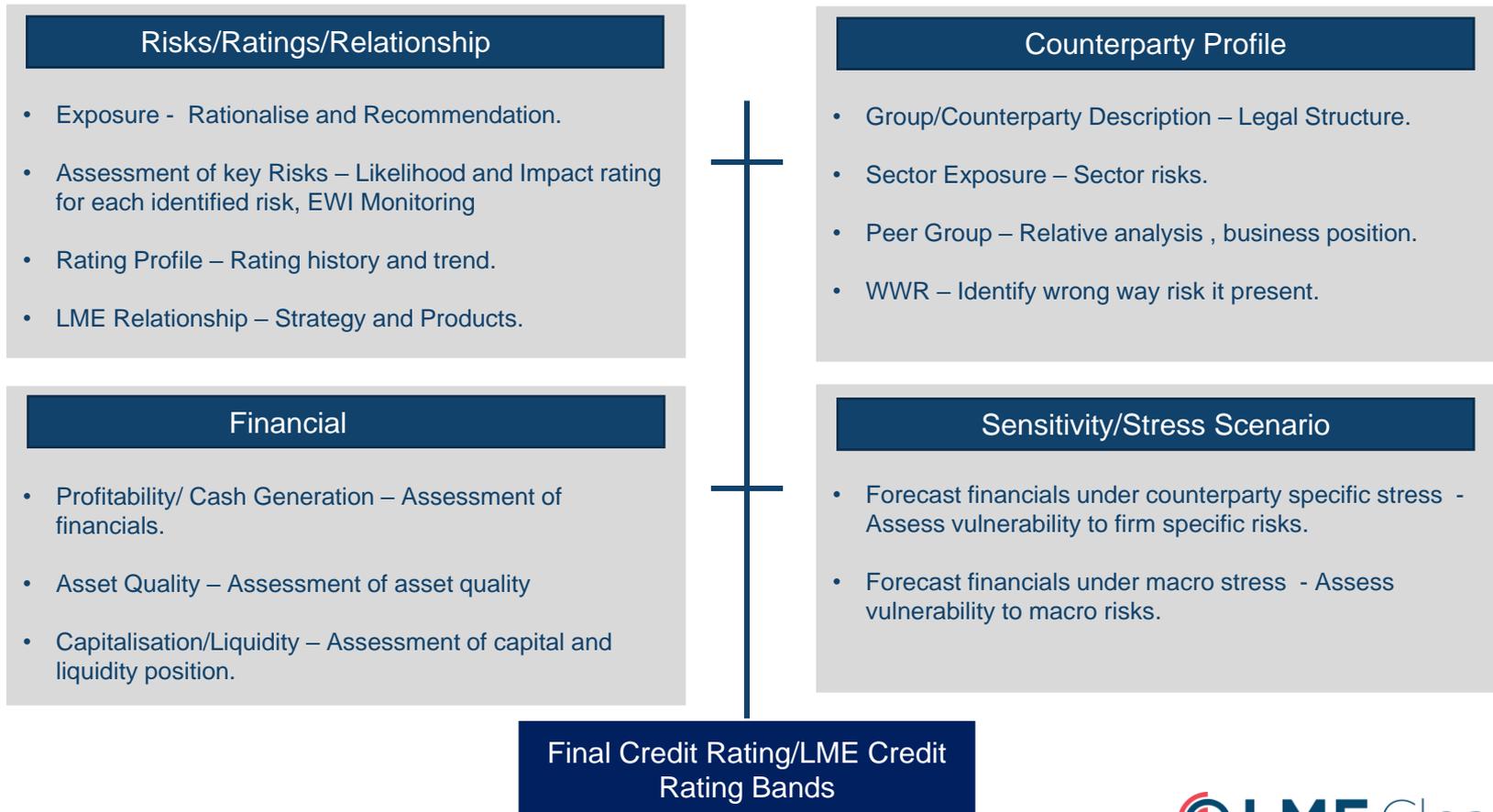
Credit Scorecard Model Process



- LME Clear uses scorecards provided by S&P Global Market Intelligence
- All input factors are made / validated by credit analysts
- An important driver of the rating is the credit analyst review – also based on qualitative factors (please see next slide)

Credit Analyst Review

- Rationalise counterparty risk against relationship type
- Identify Counterparty Specific Key Risks
- Justify model factors and confirm credit rating from scorecard
- Provides a full audit trail of the credit assessment process and decision



Early Warning Indicators (EWI)

Identify and monitor credit deterioration for both public and private counterparties based on real time market information

Indicators

Public companies	Private companies
<ul style="list-style-type: none">• External Rating Agency Downgrades• News• Margin performance• Market data:<ul style="list-style-type: none">- CDS prices- Share price	<ul style="list-style-type: none">• External Rating Agency Downgrades• News• Margin performance

Data sourced from ICE (CDS), Bloomberg (Other Market Data), External Rating Agencies

Internal EWI Model Calibration

Credit Cycle Time Series Analysis

Determine the appropriateness of each market instrument as a measure of credit quality.

Optimisation

Set EWI triggers to generate the optimal level of warnings with the least amount of “false alarms”

Sensitivity Analysis

Calibrate to our portfolio characteristics and ensure effectiveness.

LME Clear Rating Scale – Minimum Member Rating

Rating Scale

- LME Clear operate on an internal Rating Scale from 1 to 10.
- 1 is the best rating (AAA/AA+ equivalent) and 10 is the rating of a defaulted entity (D equivalent).

Minimum Rating

- The minimum required rating for new LME Clear Members is 6
- LME Clear considers that an internal rating of 6 represents the appropriate balance between a broad participation and an appropriate risk profile for LME Clear and its members.

Remediation Tools for Members below the minimum rating

Rating Advice

- A downgrade below the minimum rating and the implications will be discussed with affected member, taking account of relevant Anti-Procyclicality considerations.
- LME Clear may make recommendations how the affected member can improve their internal rating, and the member should comply with the recommendation.
- As a general guide, LME Clear will only accept exposure to members below the minimum rating on a temporary basis.
- Compliance with LME Clear's credit standards is a requirement of the LME Clear Rules. Where a member falls below the minimum standards, particularly on a prolonged or repeated basis, LME Clear reserves the right to take appropriate action against the member, including, but not limited to, investigation and disciplinary action for breach of the Rules.

Additional Margin / Exposure Management

- LME Clear will protect itself against increased counterparty risk by calling for additional credit margin.
- The additional margin is charged on a sliding scale in accordance with Anti-Procyclicality considerations based on stress testing losses above margin requirements.
- Any exposures to members where there are material credit concerns will be under heightened scrutiny at the CCP. LME Clear will manage these through the application of the following toolkit so that there will be no significant impact on the CCP and the other members:
 - Exposure Control
 - Additional Reporting
 - Collateral Management