What is “Green” in the Real Estate Finance?

1. Best business practices
   - Maximize efficiency aspects in construction / operations
   - Minimize waste and costs
   - Capture ‘free’ inputs from natural environment
   - Increased architect / engineer / contractor coordination

2. Mark of high-quality construction and asset value via several third-party verification processes

3. A product differentiation marker based on:
   - Energy/ water operational cost savings
   - Reduced exposure to energy/ water price volatility
   - IEQ and associated health benefits
   - Building amenities
   - Asset quality
Industry Initiatives - COSTAR
Office Market

Is it a Green building......
...or is it a Brown building......

COSTAR Asset Information
Transparent / Effective Metrics Essential

CFO Research Services / Jones Lang LaSalle Report
March 2008

Top Sustainability Priorities
• Improve energy efficiency
• Reduce carbon footprint
• Reduce environmental impact of operations
• Manage risk

Barriers
• Lack of decision framework / tool
• Not integrated into financial management and control systems
• Inability to measure effect on shareholder value / investor returns

Respondent Quote
“As more efficient measuring tools are created and utilized, finance’s role in sustainability efforts will be greatly enhanced.”

Survey Metrics:
175 responses - senior finance executives
95% from companies w/ over $500MM revenue
Underwriting Limitations / Constraints

**LEED-EB:OM Gold**
- Energy Star Score = 98
- Water Efficient [WEc1, WEc2, WEc3]
- Transit Oriented [SSc4]

Owner / Borrower

Rincon Center
San Francisco CBD

Lesser of Actual or ‘Market’

**LEED-EB:OM Gold**
- Energy Star Score = 98
- Water Efficient [WEc1, WEc2, WEc3]
- Transit Oriented [SSc4]

Mark-to-Market
- What is ‘Market’
- Guilty by association with non-efficient peer group
Lack of Transparency

**Owner / Borrower**

- Primary Market
  - Lenders
  - Equity Investors
  - Investment Managers

**Secondary Market**

**LEED-EB:OM Gold**
- Energy Star Score = 98
- Water Efficient [WEc1, WEc2, WEc3]
- Transit Oriented [SSc4]

**Mark-to-Market**
- What is ‘Market’
- Guilty by association with non-efficient peer group

**Transparency**
- How to differentiate asset / portfolio risk profiles

---

**Green Building Underwriting Consensus Standard**

**Decision Tool**

- Risk Management
- Investment Performance

**Reporting**
Capital Market Focus on “Green”
Financially Tangible Asset Attributes

1. Energy efficiency
2. Water efficiency
3. Location aspects
   - Transit orientation
   - Pedestrian accessibility
   - Neighborhood amenities
4. Indoor environmental quality
5. Market position
   - Tenant preferences
   - PR advantages
6. Obsolescence risk
   - Approaching bifurcated market – Green vs. Brown

Green Building Underwriting Standard
Principals

1. Performance based
2. Easy to analyze / simple to implement
3. Disciplined
   - Tangible financial impacts
   - Acknowledgement of intangible value
4. Utilize/ recognize consensus industry standards
5. Third-party verified
Green Building Underwriting Standard

In Practice: Underwriting Overlay

- Request additional key information pieces during underwriting
- Incorporate information data points
  - Decision processes
  - Reporting
- Does not materially change current underwriting practices

“If you cannot measure, report, and verify......
......you cannot manage it”

Importance of Consensus Standards

- Reduces risk and uncertainty
  - Building industry regulation mechanism since 1898
    - Tensile strength of steel
    - Compaction of backfill
    - Pipe threads
  - Over 10,500 ANSI industry standards exist today
- Represents “best thinking” of industry practitioners
  - Broad and active participation
  - Process engagement results in buy-in
- Eliminates market barriers to adoption
- Facilitates commerce
- Government reliance on industry standards
  - Market-based / independent
  - Utilize industry standards in lieu of government regulation

- Reduce Risk
- Improve Quality
- Decision Support
- Public Safety
- Consumer Protection
CMP Green Building Underwriting Structure

- Recognizes and incorporates existing industry standards
  - Comprehensive
  - Transparent
  - Market-driven
  - Consensus-based

- Standards - three pillars
  - EPA Energy Star
  - USGBC LEED Rating System
  - MTS Climate Neutral

- Performance based
  - Energy
  - Water
  - Indoor environmental quality

- Third-party verification requirement
  - Self-Regulation = No Capital Market Acceptance / Confidence

EPA EnergyStar - Overview

- Government-backed program helping businesses and individuals achieve superior energy efficiency

- Energy performance rating tools
  - EnergyStar Portfolio Manager (existing buildings)
  - EnergyStar Target Finder (new construction)

- Scoring system of 1-100
  - Commercial buildings
    - Bell curve based on statistically significant comparative data set
    - Higher score is better
      - Median = 50
    - EnergyStar Certified buildings score 75 or higher
  - Residential buildings
    - Based on energy consumption / HERS test
    - Lower score is better
Energy Star – Not Just For New Assets

Built in 1927

Energy Star – Building Distribution

<table>
<thead>
<tr>
<th>Energy Star Score</th>
<th>90</th>
<th>75</th>
<th>50</th>
<th>25</th>
<th>10</th>
<th>1</th>
</tr>
</thead>
</table>

kBtu/SF/Year

| 29.9 | 86.0 | 121.1 | 165.7 | 339.4 |

Number of Buildings

Best Performers

Energy Intensity

Carbon Intensity

Worst Performers

ENERGY STAR Performance Rating
Buildings vs Autos – Energy Usage

<table>
<thead>
<tr>
<th>Energy Star Score</th>
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ENERGY STAR Performance Rating

Best Performers  
Energy Intensity  
Carbon Intensity  
Worst Performers

USGBC’s LEED™ Rating System
Leadership in Energy and Environmental Design

Environmental Responsibility Defined For Buildings
• Answers question: “What exactly is an environmentally-responsible building?”  
• Third party certification of environmental achievement

LEEDv3
• Point-based system  
• Broken into categories

- Sustainable Sites: 26 Points  
- Water Efficiency: 14 Points  
- Energy & Atmosphere: 35 Points  
- Materials & Resources: 10 Points  
- Indoor Environmental Quality: 15 Points  
- Innovation in Operations: 6 Points  
- Regional Priority: 4 Points  

TOTAL POSSIBLE POINTS: 110 Points
US Green Building Council
3rd Party LEED Certification for Green Buildings

Consensus-based, transparent national standard

USGBC Mission:
To promote the design and construction of buildings that are environmentally responsible, profitable, and healthy places to live and work.

Climate Neutral Certification
Consensus-based national standard
Certifies carbon neutrality

Certification process:
- Audit baseline energy use
- Implement efficiency measures
- Address remaining energy use:
  1. Install onsite renewable energy;
  2. Purchase “Green-e” renewable energy;
  3. Purchase/retire “Green-e” REC’s; and/or
  4. Purchase annual emissions offsets based on the Cleaner and Greener® program requirements
- Certify by accredited 3rd party professional
Final Analysis
Capital Markets Partnership Green Score Formula

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<th>Score</th>
<th>Value Ratio</th>
<th>Adjusted Score</th>
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<td>ENERGYSTAR Score</td>
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<td>CERTIFIED</td>
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<tr>
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CMP GREEN SCORE 100%

Performance - Portfolio Level

Implementation Benefits
- Risk reduction
- Transparent reporting
- Increased brand value
- Increased competitive advantage
- Capital attraction
- New product possibilities

Non-Implementation Risks
- Sub-optimal risk management
- Inadequate disclosure
- Fiduciary abdication
- Lost business opportunities
Performance - Asset Level

- Increased cash flow
  - Revenue and expense side
    - Debt Service Coverage Ratio
    - Loan-to-Value buffer
- Cap rate adjustments
  - Positive (at minimum neutral)
- Investor demand
  - Requires transparent tracking/reporting
  - Capital attraction to risk reduction

Implementation Example - CMP Green Score

2000 Tower Oaks Blvd - Washington DC Suburban Office

Washington DC Suburbs: Rockville
Super Class A Office: 2008
LEED Rating: Platinum
LEED Points: 48 pts
Height: 9 Stories
Gross SF: 198,000
Floorplate SF: 23,000
# 2000 Tower Oaks - LEED Platinum

## Implementation - 2000 Tower Oaks
Capital Markets Partnership Green Score Formula

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<tr>
<td>CMP GREEN SCORE</td>
<td>100%</td>
<td><strong>82.6</strong></td>
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</table>
**Expected Distribution**

**CMP Green Value Score**

- **Top Quartile**
- **2nd Quartile**
- **3rd Quartile**
- **Bottom Quartile**

**CMP Score Distribution**

Assets with very high CMP scores indicate:
1. Reduced exposure to energy cost volatility
2. Superior location attributes
3. Reduced obsolescence risk
4. Greater leasing prospects upon lease churn
5. Reduced liability exposure to IAQ issues

How financiers should assess a CMP Green Value Score:

- **CMP > 70**  Sharpen your pencil to win the deal
- **CMP > 50**  Take keen interest in this well-managed asset
- **CMP > 25**  Better than average - pay attention to capital upgrades
- **CMP < 25**  Be prepared for a re-price at time of sale / finance
- **CMP < 20**  Call the engineers, commissioning agents, architects, etc.
- **CMP < 15**  You have your work cut out for you......
Why This Matters to Financial Markets
Risk Management / Transparency / Investment Performance

Occupancy Rates – Office

Source: CoStar Analytics

Why This Matters
Risk Management / Transparency / Investment Performance

Occupancy Rates – Office

Source: CoStar Analytics
Why This Matters
Risk Management / Transparency / Investment Performance

Direct Rental Rates - Office

Source: CoStar Analytics

Difference = $2.32
Difference = $3.80
Difference = $4.73

EvolutionPartners.com
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Urban Green Expo 2010 - NYC
September 28, 2010
Why This Matters
Risk Management / Transparency / Investment Performance

Source: CoStar Analytics

Occupancy Rates – Office

Source: CoStar Analytics
Several Academic Studies - Similar Results

- CoStar Building Peering Study (2007)
- Miller, Spivey, Florance (2008)
  - EPA Energy Star Partner of the Year
  - American Real Estate Society Best Paper 2008
- CoStar Building Peering Study - Update 1 (2008)
- Fuerst and McAllister (2008)
- Eicholtz, Kok & Quigley (2008)
- CoStar Building Peering Study - Update 2 (2009)
- Pivo & Fisher (2009)

Note: CoStar continues to make its data set available to academic researchers for further analysis.

Rents - Green Premium vs. Brown Discount

Leading green companies were asked if they would pay a premium for an LEED or Energy Star rated building
- PNC Bank
- IBM
- Toyota
- Cisco
- Others

Response:

NO......but all would pay a discount for buildings that were not environmental friendly and efficient

Q: Does ‘green’ equal a premium.....or does ‘non-green’ require a discount?
Bottom Line – CMP Green Score
Real Estate Finance Industry Adoption

1. Improved risk-adjusted decisions

1. Demonstrate positive voluntary industry progress

2. Pre-empt government regulations

“We are concerned that the corporate oversight of AIG Financial Products......lacks critical elements of independence, transparency, and granularity.”

- Office of Thrift Supervision
March 10, 2008

What Do I Do?

• Don't wait for perfect data - it will be too late
  - Too many moving parts in a real estate deal [leasing / sales]

• Get the asset’s Energy Star score / CMP Score

• Determine ways to increase Energy Star score

• Analyze asset’s LEED-EB:OM rating potential
  - Points completely off the table
  - Points achievable
  - Points that are stretch goals

• Pursue LEED-EB:OM

• Create ongoing corporate policies in line with capital market expectations
What’s Next For CMP

• CMP Green Score Technology Platform
  - Automated internet-based scoring / reporting system
    • In design / early development
  - Ease of use for score determination and report generation
  - Comparative database results in:
    • CMP Raw Green Value Score
    • CMP Index Green Value Score
    • Comparisons by property type / geographic region

Final Thought
Finance Industry and Sustainability

The finance industry prides itself on seeing the road ahead......

It cannot be done while using the rear view mirror......
For more information on the Capital Markets Partnership please visit:
CapitalMarketsPartnership.com

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