



VERSION 1.0

Value Rating System for the Green Building Industry

Buildings Certified to Consensus Standards

Green Building Industry Value Rating System®

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This document falls within the exclusive jurisdiction of
the MTS Economic Benefits Committee

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EXECUTIVE SUMMARY: Certified green buildings have captured upwards of 5% of the US commercial new construction market since 2000 and continue to grow at a 50-70% annual rate. The *Green Building Industry Value Rating System*® prepared by finance, legal and environmental experts shows that green buildings are more valuable and less risky than standard real estate assets. Real estate value is a combination of cash flow, timing and risk. Green buildings positively affect all three of these metrics.

Relevant factors for rating green buildings by the Rating Agencies have been quantified in a rating matrix evaluating 15 Risk Categories according to the following five Risk Factors:

1. Aggregated dollar size of risk
2. Potential for increasing risk over time
3. Reduced liability and litigation risk including transaction costs
4. Insurance risk from no or diminished coverage
5. Obsolescence risk / higher valued collateral

Scores are adjusted based on historical data available and business experience. A cumulative risk score is given showing a higher adjusted net score for certified green buildings after considering evaluation criteria for ratings, and accounting for data quality and quantity

Rating agencies serve their customers by accurately assessing various risk features of investments including tangible financial / default risks, as well as intangible risks that materially affect the underlying collateral. Rating agencies have a legally based fiduciary duty to their clients and the capital markets to incorporate various risk and risk reduction measures into their overall ratings for equity and debt financial instruments and issuances (Investment Advisors Act of 1940, & *The Investor's Advocate: How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital Formation*, SEC 2006). Further, the laws in countries with capital markets require that this risk be reflected. (Legal Framework, Freshfields Law Firm & UNEP 2005).

A CMBS Credit Rating "is an opinion on the ability of the collateral to pay interest on a timely basis and to repay principal by the rated final distribution date, according to the terms of the transaction," (S&P's CMBS Property Evaluation Criteria 2004 at 9). Long term issue credit ratings like AAA, AA, A, etc., are expressed in terms of default risk. (Id).

In order to validate any improvement in performance of CMBS loans secured by LEED buildings, the metrics used in CMBS default models should be considered, especially the preeminence of the debt coverage ratio which in turn is driven by underwritten cash flow. It is worth noting at the outset that CMBS is in many ways driven by diversification and the laws of large numbers, with hundreds of assets in a pool necessitating a quantitative and statistical approach to measuring risk. One consequence is that the securitization process tends to put more emphasis on objective and quantitative measures (such as DSCR and LTV) vs. subjective, harder-to-quantify measures (such as quality of the asset and location, construction features, etc. which may include many potential "green" attributes). Examining the LEED categories of green building performance through the lens of CMBS real estate risk underwriting and sustainable cash flow may therefore be helpful in establishing a framework for evaluating these assets from a "green CMBS" perspective.

Green building investment standards are needed to advise investors on evolving best practices regarding investment approaches and risk reduction measures. Recent market events have led to the recognition of the value of green and sustainable technologies as evidenced by the continued growth of green building registrations and certifications, mandates by federal, state and municipal government, and various market measures including Fireman's Fund which now provides a 5% insurance discount for certified green buildings and Nationwide and Farmers Insurance who provide a 10% discount for hybrid vehicles.

The *Green Building Industry Value Rating System*® shows the greatest qualitative and quantitative value for:

- Mold protection (**VERY HIGH: 26, adjusted total score**)
- Reduced energy use and exposure to future energy pricing volatility (**VERY HIGH: 25**)
- Reduced climate risk (**VERY HIGH: 24**)
- Commissioning/Operational risk (**HIGH: 17**)
- Improved indoor air quality and health (**HIGH: 17**)
- Lower operating costs and default risk (**HIGH: 17**)
- Improved tenant productivity and a corresponding increase in rents (**MEDIUM: 11**)

The greatest green building risk reduction accrues from (in order):

- Decreased dollar risks over time
- Reduced large dollar risks
- Increased collateral value / reduced obsolescence risk
- Reduced default risk from no or diminished insurance coverage
- Reduced liability risk

In addition to cited references throughout this Report, the Bibliography in Appendix 1 contains many references supporting the conclusions in this Report and are listed in the following categories:

- Commissioning
- Productivity
- Energy Costs / Trends
- Indoor Air Quality
- Carbon Emissions / Energy Cost Potential
- Climate Change
- Green Building Research Papers
- Business Opportunities
- Market Acceptance