CAPITAL MARKETS BRIEFING PAPER

Business Case for Commercializing Sustainable Investment

- Green & Climate Neutral Buildings
- Green Equity & Building Securities
- Certified Sustainable Manufactured Products
- Improving Investor Confidence
- Reduced Risk & Higher Valued Collateral
- Cheaper Cost of Capital & Enhanced Liquidity
- Green Building Underwriting Standards
- Economic Stimulus & Innovation
- Social Benefits Including Climate Change, Energy & Global Security

Capital Markets Partnership

Acting Now to Secure a Healthy & Prosperous Tomorrow

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CAPTIAL MARKET BRIEFING PAPER

Business Case for Commercializing Sustainable Investment

Capital Markets Partnership

peer review completed July 2009

The Partnership expresses its appreciation for assistance in the preparation of this Report to:

Bank of America Foundation
JPMorgan
Energy Foundation
anonymous foundation (green affordable housing)
Federal Home Loan Bank

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Ms. Tobias is founder and principal of Malachite LLC (www.malachitellc.com), an advisory firm specializing in green real estate development, investment, finance, leasing and property operations. Before founding Malachite LLC, Ms. Tobias served as an investment manager for nationally-ranked pension real estate funds holding green and conventional commercial real estate projects, and as a capital markets expert at the Mortgage Bankers Association. In addition to her work with private clients, she is a sought-after international speaker on green real estate investment. Ms. Tobias has been active in institutional commercial real estate markets for over 20 years, and holds an MBA from the Wharton School at the University of Pennsylvania and a Master's of Public Affairs degree from Princeton University. She is one of the few real estate investment experts to hold the LEED Accredited Professional designation from the U.S. Green Building Council.

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Ms. Italiano is Managing Principal of Merintra Co., LLC, a strategic business and market development consulting firm that she founded in 2003. Prior to founding Merintra Co., she spent 15 years on Wall Street leading large scale change initiatives related to governance and strategy alignment for both Morgan Stanley and Chase. In that capacity, Ms. Italiano's program management responsibilities also included new product development, market roll-outs and operational infrastructure implementations that supported business strategy. Ms. Italiano now works with clients to build their business and brand equity through sustainability measures, value creation and market related risk management practices. Ms. Italiano received her BS from Pace University, New York City.

Executive Summary

This Briefing Paper sets forth the results of the work of the Capital Markets Partnership (the Partnership or CMP) to complete foundational due diligence for its Sustainable Investment Initiative. The mission of the Sustainable Investment Initiative is to launch a suite of green building and other sustainable finance products and to summarize the business case on which the due diligence rests.

The environmental and economic findings of this due diligence are summarized below, and conclude that green buildings, certified sustainable manufactured products and sustainable investments are more profitable than conventional, substantially reduce risk, provide much needed social benefits, and are preferred by investors in the Survey initiated with S&P included this Paper covering over $3.3 trillion in assets.

CMP is a balanced, nonpartisan and nonprofit coalition of 70 investment banks, investors, professional firms, local, State, and federal governments, countries and non-governmental organizations (NGOs). In 2009, CMP completed a four year, $700,000 due diligence effort to accelerate the introduction of a broad array of green building and other sustainable finance products, including:

- Direct mortgage, construction and rehabilitation loans for commercial and residential properties
- Structured finance products including Green Building Securities (GBS) and Green Convertible Securities
- Pooled green real estate debt and equity funds and investments for the private and public markets
- Insurance and asset management products and services for green buildings

In completing this due diligence effort, the Partnership is tackling the critical and immediate priorities of:

- Stimulating the global economy while promoting energy efficiency, renewable energy, and energy security
- Promoting product innovations in the capital markets
- Providing higher-quality collateral to the real estate finance sector and securities markets, thereby facilitating new securitization opportunities, increased investor confidence and capital attraction and enhanced liquidity
- Stopping imminent, irreversible, dangerous climate change as identified with the State of California and IPCC scientists, and as defined by Moody's and the Mortgage Bankers Association "as a serious credit risk"
- Greatly enhancing global sustainability

In March 2009, peer review of this Briefing Paper was initiated by the following 20 leaders from prominent financial institutions, environmental groups, professional firms, associations, and government:

- **Hon. Gavin Newsom**, Mayor, City & County of San Francisco, representing the US Conference of Mayors, Chairman, Capital Markets Partnership
- **Lauralee Martin**, Global COO / CFO, Jones Lang LaSalle
- **Jeff Perlowitz**, Citi Global Head of Securitized Markets
- **Lewis Jones**, Managing Director, JPMorgan
- **Carl Pope**, Executive Director, Sierra Club
- **Mario Silvestri**, Vice President, Wells Fargo Wachovia, Vice Chairman, National Consensus Green Building Underwriting Committee
- **Corey Brinkema**, President, Forest Stewardship Council
- **Toby Rittner**, President & CEO, Council of Development Finance Agencies
- **Larry Schweiger**, President & CEO, National Wildlife Federation
- **Dr. Matthew Kiernan**, CEO, Innovest Strategic Value Advisors
- **Jeff Telego**, Co-Executive Director, Environmental Bankers Association
- **Robert Dischert**, President, Clean Planet Funding
- **Phil Harrison**, Chairman & CEO, Perkins+Will
- **Bill Valentine**, Chairman, HOK
- **Bob Bailey**, Chief Underwriting Officer & Sr. VP, Fireman's Fund / Allianz
- **Anne Laird-Blanton**, ALB Designs, Director, American Institute of Architects
- **Ken Willis**, Sr. VP & Director, Federal Home Loan Bank Boston, Vice Chairman, National Consensus Green Building Underwriting Committee
- **Paul Epstein**, MD, MPH, Harvard University Medical School, Center for Global Health & Environment
- **Bill McInerney**, Partner, Cadwalader, Wickersham & Taft, LLP, Chairman, CMP Sustainable Investment & Financing Committee
- **John Eric Nelson**, Managing Partner, Wall Street Without Walls

Peer review was completed in July 2009, all comments were positive, no substantive changes were made, and the Paper was finalized.

As part of the peer review, the Briefing Paper and Background Documents were transmitted to all 70 CMP Partners and about 200 interested parties. The Background Documents are:

- *Creating and Economic Stimulus While Stopping Climate Credit Risk / Irreversibility©*
- National Consensus *Green Building Underwriting Standards*
- *Green Building Value Rating System© 2.0*
- US Conference of Mayors Resolution Supporting the Sustainable Investment Initiative
- Peer reviewed *Economic Benefit Standard©* for Green Buildings, Clean Vehicles & Certified Sustainable Manufactured Products

The March 19, 2009 peer review letter from the 20 leaders above, noted that this Briefing Paper is to be released to top management at the New York Stock Exchange (NYSE). This NYSE Meeting and Press Conference releasing the Paper have been confirmed and are scheduled for August 18, 2009.

Based on successful precedent and quantified benefits, the launch of a full array of green real estate finance products, including green mortgages, construction and rehabilitation loans, real

estate equity investments, pooled funds, GBS, and allied insurance and asset management products and services, are expected to add as much $1 trillion annually to the global economy in financial, health and productivity benefits.

CMP expects that the growth of the green real estate market and sustainable investment, including new finance and investment products, will:

- Generate significant economic, environmental and social benefits at the community, national and global levels
- stimulate the demand for certified sustainable manufactured products and for climate neutral investments

Partnership Due Diligence. Due diligence activities completed by CMP through 2008 include:

- **In Person Briefings & Consultations With Over 60 Leaders**
- **LEED and ENERGY STAR Building Finance Summit.** The Summit represented over $100 billion in real estate investment. Based on debt and equity sessions, case studies and market research, participants concluded that green buildings are more valuable than conventional real estate. The rating agencies were briefed on these results and they encouraged investment bank participation in additional due diligence.
- ***Green Building Industry Value Rating System 2.0©.*** The Rating System demonstrates that certified green buildings create investment value and reduce investment risk on a broad array of criteria, including building energy usage, economic measures relating to rental revenues and cost-effective operations, environmental and occupant health factors, and tenant productivity. As well, the Rating System demonstrates that the benefits of green buildings significantly outweighed the risks. The only risks identified were those typically associated with transient factors stemming from green building growth and adoption pains within the marketplace. As industry experience with green buildings continues to mature, these risks should diminish significantly. Investment banks participated in this activity, and CMP and Citi submitted this Report to the rating agencies recommending GBS.
- **Citi / CMP Recommendation to S&P to Commercialize Green Buildings**
- **Economic Stimulus Report.** In partnership with the State of California and Stanford University including Steve Schneider, Ph.D, who wrote Chapter 13 of the most recent Intergovernmental Panel on Climate Change (IPPC) Report and received the Nobel Peace Prize, the Partnership developed the peer-reviewed report: *Creating an Economic Stimulus While Stopping Climate Credit Risk / Irreversibility©*. Based on successful precedent and quantified benefits, the report projects that the growth of the global green building industry could produce annual economic, health and productivity benefits of $1 trillion per year within a five-year period, while stopping climate change credit risk / irreversibility as defined by Moody's and the Mortgage Bankers Association. The White House May 2008 Climate Change impact Report is consistent with this CMP Economic Stimulus Report's documentation of substantial economic damage that would affect every sector of society. This substantial damage to public health, environment and economy can be greatly ameliorated by stopping climate credit risk / irreversibility, i.e., imminent, runaway dangerous climate change.

- **Investor Market Research.** The Partnership completed investor market research assessing market interest in green real estate finance products. Respondents represented investment management organizations with assets under management of over $3.3 trillion and real estate investments under management of over $350 billion. The survey respondents, as a group, declared their interest in or the intention to deploy additional capital in the green real estate arena, with investment dedicated to each organization's area of specialization. Interest spanned the full array of real estate investment products, including direct loans, structured finance including GBS and equity investments, pooled private and public funds. Respondents are listed at the end of this Executive Summary, and also indicated the need for authoritative standards to guide investment in the green real estate segment. Social responsible investor (SRI) respondents specifically suggested the need for more fixed income product choices as current choices are rather limited.
- **National Consensus *Green Building Underwriting Standards*©.** Following American National Standards Institute (ANSI) Guidelines, the Partnership unanimously approved national consensus underwriting standards identifying a *CMP Green Value Score*© for single assets and portfolios. The Standards are being used by JPMorgan, Comerica Bank, Transwestern, Jones Lang LaSalle, CB Richard Ellis, Freddie Mac green building underwriting and Federal Home Loan Bank. Consensus standards are important to ensure transparency and consistency in evaluating sustainable investments, reduce risk and uncertainty, and are thus required by the capital markets. FHLB and CMP are working to have the Bank adopt the Standards for Green Affordable Housing Underwriting to stimulate this very important market segment and provide substantial social equity and economic benefits. CMP is also working with its Country Partners to have them also adopt the Standards for Green Affordable Housing globally.
- **Industry Support Activities Including Discounted Insurance & GBS Support**

"*I'm very pleased to work with all Mayors to accelerate green building and sustainable product investment*," said **San Francisco Mayor Gavin Newsom**, a Capital Markets Partnership leader and Officer. "*Like San Francisco, many other cities that have adopted LEED are extending it to the private sector. Wall Street's Sustainable investment makes private sector LEED requirements even better for business, and I know San Francisco's business leaders are enthusiastic about Wall Street's investment support.*"

According to **Mike LaRocco, CEO, Fireman's Fund**, an Allianz company, *"To promote loss control, Fireman's Fund uses LEED as a basis for its underwriting and discounted insurance. A clearly defined standard is an important first step. We are glad to see that sustainable investment is no longer a fad, but a real economic driver in this economy."* The CMP also uses LEED that is reflected in its National Green Building Underwriting Standards.

"*These are international consensus Standards for financial institution and investor adoption*," says **Mike Italiano, CEO, Capital Markets Partnership**, the non-profit behind the underwriting standards. "*This is a clear signal that investors and cities want to shift to sustainable investment to improve the economy, environment, climate change and energy security while fulfilling their fiduciary duty*."

Jeff Perlowitz, Citi Head of Global Securitized Markets says "*We were pleased to facilitate the due diligence process by providing Standard and Poor's and the market with documented*

evidence that investments in green buildings reflect less risk and provide added value. A nonprofit public charity like the Partnership consisting of investment banks, investors and government, is an excellent way to transparently disclose value and increase investor confidence in the due diligence through an accredited and audited consensus process."

According to **Mario Silvestri, Vice President, Wells Fargo Wachovia, and Officer, CMP National Underwriting Committee**, "*Wachovia looks forward to collaborating with US Mayors through the Capital Markets Partnership to further green building investment, increase jobs, and stimulate local economies. We're proud to be a participant in the Partnership's due diligence activities initiated at the Green Building Finance Summit. Along with the Green Building Value Rating System©, the Underwriting Standards provide a viable tool from which to gauge the added market value for green buildings and greatly facilitates this process.*"

CMP Outreach, Strategic Partners & Market Support. CMP has performed significant outreach, briefing and solicitation of advice on CMP activities from over 60 financial, government, academic and nonprofit organizations.

To accelerate green real estate investment CMP worked with its Partners and secured discounted green building insurance for this market from leading providers, and data and analytic support from national expert organizations.

At its 76th annual meeting in June 2008, the U.S. Conference of Mayors adopted a Resolution of Support for CMP and its Sustainable Investment Initiative, recognizing the urgent need for the capital markets to invest in green and climate neutral buildings and certified sustainable manufactured products, and to develop sustainable investment vehicles in service of this objective. Sustainable manufactured products are those best for the environment, economy and social equity across the global supply chain.

Economic and Environmental Findings. This report also reviews independent research on the economic benefits and market growth of the green building finance and sustainable investment industries, as well as on these sectors' environmental benefits. Key findings are the following:

- **Commercial and residential occupants will pay premiums for green properties.** 2007 global data collected by CoreNet Global and Jones Lang LaSalle demonstrate that 7 of 10 commercial occupants will pay a rental premium to occupy space in a green property. RCLCO's 2007 study of American homebuyers found that majorities of homeowners would pay a premium for a green home, provided that the premium was paid back in five years. Some homebuyers– including 41% of buyers motivated by health and wellness– would pay a premium even if no payback was received.
- **Aggregate data on building performance suggest that green buildings command higher rents, occupancy and sale prices.** The bulk of the aggregate data are drawn from information assembled by CoStar Group, the real estate information reporting service. Analyses performed by CoStar, RREEF and the University of California at Berkeley suggest that rental rates, occupancy levels and sales prices are higher for certified green buildings. The aggregate studies appear to validate earlier case studies suggesting accelerated leasing and periodic rental premiums for green buildings.
- **The green real estate investment market is sizable and profitable for financial institutions.** The green building market is growing far more rapidly than the U.S. and global economies. Despite this growth, occupant demand continues to outstrip

available supply. 2007 findings from the global CoreNet Global/Jones Lang LaSalle study indicate that 84% of corporate occupants believe that the supply of green buildings is non-existent, minimal, limited or patchy in the markets in which they operate. Further accelerating market growth are long term rising conventional energy prices, regulatory changes and concerns about climate change. The data suggest that the green building sector will be characterized by strong growth, limited supply and strong demand over the next several years (TIAA-CREF Asset Mgmt. Report July 2008). Green building investment is down in 2009 due to the economy, but it is holding up much better than conventional real estate investment.

- **Green real estate has the potential to reinvigorate the securities market.** Based on market evaluation with Partner investment banks, there are an estimated 800,000 green homes and 100,000 green commercial buildings available for GBS pools. Green buildings represent higher-quality collateral than conventional properties due to more reliable engineering, operational savings, strong financial performance, and borrower and occupant characteristics that reduce risk. From a policy and economic perspective, continuing efforts to invigorate the MBS market through GBS are worth pursuing. Such innovation could provide increased liquidity to the real estate market, enhance investor confidence in the capital markets, and help counter additional writeoffs from the credit crisis ranging from $500B - $1 trillion according to many expert estimates.
- **Sustainable investment increases investor value, substantially reduces risk, and provides substantial social benefits.** New financial products that are "off" conventional energy and sustainable are critical since:

  Conventional Energy Costs are Expected to Keep Rising Substantially for About 10 More Years Due To –

  - global oil, natural gas, and other resource depletion as validated by actual data
  - greatly increasing global energy demand due to population and economic growth. Costs have dipped due to decreased demand from the recession, but are expected to continue to rise over the long term.
  - regulatory constraints especially on coal, natural gas and oil, like the Carbon Principles & Climate Change Regulation

  Climate Change Regulation Will be Expensive & Burdensome for Buildings on Conventional Energy. EPA's published Advanced Notice of Proposed Rulemaking calls for regulating all owners over 5,000 ft² with oil or natural gas, since climate change pollution is regulated under the Clean Air Act as decided in 2008 by the Supreme Court.

  Green & Climate Neutral Buildings are More Valuable & Command Top of Market Rents. Tenants are not going to pay more for a "brown" or conventional building, as noted by Andy Florance, CEO of CoStar.

  Need to Improve Operational Security Due to Increasing Brown Outs from Power Shortages. Increased brownouts are likely since the 150 coal fired power plants that were scheduled to be built in the US to meet energy growth needs are down to below 10, due to successful climate change litigation by US Cities and NGOs, State regulation, and the Carbon Principles' downgrading of carbon investments. Utilities

may not be sufficiently implementing efficiency and renewable power to compensate for this shortfall as suggested by 2008 brownouts.

Investors Need to Prevent Climate Credit Risk as identified by Moody's as "Serious" which shifts the financial risk to investors just like Superfund did. Insurers are pulling out of the market because it's too risky.

- **Growth in the green real estate sector would produce significant economic and environmental benefits.** The energy used to generate building electricity produces over 40% of climate change pollution. Fuel – including electricity – used to power building heating and cooling systems, is responsible for some 60% of climate change pollution. According to estimates of the UK government, damages from climate change pollution could produce declines of up to 20% in global economic output. Many reputable scientists believe more severe catastrophic effects are on the horizon, especially if the current dangerous climate change we are experiencing becomes irreversible. In addition, Moody's and the Mortgage Bankers Association have labeled climate insurance damages "a serious credit risk." Green properties typically consume a third less fuel than conventional buildings, and advanced green buildings can result in savings of 100% conventional energy costs when certified climate neutral. The expansion of the green building market could therefore help to stop irreversible dangerous climate change and its negative impact, while producing significant economic and environmental benefits worldwide. The expansion of the green building market could also provide a potent employment stimulus for construction and allied industries. To that end according to the Bureau of Labor Statistics, a third of 2008 U.S. job losses have been in the construction segment.
- **Capital should also be deployed to create financial products serving other market segments, including sustainable manufacturer products and other sustainable investments.** Sustainable product manufacturing has been growing at 20% annually and the focus of consensus standards, notably the SMaRT standard. SMaRT Certified Manufacturers are more profitable than conventional and have substantially lessened their use of conventional energy while operating their manufacturing facilities on Green-e renewable power. This segment will benefit from the growth of the green real estate market and offers strong potential for the development of new financial products such as green convertible securities for manufacturers and retailers. As well, the global sustainable investment market, including project finance and various trading opportunities such as energy efficiency and renewable power White Tags, will benefit from the expansion of the green real estate market and sustainable manufacturing, and offers strong investment potential.

Recommendations.

1. The Capital Markets Partnership should distribute this Briefing Paper widely to top management to facilitate broader market understanding of the financial and social benefits, added value, and substantially reduced risk of sustainable investment.
2. Additional financial institutions and property investors should adopt the *National Consensus Green Building Underwriting Standards* to properly value green buildings and homes, decrease risk and increase profitability and transparency.
3. Capital Markets Partners should continue to develop and complete the launch of Green Building Securities including the planned GBS originations using the

Underwriting Standards to qualify buildings for pools. CMP should continue to facilitate the development and launch of additional capital markets products, such as green private equity and other pooled equity funds, green permanent mortgage loans, green construction loans, green convertible securities, and other fixed income and structured finance products. Additional sustainable insurance and asset management products should also continue to be developed.

4. Given their expected profitability and the substantial and urgently needed benefits to the economy and the environment, Capital Markets Partners should continue to accelerate the launch of additional new sustainable financial products for other sectors in the global supply chain.
5. The Capital Markets Partnership should conduct quarterly meetings to:
   - Continue to facilitate sustainable investment.
   - Ensure that at least two million green buildings and one million sustainable manufactured products are certified by 2015 to protect and stimulate the economy, and stop climate credit risk and imminent, irreversible and dangerous climate change in accordance with State of California and IPCC Member recommendations.

Contents

1. Introduction

The Capital Markets Partnership (the Partnership or CMP) is a balanced, nonpartisan and nonprofit coalition of investment banks, investors, professional firms, local, State and national governments, countries and non-governmental organizations (NGOs). CMP is engaged in conducting a Sustainable Investment Initiative to accelerate the launch of a suite of green real estate finance and sustainable investment products.

CMP has completed the necessary foundational due diligence for the Sustainable Investment Initiative which provides a framework to assist financial institutions to launch within their existing operations, a variety of green building finance products, including:

- mortgage, construction and rehabilitation loans
- direct equity investments in sustainable buildings
- pooled debt and equity funds for the private and public markets
- insurance and asset management products and services and
- green building securities (GBS). GBS are bonds backed by pools of mortgages on green buildings and is a new capital markets product to stimulate a $4 trillion world market (*Staff Report, Enhancing Disclosure in the Mortgage backed Securities Market,* § II, SEC, Treasury, & Office of Fed. Enterprise Oversight 2003).

By undertaking these activities, the Partnership is tackling the critical and immediate priorities of:

- Stimulating the global economy while promoting energy efficiency, renewable energy, and energy security
- Promoting more profitable and less risky product innovations in the capital markets
- Providing higher-quality collateral to the real estate finance sector, new securitization opportunities, heightened investor confidence and enhanced liquidity
- Stopping imminent irreversible and dangerous climate change
- Greatly enhancing global sustainability

CMP also helped initiated the development of CalSTRS $200M and another $200M green building private equity funds (CMP / CBRE / LJ Melody Capital Markets Letter and meetings with California Treasurer and California pension funds, Apr. 6 & 22, 2005).

CMP unanimously approved the consensus Green Building Underwriting Standards which are being used by JPMorgan, Comerica Bank, Transwestern, Jones Lang LaSalle, CB Richard Ellis, Federal Home Loan Bank, and Freddie Mac green building underwriting. Due to substantial benefits including economic, it is important to launch a full array of green real estate finance products, such as green mortgages, construction and rehabilitation loans, real estate equity investments, pooled funds, GBS, and allied insurance and asset management products and services. Based on successful precedent and quantified benefits, these activities are expected to add as much $1 trillion annually to the global economy in financial, health and productivity benefits.

Green buildings are energy and environmentally efficient and contain certified sustainable manufactured products which are those best for the environment, economy and social equity.

2. Purpose

The purpose of this report is to provide necessary information requested by top management at investment banks, rating agencies, investment organizations and governments to commercialize sustainable investment and launch GBS and additional securities.

3. Background

Some 70 partners, including financial institutions, governments, NGOs and professional firms have worked within CMP to evaluate and identify the value of green buildings and sustainable investment.

The evaluation was undertaken through an extensive series of meetings and consultations with financial experts, investment banks and the rating agencies, through a review of the research literature on green buildings and sustainable investment, through interviews with investors and a formal survey of investment managers, through adoption of consensus national standards including *Climate Neutral Building Standard* and *Green Building Underwriting Standards*, and through extensive original research.

Additional due diligence activities undertaken by the Partnership include the development of the *Green Building Industry Value Rating System©*, *Creating an Economic Stimulus & Stopping Climate Credit Risk / Irreversibility Report©* and Economic Benefits consensus standard©. Together, these form a framework to enable financial institutions to expand and accelerate their green real estate investment activities and to develop new sustainable investment products.

This effort has been conducted on a nonprofit basis through the Capital Markets Partnership that is a 70 entity coalition of the Institute for Market Transformation to Sustainability (MTS), a nonprofit public charity. The Partnership is led by the Hon. Gavin Newsom, Mayor, City of San Francisco representing the US Conference of Mayors JPMorgan Chase, Citi, Bank of America, and Bob Congel, Chairman & CEO, Destiny USA.

4. Successful Precedent for Capital Markets Action

The capital markets are important sources of innovation and have developed risk mitigating standards that offer transparency for financial decision making at the local, national and global levels. Successful precedent for the use of capital markets standards in the environmental arena are drawn from the development of the Phase 1 Environmental Site Assessment and Property Condition Assessment Standards, that was led by CMP top management.

Phase 1 Environmental Site Assessment Consensus Standard

A highly successful precedent that demonstrated the importance of the capital markets in disseminating environmental best practices for the real estate industry was the development of the consensus Phase 1 Environmental Site Assessment consensus standard. Under this initiative, Partnership senior management worked with a coalition of some 20 real estate associations led by the Mortgage Bankers Association. The Phase 1 provides a defense to liability for innocent landowners under the Superfund Amendments and Reauthorization Act and comparable state law. The Phase 1 defines how innocent landowners must take all appropriate inquiry into the real estate in which they had or have an interest. All appropriate inquiry is defined as conducting the due diligence necessary to determine that the property is safe for public health and environment.

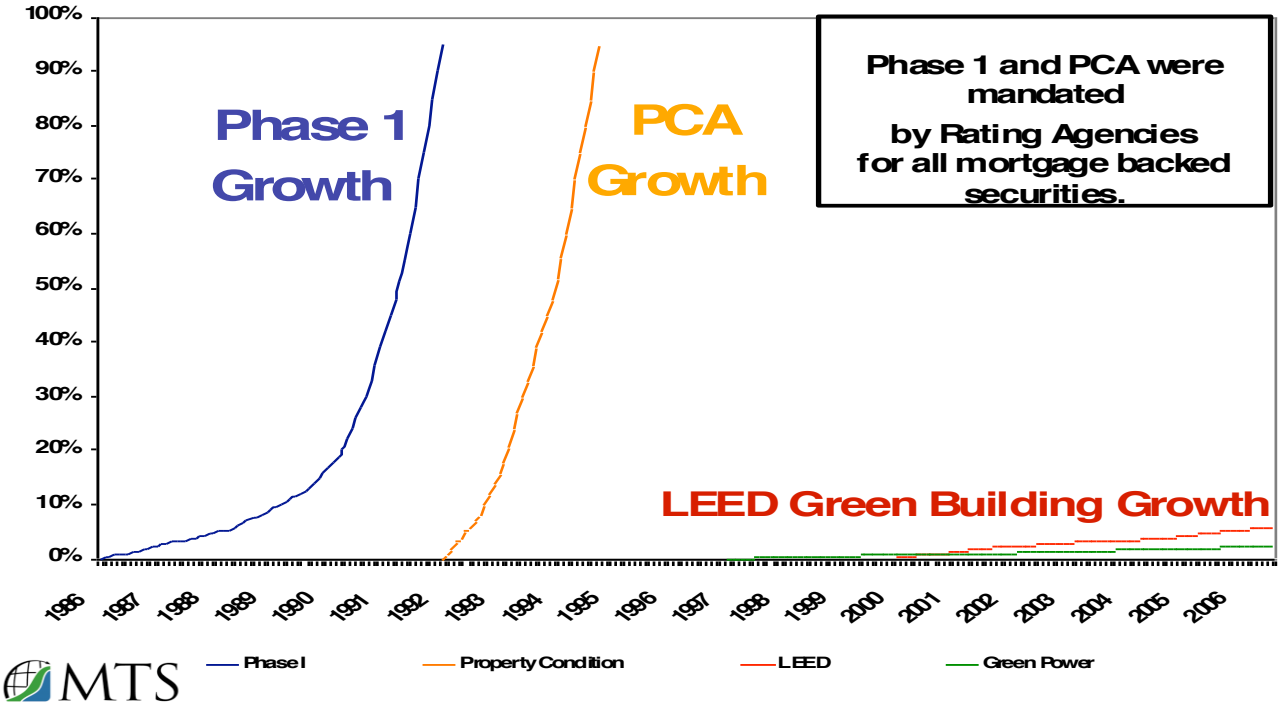
Prior to the development of the Phase 1, financial institutions that foreclosed on realty without knowledge of preexisting contamination were held liable for any cleanup and were subject to contribution actions from other potentially responsible parties. For example, State Street Bank in Boston foreclosed on a property that was a hazardous waste site and subsequently listed on EPA's National Priority List, subjecting the Bank to some $30 million in liability and numerous contribution actions by manufacturers party to the litigation. Secured creditors – financial institutions with a security interest in the real estate – were also potentially liable.

The financial industry embraced the Phase 1 because it made good business sense Shortly after completing the Phase I standard, investment banks and rating agencies required that commercial buildings in securities be qualified with Phase I's, thus substantially reducing risk, liability and financial uncertainty. The Phase 1 qualification requirement resulted in the engagement of hundreds of environmental professionals who completed Phase 1 's for buildings that the banks warehoused for commercial mortgage backed security (MBS) pools.

Because the Phase 1 substantially reduced risk and uncertainty, investment banks and rating agencies only included commercial buildings in new MBS pools that had a completed Phase 1 which resulted in the resecuritization of the building stock within five years. Within this five year period, the influence of the securitization industry drove Phase 1 market penetration from 5% to 95%. See Figure 1. The use of Phase I's substantially reduced the risk to investors and enhanced the growth and financial success of the CMBS industry. The Phase 1 standard also resulted in significant economic growth in the environmental assessment industry, the sector that conducts Phase 1 reviews.

Successful Precedent

Phase 1 Environmental Site Assessment & Property Condition Assessment (PCA) Adoption Resulted in 95% US Market Penetration in 3-5 Yrs. The same will occur for green buildings due to comparable value.



Property Condition Assessment (PCA)

Following the success of the Phase 1 in the capital markets, Standard and Poor's (S&P) asked Capital Markets Partnership top management to create a consensus standard methodology for a Property Conditions Assessment (PCA) for use by investment banks in securitizing MBS. The PCA's purpose is to provide a uniform assessment procedure to detect operational or structural failures in buildings and either correct them and place the property in MBS pools or to exclude the property from the pool. It was a precursor to the more rigorous commissioning prerequisite for certified LEED green buildings.

After the PCA Standard was approved, S&P mandated it for all commercial MBS pools driving PCA market penetration in commercial building to 95% in about three years. See Figure 1. Like the Phase 1 standard, the PCA standard improved the condition of the securitized building stock, reduced investment risk, and helped to accelerate the growth and financial success of the CMBS industry. Because a significant percentage of U.S. real estate was securitized, PCA requirements also became standard throughout the U.S. real estate market.

As the Phase 1 and PCA examples illustrate, consensus standards adopted by the capital markets can be significant drivers for environmentally and financially beneficial change. The Phase 1 and PCA requirements produced the multiple, beneficial results of:

- reducing investment risk
- helping to accelerate the growth of the securitization industry
- stimulating economic and employment growth in the industries responsible for implementing the standards, and
- enhancing public health and environmental quality

5. Capital Markets Partnership Due Diligence Activities

Due diligence activities for the Capital Markets Partnership began in 2004 with planning activities with investment banks and rating agencies, and the December 2005 Green Building Finance Summit. The Capital Markets Partnership was launched by California Treasurer Bill Lockyer and Bank of America senior management. Key members of the Capital Markets Partnership include: The US Conference of Mayors, JPMorgan Chase, Citi, Bank of America, Wells Fargo Wachovia, Allianz, Fireman's Fund, Goldman Sachs, EPA, U.S. Treasury, Federal Home Loan Bank, United Kingdom, Fannie Mae, US Green Building Council, States of California, New Jersey and New York, and Destiny USA.

As of March 2009, the Partnership has completed a four year, $700,000 due diligence program of foundational research establishing the framework for the launch of sustainable investment vehicles by Partnership members and other financial institutions. The Partnership's due diligence activities are summarized below covering:

- Briefings and consultations with key leaders
- LEED & ENERGY STAR Finance Summit
- Green Building Industry Value Rating System
- Citi / CMP recommendation to S&P to commercialize green buildings
- Investor Market Research
- Peer Reviewed Report with the State of California on Economic Stimulus / Climate Risk
- National Consensus Green Building Underwriting Standards
- Industry Support Activities

Briefings & Consultations With Key Governments, Financial Institutions & Associations

Since its inception in 2005, information sharing with Partners and other organizations interested in sustainability has been a cornerstone activity for the Capital Markets Partnership. The Partnership has conducted over 60 in-person briefings to summarize key Partnership findings and obtain important advice from the following entities, in some cases, several times:

- Allianz
- American Council for an Energy Efficient Economy
- Bank of America
- California pension funds
- California Attorney General
- California Treasurer
- Calvert Investors
- Canada
- Citi
- Citi Smith Barney
- City of Chicago
- City & County of San Francisco
- City of Oakland
- City of New York
- City of Santa Monica
- CoStar
- Delaware Valley Green Building Council

- Dewey & LeBoeuf
- District of Columbia
- EPA ENERGY STAR
- Environmental Bankers Association
- Fannie Mae
- Federal Environmental Executive
- Federal Home Loan Bank
- Federal Housing Finance Agency
- Fireman's Fund
- Freddie Mac
- Global Green
- Governor Schwarzenegger's Green Building Advisory Council
- HSBC
- JPMorgan Chase
- Lord Mayor of London
- Merrill Lynch
- Mortgage Bankers Association
- Mortgage Green
- Natural Resources Defense Council
- New Jersey Green Building Council
- New York Green Building Council
- Northern California Green Building Council
- Real Estate Roundtable
- City of San Francisco
- Sierra Club
- Social Investment Forum
- Standard & Poor's
- State of California
- State of New Jersey
- State of New York
- Standard & Poor's
- Swinerton Builders
- TIAA- CREF
- Thomas Properties
- UBS
- United Kingdom
- US EPA
- US Green Building Council
- US Treasury Department
- Vinson & Elkins
- Wachovia
- Wells Fargo
- West Coast Green
- Wharton School
- White House Council on Environmental Quality
- World Wildlife Fund

The overall result of these consultations is the conclusion that the market over time will and needs to commercialize green buildings and sustainable investment. Initially, the meetings took the tone that this is the right thing to do, the value and risk reduction are there, and based on the precedent of the Phase 1 and PCA, it will happen and CMP can serve a vital role and accelerate it.

However, the more recent meetings have shifted to the very clear added value. But in addition, they have taken a more serious tone regarding the substantial risk with the urgency to act now in a sustainable investment market shift to turn around the economy given the expected $500B - $1 trillion in additional credit writeoffs and their recessionary effect and harm to the overall economy, investor confidence and liquidity. Moreover, we need to aggressively act now to reduce expected risk and comprehensively address the key long term global challenges having an increasingly deleterious effect:

- Long term rising energy costs driving global inflation as recognized by the Fed (higher energy prices pressuring businesses to pass along higher prices in May 20, 2008 statement, and July 23, 2008 statement as reported by Reuters, "Fed Says Price Pressures Gain, Growth Slackens" (July 23, 2008). Further, this was the consensus conclusion at the July 25, 2008 meeting the UK hosted at the Queen's Residence in NYC with the Lord Mayor of London (UK elected financial industry spokesperson), S&P, and financial institution top management including HSBC and Merrill.
- Imminent irreversible dangerous climate change with substantial and overwhelming damages as documented by:
    - CMP's *Creating an Economic Stimulus Peer Reviewed Report* with the State of California and IPPC Scientists (2008)
    - Moody's (a "serious" credit risk as noted by MBA)
    - Mortgage Bankers Association (MBA) (*Natural Disaster Catastrophic Insurance, the Commercial Real Estate Perspective* at 39, 40, 42, 44-46, 2006), and
    - The Bush White House as detailed extensively in this section of this Report below (*Scientific Assessment of the Effects of Global Change on the US*, White House Science & Technology Council, May 2008).

LEED & ENERGY STAR Building Finance Summit (Dec. 2005, NYC)

Green or sustainable buildings represent a new real estate asset class that began to penetrate the U.S. commercial real estate market between 2000 and 2005. The LEED (Leadership in Energy and Environmental Design) standard of the U.S. Green Building Council (USGBC) and the ENERGY STAR standard of the U.S. Environmental Protection Agency are two widely-used methods to track the energy efficiency and sustainable characteristics of green buildings. As awareness of green buildings rose, the Capital Markets Partnership was asked by the financial and building management and development industries to take a lead in valuing and commercializing sustainable real estate investment. To this end, the Partnership conducted a LEED and ENERGY STAR Building Finance Summit in cooperation with USGBC, EPA, and leading building owners, investment banks, investors, other financial institutions, NGOs and government.

The Summit was conducted in December 2005 in New York City. The event was hosted by the Durst Organization and the City of New York. Over $100 billion in real estate investment was represented at the Summit, with the proceedings summarizing its objective:

> *"This Summit's objective is to launch the development of a Green Building Valuation Methodology for the real estate finance community that can inform better risk-adjusted financing and investment decisions, including expected long-term rising energy costs.*
>
> *Target users for this Methodology are institutional investors, debt providers, and rating agencies including Fitch, Moody's, Standard & Poor's and can serve as an overlay to existing underwriting standards. The Methodology's objective is additional underwriting criteria and standards that lead to better risk-adjusted costs of capital for all participants by appropriately attributing financial value for LEED® and ENERGY STAR® buildings and the companies that own and finance them"* (*Final, Approved Green Building Finance Summit Minutes*, January 19, 2006. p.1).

CMP's *Green Building Underwriting Standards*© based on the Green Building Industry Value Rating System summarized below, meet the Summit's objective.

Based on sessions examining the role of sustainable properties in the real estate debt and equity markets and case studies of sustainable real estate projects, Summit participants concluded that green buildings were more valuable than conventional. For example, panelists and participants cited the Multi-Employer Property Trust pension fund's 2000 investment in Phase II of the Brewery Blocks commercial LEED development in Portland, Oregon. The project was completed within conventional budget parameters. The Trust concluded that "*the green features contributed to leasing performance that surpassed market norms then prevailing in Portland, despite the significant market slowdown that occurred prior to project delivery." (Ibid*, p. 10.) A Principal of Gerding Edlen, the developer of Brewery Blocks, discussed the results of additional project phases, and noted that *"green features were an amenity that helped leasing and added to the appeal of the project"* and that *"the project has achieved a rental premium over proforma"* (*Ibid*., p. 10).

Rating agencies were briefed before and after the Summit and expressed interest in green building securities (GBS) if pursued by investment banks. The rating agencies also indicated the need for a better understanding of the factors contributing to green building value, an observation that led to the Partnership's development of a Green Building Value Rating System.

***Green Building Industry Value Rating System*©**

In response to the Summit findings and briefings with rating agencies, the Green Building Value Rating System (Green Building Value Rating System 1.0) was prepared in 2006 and updated in 2008 by Partnership financial, legal, and environmental experts and peer reviewed by a larger constituency, including financial institutions and independent experts. It documents the added value of green buildings.

Citi and Partnership leaders submitted the Value Rating System in November 2006 to S&P. The transmittal recommended commercializing green building investment and initiating GBS, due to higher value and reduced risk. In response to additional comments from CMP Partners,

the Value Rating System was updated in May 2008 (*Green Building Value Rating System*© 2.0).

The Value Rating System found that since 2000, certified green buildings have captured upward of 5% of the commercial new construction market and continue to grow at an annual 50%-70% rate. The report concluded that "*green buildings are more valuable and less risky than standard real estate assets. Real estate is a combination of cash flow, timing and risk. Green buildings positively affect all three of these metrics*" (*Green Value Rating System Report*, May 2008, p. 3). The Rating System also concludes:

> *"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 governments, and various market measures including Fireman's Fund which now provides a 5% insurance discount for certified green buildings"* (*Ibid*, p.4). The Figure below details the goals and objective of the Rating System:

Capital Market Green Building Rating – Goals and Objectives

OBJECTIVE: **Translate Green Features Into Financial Value ("Underwriting Overlay")**

GOALS:
1. **Appropriate Recognition of Superior Assets**
2. **Underwriting Bonuses – Market Rent / Vacancy, OpEx, Reserves**
3. **Lower Risk-Adjusted Capital**

METHOD: **Green Buildings Rated As Higher Collateral**

Well-Designed High-Performance Buildings	↑ **Collateral Value**
Top-Of-Market Rents (new / re-lease)	↑ **Revenue**
Financially Strong Tenants	↓ **Default Risk**
More Likely To Renew Upon Expiration	↓ **Re-Lease Expense**
Below BOMA Average Operating Costs	↓ **Operating Costs**
Reduced Maintenance / Upkeep	↓ **Replacement Reserves**
Lower Insurance Liability (Mold, IAQ, etc.)	↓ **Op Ex / ↓ Default Risk**

IMPACTS: **Greater Cash Flow Certainty For Debt Service Coverage**
CMBS AAA buyers receive higher quality assets in underlying pool
Buyers bid higher leading to spread reductions
BB Buyers (First Loss) Have Greater Margin For Error

The Rating System evaluated fifteen Value / Risk Categories, determining the extent to which they increased property investment value or reduced property investment risk. Factors that enhanced value and reduced risk were awarded a positive score, while factors that reduced value and increased risk earned negative scores. The following categories were evaluated:

- Commissioning / Operational Risk
- Energy Use Reduction / Price Volatility
- Mold
- Green Power
- Indoor Air & Health
- Location Value
- Reduced Climate Risk
- Improved Productivity / Increased Rents
- Competitive Advantage / Lower Operating Costs
- Added First Cost
- Certification Time and Cost
- Availability of Professionals
- Lack of Auditing
- Resistance to Change

Evaluation indicated that the following green property features produce the greatest qualitative and quantitative enhancements to property value, while concomitantly reducing investment risk:

- Reduced energy use and reduced exposure to future energy price volatility (very high)
- Mold protection (very high)
- Reduced climate risk (very high)
- Commissioning/ reduced operational risk (high)
- Improved indoor air quality and health (high)
- Lower operating costs and default risk (high)
- Improved tenant productivity and corresponding increase in rents (medium)

The Rating System indicates that 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

Significantly, the *Green Building Value Rating System*© demonstrated that certified green buildings created investment value and reduced investment risk *"on a wide variety of risk/value measures,"* including building performance, economic measures relating to rental revenues and cost-effective operations, environmental and occupant health factors, and tenant productivity. (*Ibid*, p.4.)

As well, the Green Building Value Rating System demonstrated that the benefits of green buildings significantly outweighed the risks of expanding the sustainable property market. Risks were associated with *"non real estate related financial measures stemming from green building growth and adoption pains within the marketplace. As industry experience with green buildings continues to grow/mature, the negative risk factors identified significantly diminish"* (*Ibid*, p. 4).

The Figure below summarizes the Rating System's conclusions.

MTS Green Building Value Rating System©

Real estate value is a combination of cash flow, timing and risk. Green buildings positively affect all three of these metrics.

Basis of Wall Street Initiation of Sustainable Investment & SMBS

The Greatest Qualitative & Quantitative Value Exists for:

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

MTS Capital Markets Partnership

Citi / Partnership Recommendation to S&P to Initiate Green Building Investment & GBS & Meeting with S&P

Based on meetings and communications with Citi Commercial Bank, Global Fixed Income, the Partnership's Value Rating System was transmitted to S&P and Fitch in November 2006, with the recommendation for the issuance of a Green Building Securities (GBS) rating opinion based on the higher green building value, as documented in the *Green Building Industry Value Rating System©*.

The November 9, 2006 Citi / Partnership leadership request to S&P stated:

> *"Market Transformation to Sustainability (MTS) is a non-profit organization accredited by American National Standards Institute (ANSI) to develop and disseminate consensus-based certified sustainable (green) building industry standards. MTS maintains broad-based membership from all factions of the building industry – which has been governed by consensus-based standards since 1898.*
>
> *Currently, MTS is working with financial and government partners by translating the value of these standards for the capital markets – based on MTS' prior experience in achieving higher ratings for the Phase I and PCA for CMBS.*
>
> *Toward that end, MTS has partnered with CitiGroup's IB Fixed Income Division to sponsor an application to one of the major rating agencies to secure a policy*

opinion (at a minimum), and possibly a rating, based on the consensus-based certified higher green building rating matrix outlined in the Green Building Industry Value Rating System *report….*

The investment banking community sees tremendous potential for new issuance, re-qualifying of existing mortgage pools, and facilitating SRI investments related to higher green building ratings. At the same time, they are also hesitant about adopting new operating procedures incorporating the consensus-based certified higher green building rating standards if there is no underlying policy opinion issued from one of the major rating agencies on this topic. Therefore, MTS is launching the initiative to push for a policy opinion from one of the rating agencies to help establish the underlying rating infrastructure investment banks will need to begin incorporating consensus-based certified higher green building rating standards into their operations.

MTS and CitiGroup would like to meet with S&P… to discuss your level of interest in this project and the due diligence requirements which will have to be met for S&P to issue a policy opinion."

Based on Partnership and Citi communications with Fitch on November 1, 2006 and on the November 16 meeting with S&P, Fitch and S&P agreed to evaluate green building mortgages placed in GBS pools for securitization, just as it did for buildings in pools qualified for the Phase I. CMP representatives and S&P identified in the Nov. 16 Meeting the desirability to survey investors.

Investor Market Research

As noted, one of the outcomes of the November 16, 2006 meeting with S&P was the mutual recognition of the need to assess investor willingness to buy green building investment products, including securities such as GBS. This section of the Briefing Paper covers CMP's Investor Outreach and the results of the formal Investor Survey.

Investor Outreach. To assess investor demand, CMP conducted a number of meetings and interviews with potential investors from 2006 through the summer of 2007, and completed a formal investor survey during the summer of 2008.

In November 21 and 28, 2006, interviews were conducted with, respectively, senior executives of Allied Capital, a former B piece buyer in the commercial mortgage-backed securities (CMBS) market, and Allstate Investments, a CMBS A piece buyer. Both stated that there should be no impediment to securitizing GBS, as they would be priced appropriately in the marketplace relative to their risk. The executives concurred that public pension funds and other institutional investors with dual social and financial investment objectives would be the likely first purchasers in a new GBS market. The executives also noted that other features of green buildings, particularly moisture control measures to minimize the likelihood of mold, would likely be of interest to a broad spectrum of CMBS investors.

Public pension investors have in fact begun to deploy capital for green real estate investment. CalPERS and CalSTRS, the California state employees' and teachers' retirement funds, respectively, require a 20% reduction in the conventional energy use for their real estate investment portfolios (Green Wave Requirements http://www.treasurer.ca.gov/greenwave). Bill Lockyer, California State Treasurer and a CalPERS and CalSTRS Director, has awarded $10 million in investment funds to San Francisco's New Resource Bank for green building

investment (Cal. Treasurer Oct. 16, 2007 Press Release). Similarly, CalPERS created the $275 million Hines CalPERS Green Development Fund and CalSTRS has committed capital to a green real estate fund sponsored by Thomas Properties. The public fund sector has recently announced its intention to increase its investment in green real estate holdings with some funds having a strong intention to move to 100% green portfolios (CMP Investor Survey 2008).

In July 2007 e-mail communications to CMP and in meetings with CMP conducted in August 2007, managers at the following socially responsible investment firms expressed favorable interest in purchasing GBS: Domini, Calvert, CalSTRS, California pension fund, United Methodist Church General Board of Pension Benefits, TIAA-CREF, Quadrant Real Estate Advisors LLC, The Levine Social Investment Group / UBS Financial Advisors, MMA Stewardship Investing, and Parnassus Investments. Recent reports have pointed to the escalating interest in Socially Responsible Investments (SRI) by mainstream fund managers, which reflects a movement from a niche investment category, to the growing trend for the broader asset management arena. Currently, SRI assets represent more than 10% of total assets at the world's largest asset management firms (TIAA-CREF *Wkly. Market Monitor* July 14, 2008).

The most important finding of CMP's 2006-2007 investor outreach process was that substantial latent investor demand existed for GBS and other green real estate investment products. This observation is substantiated by market data. According to Capital Markets Partner First Affirmative Financial Network, there is almost $3 trillion in social investment funds comprising 50 institutional investors, with no real estate option ("Shareholder Democracy", *GreenBiz* Apr. 21, 2008 & personal communication w/ Steve Schueth, First Affirmative President).

Investment Manager Survey. The Partnership conducted a formal survey of investment managers between June 23 and July 16, 2008 to more completely evaluate the interest of real estate investors in green real estate finance vehicles. Respondents are listed in Appendix A and CMP has a copy of the Survey Form and individuals who responded. Respondents to the survey represent organizations with total assets under management of over $3.3 trillion, and real estate assets under management of over $300 billion. Respondents are headquartered in four nations (the U.S., the UK, Germany and Australia) and include a cross section of investment managers specializing in institutional and retail clienteles. Organizations surveyed range from large, international organizations to smaller, regionally-based entities, and include both firms with no or limited real estate investment experience and firms with extensive real estate investment management expertise. Respondents include a mix of traditional real estate managers and firms that focus on SRI.

The survey respondents, as a group, declared a clear intention or desire to deploy new or additional capital in the green real estate arena, with investments to be targeted within each organization to its existing area(s) of specialization. Interest spanned the full array of real estate investment products, including direct loans and equity investments, pooled private and public funds, and GBS. The respondents acknowledged 2008 challenges in the mortgage debt markets. In 2008, one respondent, a regional manager of investments for retail clients, had withdrawn completely from the real estate investment market. The remaining respondents intended to continue their real estate investment activities. Organizations already investing in the MBS market stated that they would be interested in investing in a GBS product when available. All respondents indicated that green real estate investments already played or were

expected to play a role in their investment strategies, and all expressed the desire to dedicate increasing amounts of capital to the sector.

Both SRI and more traditional real estate managers cited multiple investment motivations, including economic and environmental / social motivations for their interest in green real estate. Comments from the Respondents in Appendix A included the following:

> *"There are reasons to believe that such investments can outperform ordinary assets over the medium term. Such assets will have a higher net income growth rate as a result of tenant preferences towards 'greener buildings', lower running costs, and greater liquidity (therefore lower risk premium) than ordinary assets. Arguably, even if there is no material difference in medium to long run returns, there is still a moral reason to invest in such instruments."*

> *"In three to four years, the Class A building definition will be sustainable. Today there exists a mispricing of inefficient* [conventional] *real estate – it is overpriced in that as soon as the sustainability and energy efficiency screens are used to compare, lower operating costs will be attributed to those more efficient buildings, heightening their valuation by comparison. Therefore, there is an opportunity to make money in sustainable real estate; the market is still pricing existing product incorrectly… In addition, it's the right thing to do."*

> *"One: green real estate is consistent with* [organization's] *focus on providing competitive investment products that contribute to sustainability. Two: the green real estate sector is a key way to address the climate change issue. Three: companies that are paying attention to these issues are going to be better investments, whether through improved ROI's or lower risks."*

Respondents also cited the needs of their investment clients as a driver leading them to invest in green real estate: *"There is expanding client interest. Green investments fit with our overall SRI portfolio, reflecting the values of clients. Investor demand – pension funds are a primary client base."*

Other investment managers perceived a market niche that has yet to be filled completely, or they saw the need to keep pace with competitors. One respondent noted: *"There is a spectacular gap in the market."* Another said *"Competitive REITs are marketing this category and there are more SRI funds available."* Many respondents also believe that green real estate investments offer a long-term competitive advantage, and a few have begun to restrict their real estate investments to green assets:

> *"Everything will be sustainable or it won't be profitable, so question is to what extent . . . certified or* [LEED] *Platinum? This is how our organization already invests, i.e., across all* [real estate] *asset classes."*

> *"Our business is 100% dedicated to sustainable real estate."*

> *"As a real estate fiduciary, we seek long term value so* [green real estate] *is central to the strategy and management mission. It's a risk mitigation strategy. The market is changing, so it's necessary to avoid the penalty of energy inefficient buildings. This is already occurring in Europe."*

SRI respondents specifically suggested that there is a need for more product choices in the fixed income area as current choices are rather limited. As well, it was suggested that GBS

could be a new fixed income alternative in response to current market turmoil. *"We'd be interested in GBS."* Tenant demand was also cited as a driver by respondents who managed equity real estate:

> *"Growing tenant interest and demand….Quicker lease up, higher rental rates, greater tenant retention."*
>
> *"Our ability to demonstrate our sustainability credentials and repositioning of our property portfolios is crucial in developing the value proposition for existing and future tenants. Important factor in attracting the high quality tenants, particularly for long lease terms. Our sustainability performance is particularly important to our federal government tenants who have mandated* [it as] *a requirement … to achieve in all new leases. This also has a flow on effect to major tenants who tender for government work and need to demonstrate a similar corporate commitment."*

Respondents also agreed that green real estate investment must be evaluated with rigor with respect to real estate, financial, environmental and other metrics, a view that validates the need for clearly articulated consensus standards:

> *"Must define 'green' very well; including the case made versus conventional or other SRI* [features]. *We need a definition of 'sustainability.' The investment strategy needs to be clearly defined through dialogue between the client and fund manager."*
>
> *"We are wary of greenwashing. … We want green buildings that contain green people or businesses."*
>
> *"We take the same investment approach* [that we do] *to value driven investments – look at same universe and metrics; plus the sustainability factor – must meet both hurdles."*
>
> *"Over the last two months* [we've had] *a lot of dialogue with market segments. There is concern about 'greenwashing' and* [the exploitation of a] *marketing opportunity. … It is necessary to educate the public with integrity."*

All told, responses to the Partnership's Investment Manager Survey suggest that green real estate investment is an expanding market, propelled by the demands of investment clients and tenants, as well as the beliefs that green real estate is associated with immediate and long-term return benefits, it mitigates investment risk, and addresses pressing environmental concerns. As well, the responses indicate that market participants want rigorous and clearly articulated standards to define green real estate, and guide underwriting practices.

Peer Reviewed Report with State of California on Economic Stimulus & Climate Risk

In partnership with the State of California, the Partnership developed a peer-reviewed report, *Creating an Economic Stimulus While Stopping Climate Credit Risk / Irreversibility*©, published in March 2008.

The report projects a green building market stimulus of $1 trillion per year at 70% market penetration based on quantified benefits and successful precedent. Climate Change Officials in the California Energy Commission, Attorney General's Office, Steve Schneider, Ph.D, of the United Nations Intergovernmental Panel on Climate Change (IPCC) and Stanford University, and Jim Hansen with NASA provided guidance on the needed amount of climate pollution reduction to stop imminent, irreversible and dangerous Climate Change and to eliminate climate change credit risk identified by Moody's and the Mortgage Bankers Association.

The Bush White House states that "*IPPC concluded that it is unequivocal that the average temperature of the Earth's surface has warmed recently and it is very likely (greater than 90% probability) that most of this global warming is due to increased concentrations of human generated greenhouse gases.*" The Bush White House then concurred with IPCC on this point: [T]*here is a strong human influence on climate …* [and the] *evidence … provide*[s] *a compelling and scientifically sound explanation of the changes to Earth's climate – including changes in surface temperature, ice extent, and sea level rise – observed at global and continental scale over the past few decades*" (*Scientific Assessment of the Effects of Global Change on the US*, White House Science & Technology Council at 1-2, May 2008).

Similar to the IPCC findings listed in the CMP "*Creating an Economic Stimulus*" Report, the Bush White House in its "*Scientific Assessment*" Report then identifies the many economic, human and environmental problems from worsening climate change, that a sustainable investment market shift can counter especially in stopping irreversibility.

The following 93 different adverse impacts over 12 broad categories are listed in the White House Report covering almost every aspect of society. This Report is of paramount importance, and enumerates substantial damages, and validates the UK's 2006 *Stern Review* projecting up to a 20% loss in global GDP from runaway dangerous climate change:

Adverse Impacts From Rising Temperature:

- Increased heat waves (p. 4)

Adverse Impacts From Precipitation, Runoff & Drought:

- Regional severe droughts and reduced precipitation (p. 5)
- Increased storms with greater wave heights along coasts (p. 5)

Adverse Impacts From Ice & Snow:

- Reduced snow cover, reduced mass of glaciers and ice sheets (p. 6)

Adverse Impacts From Sea Level:

- Rising sea level (p. 6)

Adverse Impacts From Atlantic Hurricanes:

- Increased coastal storm surge levels with rising zones of impact and waves farther inland with increasingly greater coastal erosion and damage (p. 7)
- More intense and frequent Atlantic hurricanes with higher waves, rainfall and wind speeds (p. 7)

Adverse Impacts on Natural Environment & Human Systems:

- Temperature increases, rising CO2 levels, and altered patterns of precipitation will significantly impact US water resources, agriculture, land resources, biodiversity, and human health among other things (p. 8)

Adverse Effects to Biological Diversity, Ecosystems & Natural Environment:

- Exceeding the resilience of ecosystems including wildlife due to flooding, drought, wildfire, insects, and ocean acidification (p. 9). These ecosystems are essential to human health and well being (p. 7)
- Decrease in vegetative cover that protects the ground surface from wind and water erosion (p. 9)
- Reduced snow and ice covers providing denning and foraging habitat for polar bears and other ice-dependant species (p. 10)
- Reduced reflectivity from vegetative changes will cause further warming (p. 10)
- Lengthening wildfire season and burn intensity in the Western US (p. 10)
- Increased size and number of insect outbreaks and resultant tree mortality which feeds wildfires, in the West and Alaska (p. 10)
- Many plants and animals exceeding their physiological limit for tolerating temperature and water stress (p. 10)
- Detrimental impacts to river and riparian systems in arid climates including increased erosion and invasion of exotic grass species (p. 10)
- Creating physical conditions accelerating wildfire in arid regions (p. 10)
- The loss of iconic megaflora in arid regions from increased wildfire such as Saguaro Cactus and Joshua Trees since they are not serotenous (reproduce through fire) (p/ 10)
- Loss of coastal salt marsh habitat due to inundation in Mid-Atlantic (p. 10)
- Decrease of Northeastern salt marsh biodiversity (p. 10)
- Erosion of barrier islands increasing wave height in coastal bays (p. 10)
- Increased ocean acidification negatively impacting marine shell-forming organisms including corals and large portions of the marine food chain (p. 10)

Adverse Impacts on Agriculture & Food Production:

- Failure of grain and oilseed crops with increasing temperature (p. 11)
- Worsening marketable yield of horticultural crops such as tomatoes, onions and fruits (p. 11)
- Increasing northward migration of weeds including invasive weeds and declining effectiveness of relevant pesticides (p. 11)
- Increasing disease pressure on crops and animals with proliferation and higher survival rates of pathogens and parasites (p. 11)
- Reduction in the availability of soil moisture early in the growing season (p. 11)
- Negative impacts to cold water fisheries (p. 11)
- Adverse impacts to plants, animals, natural and managed ecosystems and human settlements from changes to the storage, fluxes and quality of water (p. 11)

Adverse Impacts to Water Resources:

- Elimination of past conditions as precedent for US water management practices (p. 12)

- Earlier snowmelt peaks causing reduced lowflows in summer and fall causing substantial adverse impacts on reservoir performance (p. 12)
- Higher temperatures causing declining water quality including reduced oxygen content of waters with potential negative impacts on aquatic organisms (p. 12)
- Increased rain events causing more sediment, nutrients, pathogens, toxic pollutants into water bodies (p. 12)
- Increased salt water intrusion adversely affecting water quality in coastal regions (p. 12)
- Rising stream temperatures adversely impacting aquatic ecosystems and water quality especially during low flows (p. 12)
- Declines in available surface water and decreasing groundwater recharge in water stressed regions like the Southeast (p. 12)
- Less reliable supplies of water adversely affecting urban water systems and industries dependant on large water volumes (p. 12)
- Increased vulnerability to extended drought to agriculture, municipal & industrial water uses, e.g., areas using the Columbia & Colorado River Systems, parts of California, New York Area, and many islands including Puerto Rico & US Virgin Islands (p. 12-13)
- Increasing pressures for reallocation of water in fast growing areas (p. 13)

Adverse Impacts to Social, Economic Systems & Human Settlements:

- Adverse impacts regionally beyond sustainable thresholds to access to financial resources, and areas that are urbanizing and shifting in demography (p. 13)
- Adverse impacts to human health, water and other urban infrastructures, energy needs, and welfare and activities of urban communities (p. 13)
- Adverse impacts to economic competitiveness, opportunities & risks (p. 13)
- Adverse impacts to social & political structures (p. 13)
- The most vulnerable to these adverse impacts are –
    - Industries, settlements & societies in coastal areas and river flood plains (p. 13)
    - Those in economies closely linked with climate sensitive resources, e.g., agriculture, timber (p. 13)
    - Those in areas prone to extreme weather events (tornados, hurricanes, floods, droughts, severe storms, fires) especially where rapidly urbanizing (p. 13)
    - Alaska (p. 13)
    - Coastal & river basin areas susceptible to flooding (p. 13)
    - Areas where water scarcity is a pressing issue (p. 13)
    - Areas whose economic bases are climate sensitive, e.g., agriculture, timber (p. 13)
- Migration of population and economic activity away from areas –
    - where insurance has been eliminated due to climate risk (p. 13)
    - where there is public perception of risk (p. 13)
- Adverse impacts from increasing value of property at risk such as coastal areas with increasing growth (p. 13)
- Increased risk of adverse impacts to Gulf and Southeast urban coastal areas from hurricane damage (p. 14)
- Serious implications for the well being of societies dependent on coastal ecosystems especially coral reefs and wetlands (p. 14)
- Reduction of small island size from sea level rise especially Hawaii, US Territories and other Pacific Islands (p. 14)

- Substantial adverse effects on local economies e.g., tourism, ski and beach areas (p. 14)
- Adverse impacts from intensifying wildfires especially in areas where population has been expanding in fire-prone areas (p. 14)

Adverse Impacts to Human Health:

- Adverse impacts from heat stress and heat island effects including morbidity & mortality and chronic health impacts (p. 14)
- Adverse impacts from spread and emergence of animal, water & food borne diseases (p. 14)
- Adverse impacts from increase in diseases associated with air pollution and aeroallergens (p. 14)
- Adverse impacts accentuating the disparities extant in the American Health Care System (p. 14)
- Increased illness and death to the young, elderly, frail & poor (p. 14)
- Adverse impacts from increased risk and geographic spread of vector borne infectious diseases including Lyme disease and West Nile virus (p.15)
- Adverse impacts from increased spread of food and water-borne pathogens among susceptible populations (p.15)
- Adverse impacts from increased contamination events from waterborne disease (p. 15)
- Adverse impacts from air quality changes including increased ground level ozone causing reduced lung function, increased susceptibility to respiratory infection, & premature death to people with heart and lung disease and (p. 15)
- Adverse impacts from extreme weather leading to increases in deaths, injuries, infectious diseases, interruptions in medical care for chronic disease treatment and stress related and associated disorders from social disruption and migration (p. 15)
- Adverse health impacts to high density populations in low lying coastal regions (p. 15)
- Adverse health impacts from increased wildfires including (p. 15-16) –
    - increased eye and respiratory illnesses
    - increased mental health impacts from evacuations, lost property, and damage to resources
    - decreased air quality and increased pulmonary effects
    - increased wildfire frequency, severity, distribution, and duration in the Southeast, Intermountain West, and West
    - Increased morbidity and mortality with increased intensity and duration of events

Adverse Impacts on Energy Production, Use & Distribution:

- Adverse health impacts from increased energy used for space cooling, refrigeration, and industrial process cooling including thermal power plants and steel mills (p. 16)
- Increases in electrical peak demand for most of the US except Pacific Northwest (p.16)
- Increased energy use for climate sensitive processes such as pumping water for agricultural irrigation and municipal water use (p. 16)
- Without new energy efficiency for space cooling, there will be a substantial increase in US electrical demand requiring additional production and transmission facilities at costs of many billions of dollars (p. 16)
- Reduced water supplies in regions dependent on water use for hydropower and thermal power plant cooling (p. 16)

- Every existing energy source in the US is vulnerable to climate impacts with large local and industry-specific impacts including Alaska, Gulf of Mexico, (p. 17)

Adverse Impacts to Transportation

- Increased adverse impacts to roads, highways, rail, transit, marine transportation, airports, and pipelines (p. 17)
- More intense winter storms affect traveler safety (p. 17)
- Increased frequency, intensity, or duration of heat spells adversely affecting railroad tracks causing buckling or kinking, and roads causing softening and traffic-related rutting (p. 17) (these impacts can cause increased derailments and accidents)
- Adverse impacts from coastal and riverine flooding and landslides on roads, rails and ports including disruptions of transportation networks even from wipe outs of small segments (p. 17)
- Gulf Coast and Eastern transportation systems have increased vulnerability from more energetic hurricanes and tropical storms (p. 17)
- Increased extreme precipitation events causing (p. 17) –
    - increased accident rates
    - more frequent flooding and bridge scour
    - exceeding capacity of storm drainage infrastructure
    - more frequent landslides causing increased maintenance
- Increased adverse impacts to aviation from increased precipitation and severe weather (p. 17)

CMP's *Economic Stimulus*" Report adjusts for rising climate pollution beyond IPCC's worst case projections and adds a 60% margin of safety concluding that two million green and climate neutral buildings and one million certified sustainable manufactured products are needed by 2015 to stop climate credit risk / irreversibility and create an economic stimulus. This position has also been taken by the US Conference of Mayors (June 2008 Resolution Supporting CMP's Sustainable Investment Initiative)**, and is similar to the US and European Mayors and American Institute of Architects positions supporting a 70% reduction of conventional energy use in new and renovated buildings by 2015.**

***National Consensus Green Building Underwriting Standards*©**

As detailed in the Partnership's Green Building Value Rating System report, voluntary consensus standards have provided the underpinning for the commercial real estate industry for over 100 years.

> *"The building industry has been regulated by voluntary consensus standards since 1898 when the industry standardized building heating and cooling requirements to prevent exploding boilers. As such, there is no dominant government regulatory role. The use of voluntary consensus standards has been codified in the Federal Technology Transfer Act whereby the federal government defers to consensus standards before initiating rulemaking. These standards cover the tensile strength of steel, compaction of backfill, hardness of cement and concrete, and environmental features among hundreds of other building requirements. The building industry, government building codes, government agencies, and the capital markets all require consensus standards to limit technical, scientific, financial and political risk and uncertainty and protect public*

health and welfare. Sustainable and green standards must meet this test to be 1) effective in the market, and 2) eligible for government and capital market adoption to reduce risk and create value. Consensus green building standards for public and/or private construction have been adopted by at least 21 federal government agencies, 12 states, and over 45 municipalities. Their rigorous approval process as set forth by the American National Standards Institute ensures the aforementioned benefits" (*Green Building Value Rating System Report*, p. 3).

Underwriting and valuation standards have also evolved through real estate industry consensus and have been shaped for green real estate investments.

In response to requests from CMP Partners, consensus national underwriting standards for green real estate were launched at a meeting hosted by JPMorgan Chase in New York City on June 19, 2008, and at Wachovia in New York City on July 22, 2008. The consensus *Green Building Underwriting Standards*© cover commercial, multifamily and residential green buildings. The green commercial building standards identify green building elements that increase cash flow and reduce expenses with those showing the greatest value being energy efficiency, onsite renewable power, proximity to transit, and integrative design. Standards for green homes identify those elements that increase value and reduce expenses. The standards provide a scorecard for each building, home or portfolio rated. The scorecard identifies the elements, weights them for value added, and produces a scaled value with a maximum possible score of 100 (see CMP Value Score figure below).

The Underwriting Standards and background documents were unanimously approved on September 2, 2008 and are at: http://www.capitalmarketspartnership.com

The standards are being adopted and are being used by JPMorgan, Comerica Bank, Transwestern, Jones Lang LaSalle, CB Richard Ellis, Freddie Mac underwriting, Environmental Bankers and the Federal Home Loan Bank. The added value of the green building elements are based on that attributed to green buildings in the Partnership's completed due diligence.

"*I'm very pleased to work with all Mayors to accelerate green building and sustainable product investment*," said **San Francisco Mayor Gavin Newsom**, a Capital Markets Partnership leader and Officer. "*Like San Francisco, many other cities that have adopted LEED are extending it to the private sector. Wall Street's Sustainable investment makes private sector LEED requirements even better for business, and I know San Francisco's business leaders are enthusiastic about Wall Street's investment support.*"

According to **Mike LaRocco, CEO, Fireman's Fund**, an Allianz company, *"To promote loss control, Fireman's Fund uses LEED as a basis for its underwriting and discounted insurance. A clearly defined standard is an important first step. We are glad to see that sustainable investment is no longer a fad, but a real economic driver in this economy."* The CMP also uses LEED that is reflected in its National Green Building Underwriting Standards.

"*These are international consensus Standards for financial institution and investor adoption*," says **Mike Italiano, CEO, Capital Markets Partnership**, the non-profit behind the underwriting standards. "*This is a clear signal that investors and cities want to shift to sustainable investment to improve the economy, environment, climate change and energy security while fulfilling their fiduciary duty*."

Jeff Perlowitz, Citi Head of Global Securitized Markets says "*We were pleased to facilitate the due diligence process by providing Standard and Poor's and the market with documented evidence that investments in green buildings reflect less risk and provide added value. A nonprofit public charity like the Partnership consisting of investment banks, investors and government, is an excellent way to transparently disclose value and increase investor confidence in the due diligence through an accredited and audited consensus process."*

According to **Mario Silvestri, Vice President, Wachovia, and Officer, CMP National Underwriting Committee**, "*Wachovia looks forward to collaborating with US Mayors through the Capital Markets Partnership to further green building investment, increase jobs, and stimulate local economies. We're proud to be a participant in the Partnership's due diligence activities initiated at the Green Building Finance Summit. Along with the Green Building Value Rating System©, the Underwriting Standards provide a viable tool from which to gauge the added market value for green buildings and greatly facilitates this process."*

CMP GREEN VALUE SCORE FORMULA

NATIONAL CONSENSUS GREEN BUILDING UNDERWRITING STANDARDS

	Score	Value Ratio	Adjusted Score
ENERGY STAR Score		**40%**	
Green Building Underwriting Standard Score		**35%**	
LEED Rating	**NONE**	**0%**	
(intangible value)	**CERTIFIED**	**2%**	
	SILVER	**5%**	
	GOLD	**10%**	
	PLATINUM	**15%**	
Climate Neutral Certified	**YES**	**10%**	
	NO	**0%**	
CMP GREEN VALUE SCORE		**100%**	

Industry Support Activities

Insurance Discount with Fireman's Fund. The Partnership secured the support of Fireman's Fund to provide discounted *Green Guard*® insurance for LEED Certified Buildings and homes. Fireman's underwriting standards recognize that LEED certification increases building value, reduces losses, adds value to tenants, and increases productivity. Other insurers are starting to follow Fireman's lead. Discounted coverage means substantial savings for portfolios where insurance is mandatory. Further, Fireman's coverage insures many green building attributes that are excluded by conventional coverage, including green roofs, efficient fixtures, and SMaRT Certified Sustainable Manufactured Products.

CoStar and Trepp Data Support. Through the generous support of CoStar Group, the CoStar green building data base is available to Partnership members to conduct research on the financial performance of green commercial buildings. The support of Trepp which represents

investors, has also been enlisted to take advantage of its superior knowledge analytics capability and risk management modeling support on commercial real estate finance.

Summary of Capital Markets Partnership Due Diligence Activities & Public Support

The Capital Markets Partnership has completed extensive due diligence activities in support of its Sustainable Investment Initiative. These activities include:

- **In-person briefings of over 60 organizations on Partnership activities**
- **Industry investor summit on LEED and ENERGY STAR green buildings**
- **Green Building Value Rating System**
- **Citi / CMP recommendation to S&P to commercialize green buildings**
- **Investor interviews and formal survey of investment managers**
- **Peer-reviewed study of the economic stimulus associated with climate change reduction and literature review**
- **Industry support activities**
- **National consensus underwriting standards for green buildings**

In addition to this previously completed work, this Briefing Paper summarizes the Partnership's due diligence activities and, in the following sections, summarizes the business case on which the due diligence rests.

Response to the Partnership's due diligence activities has been positive. At its 76th annual meeting in June 2008, the U.S. Conference of Mayors adopted a Resolution of Support for CMP and its Sustainable Investment Initiative, recognizing the urgent need for the capital markets to invest in high performance green buildings and to develop sustainable investment vehicles in service of this objective.

Foundational due diligence for the Partnership's Sustainable Investment Initiative has been completed. The Partnership spent $600,000 and four years developing this material. Completion of the Partnership's due diligence activities sets the stage for the launch of sustainable and green building investment products, including GBS, within existing operations.

Risk Reduction & Value Creation

Review of the risk reduction and value creation features of green real estate and sustainable investment suggests that this is an appropriate investment focus for financial institutions. The key evidence on risk reduction and value creation is reviewed below and shows it is clearly in the best economic interest of investors, originators, building owners, and manufacturers to participate in sustainable investment products.

Risk Reduction

As documented in the Partnership's Green Building Value Rating System report and in data compiled by other organizations, sources of risk reduction associated with green properties and sustainable investment include reduced exposure to:

- Long term increases in conventional energy prices
- Adverse regulatory changes, and
- Environmental liability

By consuming less conventional energy, green properties and sustainable manufactured products act as a hedge against expected and globally validated long term increases in conventional energy prices. CMP's Value Rating System and the Underwriting Standards document this globally validated research by energy investment banks. ENERGY STAR certified properties must be in the top quartile of the existing building stock with respect to energy efficiency. Data compiled by the U.S. Green Building Council indicate that LEED-certified properties typically can achieve 25%-50% reductions in energy and water usage relative to their conventional competitors, with most projects designed to achieve reductions in the 30%-40% range. Additionally, Certified Climate Neutral buildings achieve a 100% conventional energy reduction through efficiency and Green-e Renewable Power.

The first SMaRT Certified sustainable product manufacturers achieved climate neutral status at their manufacturing facilities to achieve SMaRT LEED credit and reduce conventional energy cost increases. This includes:

- Knoll, the sustainable commercial furniture market leader
- Milliken, the textile manufacturing leader
- Forbo, the leader in linoleum

A March 2008 study by the New Buildings Institute (*Energy Performance of LEED for New Construction Buildings*, March 2008) collected post-occupancy energy usage data on 121 LEED properties to determine if LEED-certified green buildings were in fact achieving their energy-saving goals. The report concluded that, despite significant variations among certified properties examined, LEED projects as a group were attaining energy reductions consistent with design specifications. For all buildings surveyed, median energy use was 24% below national averages. LEED-certified office projects were 33% below national averages and office properties certified at LEED's Gold and Platinum levels were 50% below national energy usage averages. 2007 modifications in the LEED guidelines to mandate additional energy use reductions may be expected to improve future energy efficiency ratings for LEED-certified properties.

Building green and sustainably also minimizes the likelihood that property owners will be forced to undertake expensive capital upgrades in order to comply with emerging regulations

on energy efficiency, and assures that properties are more likely to remain competitive in the marketplace. As detailed below, regulations in the U.S. and elsewhere are increasingly requiring compliance on energy-efficiency or sustainability measures.

EPA issued a proposed notice of rulemaking in the July 30th 2008 Federal Register that was in response to the 2007 Massachusetts v. EPA Supreme Court decision. The court ruled that CO2 fell within the definition of an "air pollutant" under the Clean Air Act (CAA) and instructed EPA to make an endangerment finding to determine if CO2 should be regulated. While the agency punted on the endangerment finding, the proposed regulation analyzes impacts to building owners if EPA regulated CO2 emissions under various authorities of the CAA for example requiring all owners over 5,000 ft² using natural gas and oil to have a CAA permit and reduce their climate change pollution.

The U.S. government has long required that most new federal construction comply with energy-efficiency standards, and recommends that new or substantially renovated federal properties achieve LEED Silver certification pursuant to GSA Directive and the 2007 White House Sustainable Building Executive Order.

The Federal Energy Independence and Security Act, signed into law in December 2007, establishes federal initiatives to encourage the design and dissemination of zero net energy / climate neutral, green and high-performance building standards. Even more important, the new law requires that most new leases entered into by the U.S. government after 2010 meet ENERGY STAR requirements or undergo renovation to ensure compliance within a year of lease commencement. Thus, commercial real estate owners who hope to remain competitive in the U.S. government market would do well to go green. This statute also requires all federal facilities to reduce 70% of their conventional energy use by 2015 and be climate neutral by 2030. In 2008 DOE obligated $80B and the 2009 enacted Stimulus Bill provides another $20B for federal green buildings.

The pace of green building regulation has also accelerated at the state and local levels, and is increasingly affecting private construction. As of mid-2008, some 30 state governments had adopted green building regulations or statutes, up from 19 at the close of 2006, according to an online database assembled by the U.S. Green Building Council (see www.usgbc.org/resources/). The state of Connecticut has enacted green building code requirements that will be applied to private construction, and similar initiatives were underway in New Mexico and California as of mid-2008. Over 100 local governments are reported to have adopted green building regulations. A growing number of local government mandates have imposed green or energy-efficiency requirements on private construction. Early adopters of such laws included Boston; Washington, D.C.; and Salt Lake City. More recently, green building laws affecting private construction have been enacted in Baltimore (summer 2007), Annapolis, Maryland (March 2008), Los Angeles (April 2008) and Dallas (April 2008). Similar legislation is pending in San Francisco.

Environmental and green building regulations also have taken root globally. The UK, China and India are among the national governments that have adopted or have drafted green building regulations. There are LEED license agreements with Canada and India and one is being negotiated with China. LEED's greatest growth rate is internationally (July 2008 USGBC Board Briefing) with LEED certified buildings in 26 countries as of 2006. Over 800 cities have joined the International Climate Protection Initiative to reduce greenhouse gases, and are undertaking regulatory initiatives in support of this effort. Green building requirements are

being adopted at the provincial or local levels in Australia, Canada, China, Japan, Spain and Taiwan, among others. As has been the case in the United States, green building regulations are increasingly being imposed on private construction as well as on government buildings.

As this suggests, adoption of green building standards is a prudent way to "future proof" a real estate investment portfolio and keep it competitive. This perspective was summarized by RREEF in its November 2007 study, *The Greening of U.S. Investment Real Estate:*

> *"Green building is fundamentally altering real estate market dynamics – the nature of product demanded by tenants, constructed by developers, required by governments and favored by capital providers. The upshot will be a redefinition of what constitutes Class A properties and even institutional-quality real estate. … The prospect of permanently higher energy costs will only accelerate the shifts, as will greater regulatory mandates and government incentives. … [P]roperty owners will need to adapt quickly – or risk the consequences of sharply shrinking demand for property that, over time, becomes increasingly obsolete. … Those with fiduciary responsibilities, such as investors and investment managers that control large real estate portfolios, will be especially pressed to develop appropriate greening strategies for their business models."* (Andrew J. Nelson, *The Greening of U.S. Investment Real Estate*, RREEF, November 2007, pp.1-2.).

Green buildings also serve to minimize environmental liability risk. Moisture control requirements used in the construction of green real estate minimizes the risk of mold, a substantial source of uninsured environmental liability risk for commercial and residential real estate. Minimizing the likelihood of mold contamination is especially important for real estate investors, with the only likelihood of coverage being litigation over past policy likely coverage. As of mid-2007, at least 46 states and the District of Columbia had approved insurance coverage limits for residences with respect to mold-related claims, and such limits are becoming increasingly common for commercial properties (Bob Weinhold, "A Spreading Concern: Inhalational Health Effects of Mold", *Environmental Health Perspectives,* Volume 115, No. 6, June 2007.)

Value Creation

A growing body of evidence suggests that green buildings and certified manufactured sustainable products reduce investment risk and create value for real estate lenders and equity investors. Initial examinations of green value, including reports and articles published by the California Sustainable Energy Commission, the Urban Land Institute, the Royal Institution of Chartered Surveyors, *Building Design and Construction*, and Barrons, used case study findings and interviews with developers and owners of green buildings to document:

- accelerated leasing and strong tenant retention
- reductions in utility and other operating costs and
- achievement of top-tier rental rates and sale prices, including occasional market premiums.

The case study findings have been consistent across a variety of geographic areas, real estate classes and property types, and are consistent with the findings of the Partnership's Green Building Value Rating System and the observations of investment managers recorded in the Partnership's Investment Managers Survey. Together, the case study findings suggest that green real estate including certified sustainable manufactured products enhances investment value by reducing operating costs and favorably differentiating properties and investment

products in the marketplace. Favorable market differentiation in turn leads to faster lease-up, strong rents and heightened tenant retention, and for investors a differentiated product with long term growth opportunities.

Thus, the case study evidence indicates that green construction technologies and features strengthen cash flows and financial returns from two sources: the reduction of operating costs and the enhancement of revenues through faster leasing, better tenant retention, strong rental rates, and higher sale prices.

For sustainable product manufacturers the evidence shows increased profitability and improved share value also from reduced operating costs and increased revenues (see Forbo Case Study below). Together, these factors would be expected to increase sale prices for green properties relative to conventional ones.

Recent Reports Validating Added Value

Emerging aggregate data, while still imperfect, appear to be validating the thesis suggested by the case studies.

Occupant Demand. Surveys of commercial and residential occupants suggest that both homeowners and tenants show strong interest in green features and are willing to pay premiums for green properties in many circumstances. Further, Partnership financial institutions have committed over $18B to certify their buildings to LEED. One leading financial institution used a highly conservative 0.5% productivity gain attributable to Carnegie Mellon University data, resulting in a 6 month payback time for the green investment for all its commercial outlets. PNC Bank also has certified all of its branches to LEED and initiated a regional television green building advertising program covering this investment in August 2008. A leading financial institution documented a 90% reduction in staff turnover from its operation center after shifting staff to a certified LEED Building. This coincides with original US Green Building Council research with Battelle and the Department of Energy on a certified green building renovation before and after study.

These data showing increased productivity / occupant demand, are documented in the Green Building Value Rating System, and are also consistently stated in communications with certified green building owners. In fact Lockheed recognized this fact for its buildings and kept the information confidential for years to achieve a competitive advantage (*Green the Building & the Bottom Line,* peer reviewed report of the Rocky Mountain Institute and US Green Building Council 1998). Wal-Mart's discovery of increased sales in its daylite store in St. Louis constructed in 1994, resulting in it placing skylights in all of its new stores (*Ibid*).

Residential Demand. A 2006 survey by the American Institute of Architects found that 90% of U.S. homebuyers were willing to pay a premium of up to $5,000 for energy-efficient home improvements. An August 2006 survey by Wells Fargo of 1,400 American homeowners showed that a green or energy-efficient remodeling project was the top choice of homeowners surveyed, chosen by 24% of the sample.

A 2007 study of over 1,000 U.S. homebuyers by RCLCO (Robert Charles Lesser & Company) concluded that a significant number of homebuyers were willing to pay premiums for home energy efficiency and green features. RCLCO found that three factors were typically key drivers for homeowners interested in green dwellings: environment, energy savings and health and wellness. Of these, environmental concern was the weakest driver, cited by fewer than 10 percent of respondents. By contrast, energy savings and health and wellness motivated more

substantial numbers of consumers. As detailed below, majorities of consumers in all three groups would pay premiums for green residences, especially if their investment generated a payback in five years or fewer. Consumers motivated by energy savings tended to be older and less affluent, while consumers motivated by health and wellness tended to be highly educated with higher household incomes. Notably, significant minorities of consumers in all three groups would pay premiums for green features even if no payback were available.

U.S. Homebuyers: Willingness to Pay Premium for Green Features
RCLCO, 2007

Key Motivational Factor	*Total Willing to Pay Premium*	*With Payback*	*Without Payback*
Environment	*70%*	*46%*	*24%*
Energy Savings	*. 93%*	*75%*	*18%*
Health/Wellness	*91%*	*50%*	*41%*

Source: RCLCO (Robert Charles Lesser Company), 2007.

Commercial Demand. A global survey of over 400 corporate occupiers and their advisors conducted by CoreNet Global and Jones Lang LaSalle during 2007 suggests strong occupant demand for green commercial properties, including the willingness to pay rental premiums. Globally, 70% of those surveyed were willing to pay a premium for green commercial real estate. Results were relatively consistent across regions, with most occupiers agreeing that a rental premium of 1-10% was appropriate for green commercial real estate.

Global Commercial Occupiers
CoreNet Gobal, Jones Lang LaSalle, 2007

	All	*EMEA**	*North America*	*Asia Pacific*	*Australasia*
Willing to Pay Premium	*70%*	*66%*	*77%*	*64%*	*68%*
Size of Premium					
1-10%	*62%*	*64%*	*74%*	*48%*	*61%*
>10%	*8%*	*2%*	*3%*	*16%*	*7%*

**EMEA: Europe, Middle East, Africa*

Source: Jones Lang LaSalle, CoreNet Global, Global Trends in Sustainable Real Estate: An Occupiers Perspective, February 2008, p. 5.

Aggregate Property Performance Data. Aggregate data were collected by CoStar Group, the commercial real estate reporting service. CoStar has collected data on ENERGY STAR-certified properties since 2004 and began to track LEED-certified properties in 2006. CoStar also has assembled comparative data on property sales for ENERGY STAR certified, LEED-certified and conventional properties for sales completed since 1997.

CoStar's initial reporting, released in June 2007, compared the performance of ENERGY STAR and conventional multi-tenanted Class A office properties with at least five stories and 200,000 square feet of space, and constructed in 1970 or later. The study compared 203 ENERGY STAR buildings with 100.6 million square feet to 2,077 conventional properties containing 889.1 million square feet. ENERGY STAR properties showed, on average, 2.3 percentage points higher occupancy from 2004 through the second quarter of 2007, and registered 18% rental rate growth over the period, versus 11% for conventional buildings.

ENERGY STAR Buildings also recorded higher sale prices relative to conventional buildings: a 9% premium in 2005 and an 11% premium in 2006. Occupancy rates recorded for the ENERGY STAR properties trended above their conventional counterparts for the 2004-2007 study period. With the exception of a brief convergence in early 2005, direct rental rates for the ENERGY STAR properties exceeded those achieved in the conventional buildings. Sale prices for the ENERGY STAR properties exceeded those of conventional buildings from 2003 onward– sale prices for the years 1996-2002, showed mixed results.

CoStar's data set, including information on LEED-certified properties, was further evaluated by RREEF, the asset management arm of Deutsche Bank, in a study published in November 2007. RREEF's review compared 307 LEED-certified properties and 626 ENERGY STAR buildings to over a million conventional properties. RREEF found that LEED and ENERGY STAR properties showed uniformly lower vacancies than conventional buildings across a range of property types, including office, industrial, shopping centers and other retail space, with the caveat that data in the industrial and retail segments were limited. In order to undertake a comparison of a data set in which conventional and green project attributes could be matched more precisely, RREEF also compared the performance of 114 LEED Class A office projects to approximately 14,000 conventional Class A office buildings. The results indicate significantly lower vacancy rates, shorter vacancy periods and higher rental rates for LEED properties, as detailed below.

LEED- Certified Property Performance v. Conventional
RREEF, November 2007

	LEED	*Conventional*	*Difference*
Vacancy, all property types	*6.1%*	*8.6%*	*+41.0% LEED*
Vacancy, office	*6.9%*	*11.2%*	*+62.3% LEED*
Vacancy, Class A office	*7.4%*	*11.6%*	*+56.8% LEED*
Average vacancy, in months	*20.4%*	*22.3%*	*+ 9.3% LEED*
Rent per square foot	*$37.00*	*$29.00*	*+27.6% LEED*

Source: Andrew J. Nelson, RREEF, The Greening of U.S. Investment Real Estate, November 2007, pp.24-25. REEF analysis of CoStar data, 2007.

The initial CoStar data, however, failed to control for property location, a key determinant of real estate value. In order to correct for this defect, CoStar released another real estate value study in March 2008. The 2008 study, which drew on data for 44 billion square feet of conventional space and 351 million square feet of LEED- and ENERGY STAR-certified property, paired ENERGY STAR and LEED buildings with conventional counterparts of the same class and size and of similar age and location. The location criterion was a submarket match when possible. If a submarket match was not possible, location was controlled to within a five mile radius. With respect to property age, LEED properties were matched with peers constructed within a five year period.

The March 2008 CoStar study reported that both LEED and ENERGY STAR properties attained higher occupancies, rental rates and sales prices than their conventional peers, with LEED properties showing the most significant advantages with respect to occupancy, rental rate per square foot and sale price per square foot, as detailed below:

CoStar Group Green Value Findings, March 2008

Premium to conventional real estate:

	LEED	*ENERGY STAR*
Occupancy %	*+ 4.1 %*	*+ 3.6%*
Rent psf	*+$11.24*	*+$2.38*
Sale price psf	*+$171*	*+$61*

Source: CoStar Group, March 2008. National sample. Matched comparisons controlled entirely or partially for property size, class , age (built within the a five year period) and location (located within the same submarket or within a five mile radius).

The March 2008 CoStar study represents an important contribution to the data relating to the broad-scale comparison of the financial performance of LEED and ENERGY STAR-certified buildings to their conventional counterparts, and was the first such study to institute locational controls. It should be noted, however, that concerns with the data set– especially with respect to the findings related to LEED-certified sale price comparisons– have since been cited. A June 2008 critique of the March 2008 CoStar results issued by the Green Building Finance Consortium noted that the number of sales of LEED-certified buildings was small (making sale results statistically problematic), and that the LEED sale results were further weakened by the fact that many of the reported LEED sales were compared to properties in different submarkets. The Consortium also noted that although sales of LEED and ENERGY STAR properties were compared to conventional sales taking place within the same year, that price volatility within a specific year might invalidate the results.

At the same time, the January 2009 results of a regression analysis undertaken by a research team headed by John Quigley of the University of California at Berkeley lends additional support to the thesis that green buildings, defined as buildings certified under ENERGY STAR or LEED, are more valuable with respect to both rents and sale prices. This study, which also relies on CoStar data, compared rental rates for 699 green buildings with those of 7,489 conventional office buildings. Comparisons were restricted to properties located within a quarter-mile radius. Sale prices for 199 LEED and ENERGY STAR properties sold between 2004 and 2007 were compared to sale prices for conventional buildings, again with

comparisons restricted to properties within a quarter-mile radius. The findings indicate that rental rates for the green properties were approximately two percent in excess of the conventional properties, and that effective rents (rents controlled for property occupancy) for the green properties were six to nine percent above rents for the conventional properties. Sale prices for the green properties were 16 percent above those for the conventional properties. The results were statistically significant for green buildings as a group.

The data in this January 2009 report were published in Doing Well by Doing Good, Green Office Buildings. Statistical models in the report showed at p. 2: *"At prevailing capitalization rates, conversion of the average non green rental building to an equivalent green building would add about $5.5 million in market value. … An increase in ten percent in the site energy utilization efficiency of a green building is associated with a twenty basis point increase in effective rent – over and above the six percent premium of a labeled building. A one dollar savings in energy costs from increased thermal energy efficiency yields roughly eighteen dollars in the increased valuation."* The report was funded by the European Centre for Corporate Engagement, Maastricht University, University of California Energy Institute and Royal Institute of Chartered Surveyors.

The preponderance of the data suggests that green buildings attain higher direct rents, effective rents and occupancies than conventional buildings, data that would logically be expected to correlate with higher sales prices. The CoStar and Doing Well results and case study data also suggest that green features are associated with higher sale prices. That research findings to date are more reliable with respect to ENERGY STAR properties than to properties certified under LEED, may be attributable to the relatively small number of LEED-certified rental buildings in the marketplace. Until recently, most LEED-certified buildings were owner-occupied, rather than speculative properties. As additional green-certified rental buildings are completed, leased and sold, more reliable matched comparisons of financial performance for green and conventional properties, including sale price data, should become available.

In sum, the preponderance of the evidence available as of 2009 indicates that green properties are more valuable than their conventional peers.

7. Market Growth, Pricing & Profitability

Green building and related sectors are key sources for strong pricing and profitability. Growth in these sectors has significantly outpaced growth in the U.S. and global economies, a trend that is expected to increase as conventional energy prices continue to rise.

Green building growth for newly-constructed projects certified under LEED has been about 75% annually over the last five years, according to USGBC internal data for the period 2003-2008. The market for wood certified by the Forest Stewardship Council (FSC) has grown steadily for the last 15 years and recently has paralleled the growth in the LEED new construction market, a result of the FSC wood credit in LEED (Sustainable Products Training, Sustainable Products Corporation, 2008). FSC growth for 2006-2007 has doubled annually and current market penetration has risen to 2% (FSC Board communication July 2008). Similarly, the certified sustainable product growth rate has been about 20% per year for the last two years (MTS, SMaRT data, 2008) and the growth in certified organic products has measured 20% annually for the last 15 years representing about 10% market penetration (Organic Trade Association 2006).

Green building market growth has exploded in 2009 with substantial Federal stimulus funding, viral growth nationally of municipal bond financing programs for green building retrofits, and substantial activity in Congress including the approved House Climate Bill with substantive green building programs, requirements, and funding.

Advertising and marketing for green or sustainable manufactured products and activities is at an all time high and resulted in 2008 Federal Trade Commission hearings on amendments to federal environmental marketing guidelines. The Sustainable Brands Conference has become an annual event with substantial participation by Fortune 500 manufacturers and their advertising agencies. Sustainable Materials Rating Technology (SMaRT) Certified Sustainable Products have been adopted by over 20 entities as of February 2009 including the Alliance for Sustainable Built Environments, an association of 10 Fortune 500 companies with over $100B in annual sales. The Alliance entered into a global marketing agreement for SMaRT Certified Products.

Market growth in green building and related sectors increased due to concern about climate change, green building popularity, success, and well over 100 government green building programs in the US with an increasing number mandating private sector requirements. Global green building growth is comparable to the US in developed countries.

The urgency to deal effectively deal with climate change reached a consensus in 2008 with the public and government.

In 2008, financial institutions recognized the long term impacts of global oil and natural gas depletion and carbon constraints. Climate change concerns from coal fired power plants caused the adoption of the *Carbon Principles* by JPMorgan Chase, Citi, Morgan Stanley and Bank of America, resulting in devaluation of investment in coal and uncertainty in other carbon investments, and a higher priority for renewable power. National environmental groups are opposing any new coal fired power plants due to climate change pollution. For the same reason the State of Kansas and Georgia stopped permitting of coal fired power plants and local governments in southern California switched from coal fired power. Effective national NGO campaigns against coal were initiated as a result of US and European mayors' adoption of a policy to reduce conventional energy use in buildings by 70% by 2015.

Moreover, NASA Climate Scientist Jim Hansen, recognized by the President of the National Academies of Science as the top 1 or 2 climate scientists (60 Minutes March 2006 & July 30, 2006), wrote public peer reviewed letters to the Prime Ministers of the UK and Germany documenting the need to stop any new coal fired power plant construction and urging them to do so immediately (letters to Prime Ministers Brown & Merkel Dec. 9, 2007).

Thus, there is a significant shift away from coal to satisfy substantially increasing US energy demand including the February 2009 enacted economic stimulus legislation. Approximately 150 new coal fired plants were planned to meet that demand, but that number has decreased substantially due to the challenges enumerated above. Accordingly, it is expected that much of future demand will be met by efficiency and clean renewable power, although utilities may not be moving fast enough to prevent brownouts.

Escalating oil and natural gas prices have already begun to dampen demand for these fuels. Federal Reserve Vice Chairman Donald Kohn noted in a May 20, 2008 speech to National Conference of Public Employee Retirement Systems the adverse impact of rising energy prices on the economy:

> "[A] *substantial run-up in the prices of petroleum and other commodities has simultaneously increased inflation and dampened spending on other goods and services. I don't need to tell you that challenging times for the economy are also challenging times for those entrusted with managing pension funds.*
>
> [W]*e have seen no relief from the pressures of rising prices for energy and food; thus headline inflation has been quite elevated. These prices have continued to rise despite slowing demand in the United States and, to a lesser extent, in other countries. Over the past few years, emerging market economies have increased demand for many of these commodities, and world supply has not kept pace with this growing demand. For oil, non-OPEC production, particularly in the North Sea and in Mexico, has proved disappointing, and OPEC production has remained restrained.*

Documented and substantial pressure from a number of factors is causing conventional energy costs to significantly increase as expected over the next 10 years. There will be volatility due to the global economy, but the long-term trend is for substantial price increases. These conclusions are documented in the national consensus *Climate Neutral Building Standard,* CMP 10 year historical price increase research and slides for conventional energy, and extensive globally validated research by Simmons & Company International, a leading independent energy investment bank including the book *Twilight in the Desert* (2005). Simmons & Co.'s work was been commended by former President George W. Bush, with President Bush encouraging the Company to extensively promote these findings in publications and presentations that it has done as noted at http://www.simmonsco-intl.com. A number of additional independent energy investment bankers have concurred with Simmons & Co.'s conclusions.

The above-referenced constraints on carbon, global depletion, and increasing global demand have led to rising conventional energy costs and energy price volatility, a trend that has been ongoing for a number of years. These trends are expected to continue for the foreseeable future and have substantial economic impacts throughout the economy due to the pervasive use of energy, and rising energy costs documented contribution to inflation. As prices for conventional fuels rise, consumption patterns are expected to shift to products and services

that, like green buildings and certified sustainable manufactured products, conserve energy and incorporate clean renewable technologies as standardized by *Green-e Power*.

Given the substantial long-term market demand for sustainable investment, and its documented added value and reduced risk, profitability is expected if appropriate underwriting is followed and investments are based on approved consensus standards that reduce risk and uncertainty.

Pricing for sustainable manufactured products and services, and green buildings, is expected to follow traditional supply and demand principles. As of 2008, demand for sustainable properties appears to outstrip supply, creating strong pricing and profit potential. According to the CoreNet Global/Jones Lang LaSalle global survey of corporate occupiers, 84% of respondents believe that the supply of sustainable buildings is non-existent, minimal, limited or patchy (*Global Trends in Sustainable Real Estate: An Occupiers Perspective, p.6)*, a finding consistent with the willingness to pay a premium to occupy a green building. The Survey covered about 100 top CFO's who concluded that they see value in sustainability and support measurement tools for assessing the value, e.g., *Green Building Underwriting Standards.*

8. Green Building Market Growth & Expected Demand for Capital Markets Sustainable Investment Products

Significant growth in the green building market and strong demand by commercial and residential occupants, as detailed in Sections 6 and 7, suggest that green real estate investment products and sustainable manufactured products, if appropriately underwritten in conformance with consensus standards, could be significant sources of new, lucrative business for financial institutions. Newly emerging financial products associated with growth in the sector include construction and renovation loans, permanent mortgages, pooled equity, private equity, and mortgage funds for the private and public markets.

The launch of GBS is expected to represent a new capital markets product and could help to revitalize the securities industry in the wake of the credit crisis. Leading originators are using CMP's Underwriting Standards in launching a $500M GBS. Due to the impact of the subprime crisis and general economic weakening, few MBS originations have occurred since December 2007. The residential mortgage-backed securities (RMBS) market has been the source of the most substantial writeoffs from defaults. CMBS has shown fewer underwriting challenges, but continuing economic deterioration and the stigma from challenges in the residential markets has led to a pronounced decline in new originations.

The key distinction between expected GBS and existing MBS pools– especially existing subprime pools– is the heightened quality of the underlying collateral and the reduction of default risk. With respect to real estate quality, green buildings are typically better engineered than their conventional counterparts. The commissioning of mechanical elements, as required under consensus standards, typically leads to more reliable operating performance. In addition, green commercial buildings frequently pose reduced economic risk due to accelerated leasing, stronger occupancies and tenant retention, and top-tier rental rates. In the residential market, occupants of green homes tend to be affluent, highly educated, or strongly motivated to reduce ownership costs, as indicated by the RCLCO data discussed in Section 6. These characteristics of green buildings and their occupants would be expected to materially reduce default risk.

Based on market evaluation with Partner investment banks, there are an estimated 800,000 green homes and 100,000 green commercial buildings available for GBS pools. The Partnership's underwriting standards easily allow identification of these properties consistent with the Federal Trade Commission Environmental Marketing Guidelines.

From a policy and economic perspective, it would seem that continuing efforts to reinvigorate the MBS Market through GBS are worth pursuing. This type of innovation with higher value collateral and reduced risk could improve good will and investor confidence and provide increased liquidity. Further, a key purpose of the MBS market during its growth after the S&L crisis was to stabilize the real estate market and economy. In addition, the resecuritization opportunity for existing buildings would catalyze the renovation of conventional building stock as green, energy efficient, higher valued property. This activity would invigorate both the redevelopment and new construction needs of major cities across the country as endorsed in the June 2008 US Conference of Mayors Resolution supporting CMP's Sustainable Investment Initiative.

Size and growth estimates for the potential GBS market have been estimated by for CMP Partners. The estimates, detailed in the following table, indicate that sufficient product exists in the market to launch GBS, and that the market for GBS vehicles should continue to grow.

Green or Sustainable Building Securities: Commercial Market Size & Growth Estimates

Years:	1	2	3	4	5
Revenues:					
Commercial	$25B	$50B	$100B	$200B	$375B
Residential					
Total Revenue					

Commercial Assumptions

1. $1B Average Pool / Deal Size
2. Fees are 1% of Deal Size for Lead Manager / Underwriter
3. 80 loans / buildings per Pool
4. $14M average loan size
5. Number of US commercial buildings is 46,000,000
6. Estimated percent of commercial buildings eligible for GBS is 50% (excluding non MBS building types)
7. Thus, US GBS Gross Market Size in terms of numbers of potential buildings is 25,000,000
8. Average US commercial building size is 15,000 ft.2
9. Estimated average SMBS building size is 36,000 ft.2 with $15M building value / loan amount
10. SMBS estimated market size in terms of eligible buildings is 12,000,000 (excluding buildings that are too small; one half of potential SMBS bldgs. based on square footage)
11. Thus, estimated dollar size of total SMBS market is $180 trillion (12M buildings x $15M average building mortgage value)
12. Assume this market will take 10 years to be securitized
13. SMBS market is larger than MBS market because the total potential MBS market needs to be resecuritzed to reduce expenses and risk and significantly increase LTV.

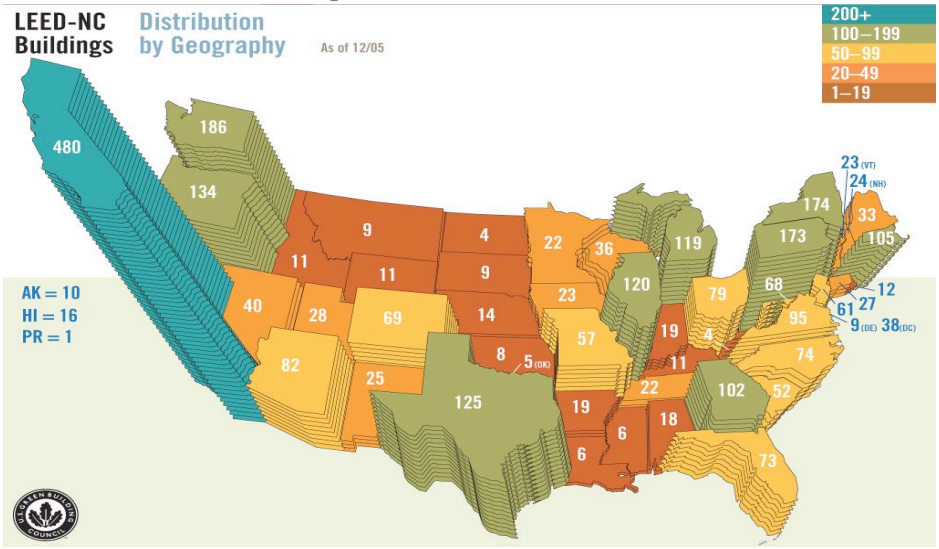
    Capital Markets Partnership due diligence and CoStar 2008 statistically controlled study show green buildings have greater cash flow, higher occupancy, sales prices and rents, fewer expenses, and overall better financial performance.

Assumptions 1-4 are taken from a 2008 CMBS Offering with 3 Managers / Underwriters.
Assumptions 5 and 8 are taken from DOE Office of Energy Efficiency (1995 Commercial Building Profile)
http://www.eia.doe.gov/emeu/cbecs/char95/profile.html
http://buildingsdatabook.eren.doe.gov/docs/bed2004.pdf

[75M homes in 1993 consisting of 185B ft.2, with average size being 2369 ft.2 (*Ibid*)]

California has the most green buildings and is the first to adopt certified sustainable products incorporated into green buildings.

US Geographic Distribution



LEED EB CERTIFIED

National Geographic Society Headquarters, Wash., DC

MTS

The Society added $16M in value from this LEED certification from a higher appraised value, raising tenant rents, lower operating costs, increased credit rating from Moody's, & lower interest rates on large loans secured to the building. ***Presentation at 2003 Congressional Green Building Luncheon by Chris Liedel, CFO, National Geographic Society.***

9. Congruence with Existing Financial Institution Operations

The Partnership's sustainable investment activities have been developed to ensure compatibility with the operations of its member financial institutions. The Partnership's *National Consensus Green Building Underwriting Standards*, for example, comport with both existing commercial and residential underwriting and appraisal methods, thus simplifying their adoption by financial institutions.

Given CMP's use of consensus national standards to define green buildings and certified sustainable manufactured products, these standards reflect the judgment and experience of industry practitioners. Thus, standards have been crafted to mesh with market norms, rendering them immediately available for implementation. Importantly, no new legislation or regulations are needed.

10. Expected New Sustainable Real Estate Finance & Other Sustainable Investment Products

A number of new sustainable investment products are expected to emanate from the Partnership's Sustainable Investment Initiative. As detailed below, three broad product categories are anticipated.

Green Real Estate Investments. The first category of expected new financial products are financial institution equity or debt investments in green commercial and residential real estate, and financial products and services related to such investment. Anticipated products, some of which are already being introduced to the market, include pooled mortgage and equity funds for the private and public markets, permanent mortgages, construction and renovation loans, GBS, insurance coverage geared to green properties, and asset management services. Certain of these products have begun to be introduced to the market and are sources of significant potential growth. Members of the Capital Markets Partnership have introduced or are developing green building private equity funds. Partnership members Bank of America and Citi have announced significant capital commitments to green real estate, and Bank of America Countrywide has launched a ten-state pilot program offering discounted LEED home loans.

Climate Neutral & Green Power Credits and Related Financial Instruments. The Partnership's activities are expected to accelerate national and international action to regulate carbon emissions. These activities are expected to expand the market for carbon finance-related investments, including Green Tags (credits for energy generated through environmentally-friendly sources), White Tags (credits for energy conservation in excess of voluntary or mandated standards), renewable energy credits (RECs) and project finance such as that performed under the Kyoto Accord.

It is expected that projects and products will have the strongest market potential where they adhere to recognized consensus standards, including LEED, ENERGY STAR, and MTS' standards for certified Climate Neutral Buildings, SMaRT sustainable products, and the *Green Building Underwriting Standards*©, because they:

- Provide the consensus and transparency required by the financial markets to reduce risk and uncertainty
- Provide the greatest economic value compared to conventional
- Avoid unlawful greenwash
- Replace increasingly costly conventional energy with increased efficiency and Green-e renewable power
- Reduce the risk associated with ineffective underwriting which contributed to the credit crisis and global recession
- Provide the greatest environmental and social value including substantial pollution reductions across the global supply chain including climate change pollution

In order to deliver these benefits to the marketplace, the Partnership's National Underwriting Standards launched on June 19, 2008 at JPMorgan Chase and unanimously approved on September 2, recognize LEED, ENERGY STAR, Climate Neutral, GreenPoint RATED, FSC and SMaRT or equivalent, but allow any building to achieve an ENERGY STAR Score and

points for easily verified locational factors such as transit. See http://www.capitalmarketspartnership.com. These consensus standards cover the built environment, the global supply chain, and about 70% of global economic activity.

Green Affordable Housing. The added value and reduced expense of green buildings and homes is very important to affordable housing especially with the adverse economic impact of the credit crisis on homeowners.

Affordable green housing can also positively affect other social challenges in communities by countering housing depreciation that was extant even before the credit crisis.

Based on these principles, the Federal Home Loan Bank (FHLB) in conjunction with the Home Depot and other leading foundations, are working with CMP to achieve FHLB adoption of the Underwriting Standards, conducting Underwriting Standards Education for green affordable housing, as well as working with CMP Partner countries to secure the Standards adoption internationally with modifications as needed for comparable green building standards internationally. To this end, FHLB has taken a leadership role with CMP's Green Building Underwriting Standards. Another participant, Fannie Mae, supports these affordable housing objectives.

The community revitalization benefits of CMP's Sustainable Investment Initiative was endorsed by the US Conference of Mayors in June 2008 at their 76th annual meeting. The Resolution furthers the ability of the capital markets to partner with local governments to attain urban development and redevelopment goals.

All of the economic benefits of green buildings documented above in this Paper are equally applicable to Green Affordable Housing. Case study results of 16 green affordable housing projects supports this conclusion (*Costs & Benefits of Green Affordable Housing,* New Ecology Inc. 2006).

The social benefits of green buildings to affordable housing communities are much greater than for conventional green buildings:

- Asset appreciation
- Pride of ownership & better sense of community
- Lower operating costs
- Improved occupant health from better indoor air, no lead, pesticides, reduction in conditions triggering asthma, reduced mold
- Improved durability; commissioning prevents operational failures and inefficiency
- MTS' ANSI Sustainable Integrative Design & Development Standard (SIDD) reduces construction & operating costs, and liability according to Fireman's Fund's liability

reduction statement, and construction experience by the Navy. Integrative design following the Standard also achieves superior energy and environmental performance.

- Small environmental footprint / less pollution

Accordingly, green affordable housing should be made a special priority by all CMP Partners.

Sustainable Manufactured Product Investments. The second category of investments expected to benefit from the Partnership's activities are equity and debt investments and insurance for certified sustainable product manufacturers, suppliers, and retailers (excepting planes and vehicles). It is expected that the sustainable manufactured products industry will benefit by the growth in the green building sector, and that consumers in the real estate industry and in other sectors will manifest strong demand for certified sustainable manufactured products.

Emerging activities in this area including the Sustainable Manufacturing & Retail Underwriting Standard showing increased share value, and Green Convertible Securities covering debt and equity and manufacturers and retailers.

There is a robust foundation of consensus standards in this area including SMaRT Sustainable Product Standard covering the global supply chain that is a result of seven successful national and international votes of consensus from 1992 to 2006.

The Forbo Linoleum case study, below, illustrates the financial success that can be achieved by companies that focus on the manufacture of certified sustainable products. Forbo Linoleum is SMaRT Platinum Certified.

Certified Sustainable Product Case Study – Forbo Linoleum

A Culture of Long Term Commitment to Optimized Environmental Performance

Forbo Linoleum manufacturers and sells linoleum floorcovering, wallcovering and finishing for office furniture and homes. The company attributes the following superior economic performance to its sustainable practices (Forbo internal data 2001):

- EBIT (Operating Result) performance as a percentage of sales that is, at a minimum, 25% better than any of its competitors.
- Internal profitability shows its sustainable products' EBIT level performance more than double, as a percent of sales, those of traditional products.
- Five year share price performance is 100% greater on average than its three largest competitors.

SMART certified | Transparent. Quantified. Global.

Forbo Linoleum is a Platinum Certified SMaRT Sustainable Product qualifying for LEED credit and recognized in Green Building Underwriting Standards. Its SMaRT Certification included 100% wind power use for all energy needs at its world's largest linoleum manufacturing facility outside Amsterdam.

11. Global Scope of CMP's Sustainable Investment Initiative

The scope of CMP's Sustainable Investment Initiative is global, as are its consensus standards for green buildings and certified sustainable manufactured products. LEED and similar consensus standards are being adopted worldwide with strong growth (USGBC internal data 2008). LEED License agreements have been executed with Canada and India, and another such agreement is expected to be executed with China.

The SMaRT certified sustainable product standard covers the global supply chain as required by international law for multi-attribute sustainable product labels and is being marketed globally by Fortune 500 companies.

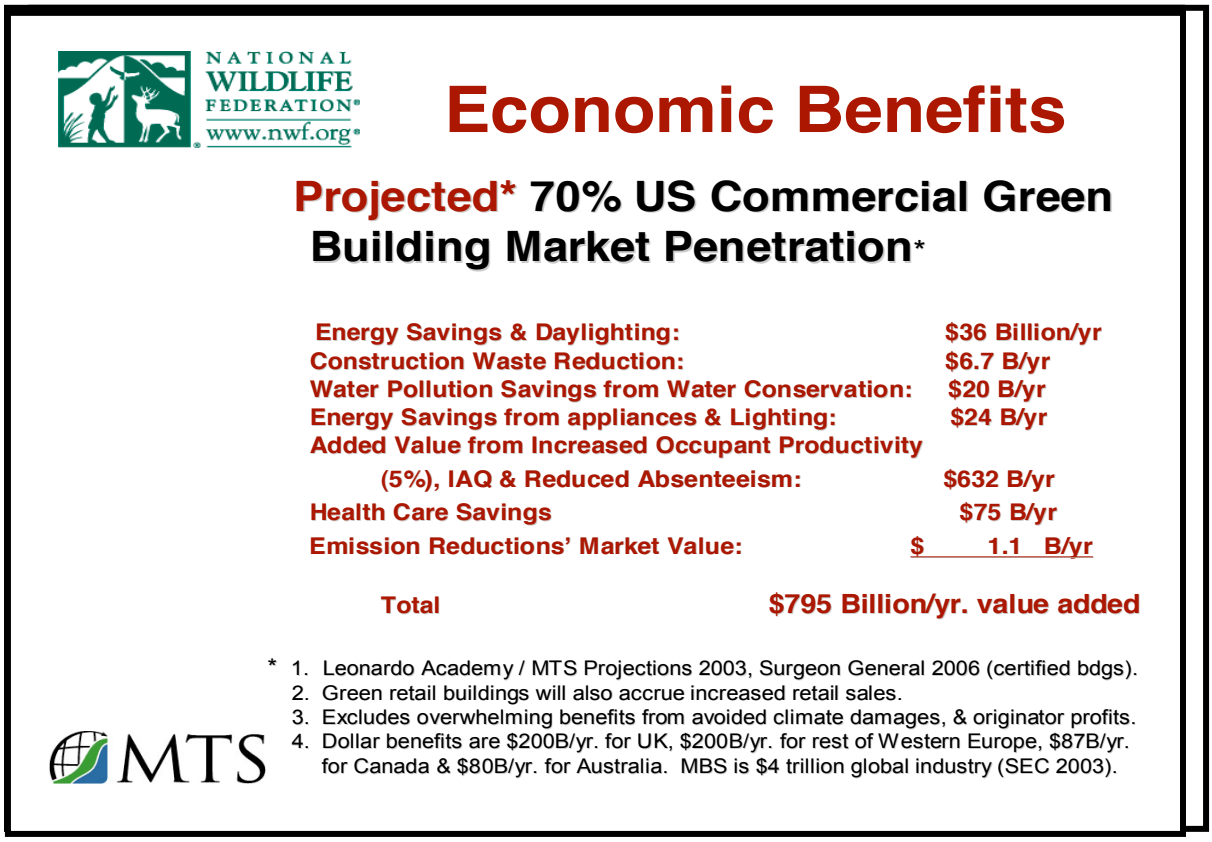
Four countries have been participating in the Sustainable Investment Initiative: Australia, Canada, the United Kingdom and United States. India shows great potential with its LEED License Agreement, a growing green building market, and substantial energy constraints including supply and reliability.

Because these standards cover the building industry that is the world's largest, and sustainable manufactured products covering 80% of products manufactured and the global supply chain, it is estimated that CMP's Sustainable Investment Initiative covers some 70% of global economic activity.

12. Substantial Expected Social Benefits

Development of green and sustainable investment finance products are expected to create substantial social benefits. The Partnership's peer-reviewed report *Creating an Economic Stimulus & Stopping Climate Credit Risk / Irreversibility* quantifies the need by 2015 to certify two million green and climate neutral buildings and one million sustainable manufactured products to stimulate the economy, counter the effect of the credit crisis, improve the value of real estate collateral, decrease risk, improve goodwill, increase liquidity, and improve investor confidence.

As indicated by quantified data developed by MTS and the National Wildlife Federation and successful precedent, the combined economic and social benefits of green market expansion, including health and productivity benefits, could reach $1 trillion annually within a five year period (see graphic below).

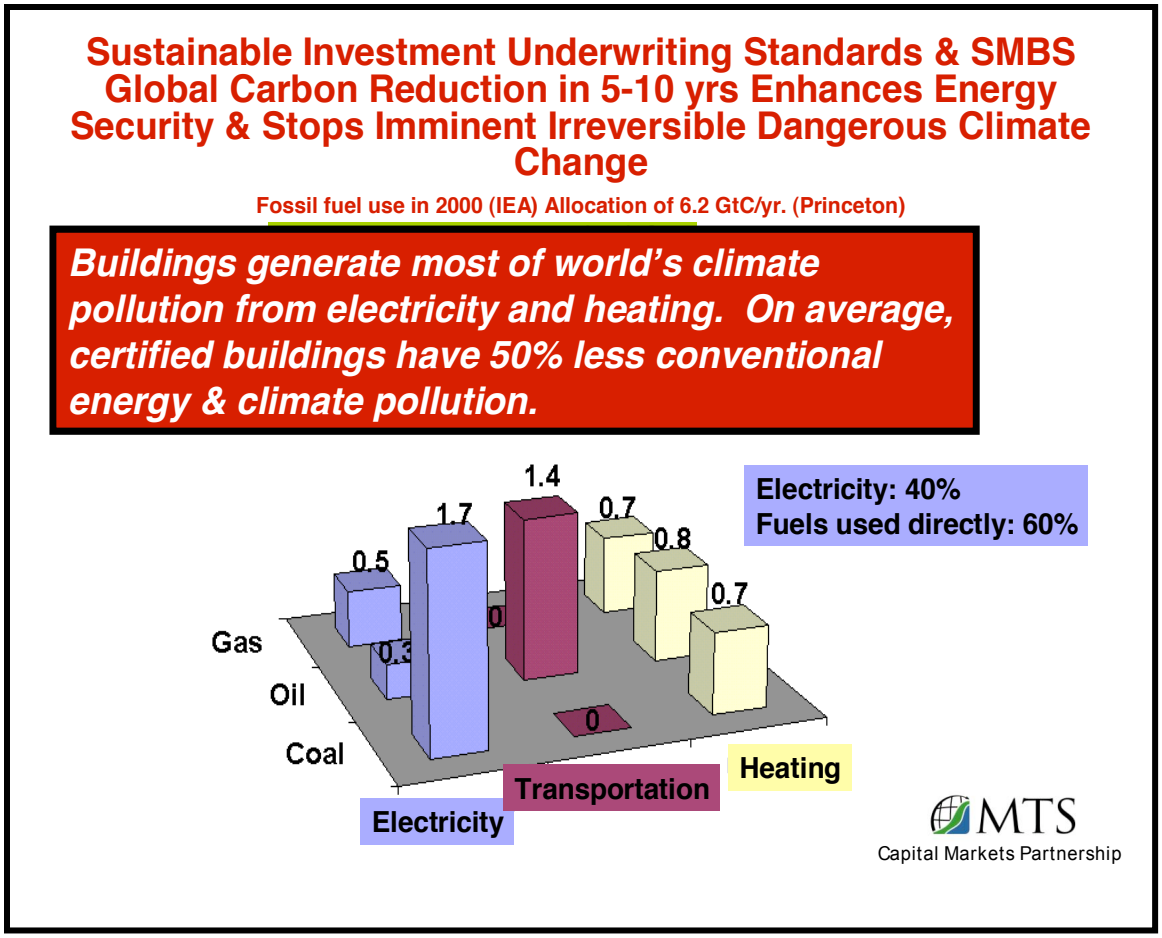


Sustainable Investment is expected to add an estimated $1 trillion/year to the global economy after five years based on quantified benefits and successful precedent.

Additional data on the social, economic and environmental benefits of the expansion of the green real estate and sustainable product markets are discussed below.

Energy Security & Reduced Energy Price Volatility. As detailed in Sections 6 and 7, above, green buildings and certified manufactured sustainable products consume significantly less energy than their conventional peers and accelerate energy efficiency and the shift to alternative fuels. Thus, their financing and commercialization is a key lever to improve energy security and reduce energy price volatility.

Environmental Benefits. The built environment is the single largest source of greenhouse gas emissions, larger than even the transportation sector. As detailed in the graphic below, electricity generated from buildings accounts for over 40% of climate change pollution, and the heating and cooling of buildings, from all sources including electricity, accounts for some 60% of climate change pollution. Widespread use of green building technologies would therefore reduce greenhouse gas pollution substantially. As discussed in Section 6, green buildings use a third less conventional fuel than conventional buildings, on average. The most efficient green buildings use 50% less fuel than conventional properties. Achieving green certifications for real estate and other products will also minimize the negative risk and impact of climate change, which could deplete up to 20% of global GDP, according to United Kingdom government projections (Sir Nicholas Stern, et. al., *Stern Review: The Economics of Climate Change*, HM-Treasury, United Kingdom, October 2006, p. vi).



Economic and Employment Benefits. The UK's Stern Review (citation above), projects climate change-associated economic losses as high as 20% of worldwide GDP. Reducing such pollution would therefore have a broad and positive effect on the global economy.

The economic and employment benefits associated with green buildings and certified sustainable manufactured products are also immediate and tangible. As discussed in Section 6, there is strong commercial and household demand for green real estate and certified sustainable manufactured products. Actions to further stimulate the green real estate market would therefore be expected reap rapid economic and employment benefits for the U.S. and global real estate economies.

Actions to stimulate the real estate sector would be particularly beneficial in alleviating immediate economic distress. In the U.S., construction and real estate-related employment led the nation out of the 2000-2001 recession and have borne the brunt of employment losses in 2006 and 2007. According to the Bureau of Labor Statistics, the U.S. construction sector has lost 528,000 jobs since its peak in August 2006 (Bureau of Labor Statistics, *The Employment Situation*, June 2008, p. 2.) The BLS also reports that job losses since 2007 in the construction sector have been nearly as large as those in the manufacturing sector, which is twice the size of the construction industry ("Labor Dept. Reports Big Job Cuts in Construction and Manufacturing," St. Louis Business Journal, July 7, 2008; www.bizjournals.com/stlouis/stories/2008/07/07/.daily15.html). As of June 2008, unemployment in the construction sector stood at 8.2%, substantially above the U.S. average of 5.5%. These numbers have worsened for first quarter 2009. All told, construction and construction-related job losses in related industries, including mortgage finance, appraisal and insurance, account for nearly a third of all U.S. job losses in the year ending May 2008, according to the National Association of Realtors (Ken Fears, *Economist's Commentary*, National Association of Realtors, July 14, 2008). Because construction and many allied jobs are locally-based and cannot be exported, actions to stimulate the green real estate industry would reap significant economic and employment benefits for communities throughout the U.S.

The growth of the green building industry would also produce additional economic and employment growth in the sustainable manufactured products industry, which produces goods and materials employed in sustainable construction. The deployment of capital to finance green real estate development in other nations would be expected to generate similar benefits.

As well, the development of real estate finance vehicles collateralized by high-quality green real estate identified in accordance with sound consensus standards would help to revitalize confidence in the U.S. and global financial services industry. The expected positive impact on financial institution brand value is substantial. An estimated 40% of share value is attributed to intangible value imbedded in companies including perceived social benefits ("Enhancing Brand Value Through Corporate Social Responsibility," Lippincott Mercer 2006).

Sustainable Investment will Create Economic Growth, and Increase Collateral and Brand Value for Financial Institutions, including Issuers.

13. Fulfilling Global Capital Markets' Legal Duty to Accurately Reflect Climate Change Risk

In recent years, the consensus view of the risks that should be appropriately assessed by fiduciaries has evolved to include environmental, social and governance (ESG) issues, as well as more traditional measures of financial risk. Climate change risk is a critical ESG issue. CMP Partner Paul Watchman, an attorney formerly with the law firm of Dewey & LeBoeuf, authored the 2005 report for the UN Environment Programme determining that the laws of the countries with the largest capital markets, including the US, UK, Japan, Canada, Australia, France, Germany, Italy and Spain, require financial institutions to accurately reflect ESG risks, including climate change risk. The report concluded:

> *"The links between ESG factors and financial performance are increasingly being recognized. On that basis, integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and arguably required in all jurisdictions."* (Freshfields Bruckhaus Deringer, *A Legal Framework for the Integration of Environmental, Social and Governance Issues Into Institutional Investment*, United Nations Environment Programme Finance Initiative, October 2005, p. 13.)

The SEC and Investment Advisors Act of 1940 also places this responsibility on the risk rating agencies and the issuers of securities. In the article *How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital* Formation, the SEC states (2008):

> "*The laws and rules that govern the securities industry in the United States derive from a simple and straightforward concept: all investors, whether large institutions or private individuals, should have access to certain basic facts about an investment prior to buying it, and so long as they hold it. To achieve this, the SEC requires public companies to disclose meaningful financial and other information to the public. This provides a common pool of knowledge for all investors to use to judge for themselves whether to buy, sell, or hold a particular security. Only through the steady flow of timely, comprehensive, and accurate information can people make sound investment decisions.*"

Partially in fulfillment of this legal responsibility, Partnership members Bank of America and Citi took leadership steps in 2007 and initiated climate change investment commitments for $20 billion and $50 billion, respectively. It is expected that rapid implementation of the Partnership's recommendations, as set forth in this paper, would contribute substantially to the fulfillment of this legal and fiduciary duty by financial institutions.

Goldman Sachs observes that investments that address environmental and climate change risk represent financial opportunities as well as risk mitigation strategies. In an August 2005 report, investment strategists Abby Joseph Cohen and Michael Moran noted that

> "*[E]nvironmental issues… [are] important to both socially responsible and fundamental investors….While many investors consider environmental issues a topic simply for the SRI [socially responsible investment] market, there are important implications from these issues for fundamental investors as well. An issue such as climate change may present a host of concerns for individual companies, such as regulatory, reputational and litigation risks. However, there*

are potential opportunities as well, such as developing new "green" products or obtaining a relative advantage over a competing firm that is not as well-positioned to adapt to a carbon-emission constrained world." (Michael A. Moran and Abby Joseph Cohen, *US Portfolio Strategy*, Goldman Sachs, August 26, 2005, p. 1.)

14. Recommendations to Top Investment Bank Management, Primary Lenders, Rating Agencies, Investors & Key Governments

1. The Capital Markets Partnership should distribute this Briefing Paper widely to top management to facilitate broader market understanding of the financial and social benefits, added value, and substantially reduced risk of sustainable investment.
2. Additional financial institutions and property investors and managers should adopt the *National Consensus Green Building Investment Underwriting Standards* to properly value green buildings and homes, decrease risk, and increase profitability and transparency.
3. Capital Markets Partners should continue working with leading originators and launch Green Building Securities, and should continue to develop and launch related capital markets products, such as green convertible securities, green private equity and other pooled equity funds, green permanent mortgage loans, green construction loans and other fixed income and structured finance products. Sustainable insurance and asset management products should also continue to be developed since this industry is impacted the greatest by climate risk. Also, insurance availability including discounted coverage like that available for green buildings by Fireman's Fund, stimulate the development of new sustainable investment products.
4. Given their expected profitability and the substantial and urgently needed benefits to the economy and the environment, Capital Markets Partners should continue to accelerate the launch of additional new sustainable financial products for all sectors in the global supply chain.
5. The Capital Markets Partnership should conduct quarterly meetings to:
    a. Continue to facilitate sustainable investment.
    b. Ensure that at least two million green buildings and one million sustainable manufactured products are certified by 2015 to protect and stimulate the economy, and stop climate credit risk and imminent, irreversible and dangerous climate change in accordance with State of California and IPCC recommendations.

15. Conclusions

The capital markets can work rapidly and effectively to stimulate the economy, to help to counter rising conventional energy costs, and to help to stop imminent, irreversible and dangerous climate change within the next 5-10 years. Successful precedent and quantified benefits demonstrate the value of immediate action.

The need to act promptly is clear. Also clear are the expected benefits from the launch of green building securities and additional securities and finance products, including equity funds, permanent mortgages and construction loans.

On the environmental front, sustainable investment finance products can help curb pollution causing dangerous climate change.

On the economic front, sustainable investment finance products help to stimulate employment growth in the construction, real estate and alternative energy sectors, contributing to immediate and long-term economic recovery. This is the world's largest industry.

Growth in the sustainable real estate market will also spur additional growth in the overall market for sustainable manufactured products, a sector that has been growing at an annual rate of 20%, and going beyond real estate with consensus sustainable product standards covering about 80% of all manufactured products. Additional activity in the sustainable manufactured products sector will further stimulate local, national and global economies and establish additional mechanisms to combat dangerous climate change.

As documented in this Briefing Paper, green real estate finance products are backed by properties enjoying strong occupant demand and financial performance, attesting to their strength as potential investment vehicles. Because green real estate finance products are backed by high-quality collateral, they can play a key role in restoring investor and public confidence in the real estate capital markets, including securities.

APPENDIX A
ORGANIZATIONS PARTICIPATING IN
CAPITAL MARKETS PARTNERSHIP INVESTMENT MANAGER SURVEY
June 23- July 16, 2008

Adelante Capital Management
AIG Investments
Pension fund with over $180B in assets under management
California State Teachers Retirement System (CalSTRs)
Calvert Asset Management Company
First Affirmative Financial Network
Hansen's Financial Services
Hart Seifer Partners
Hines
JPMorgan
Kennedy Associates Real Estate Counsel
Landon Butler Company
Lend Lease Investment Management
Long View ULTRA Construction Loan Investment Fund
Parnassus Fund
PRUPIM
RREEF
TIAA-CREF

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Hon. Gavin Newsom
San Francisco Mayor
Bob Congel, CEO
Destiny USA

ACEEE
Australia
Bank of America Securities
BOMA Foundation
BOMA International
Canada Green Building Council
Canada Mortgage & Housing Corp.
Citi
CitiGroup Smith Barney
Citi Property Investors
City of Chicago
City of Dallas
City of Denver
City of New York
City of Oakland
City of Santa Monica
City of San Francisco
City of Seattle
Citizens Bank of Canada
CoreNet Global
Delaware Valley Green Building Council
Destiny USA
Dewey & LeBoeuf
Durst Development
EPA ENERGY STAR
Environmental Bankers Association
Evolution Partners
Fannie Mae
Fireman's Fund / Allianz
First Affirmative Financial
Forbo Flooring
Forest Stewardship Council
Gerding Edlin Development
Goldman Sachs
Green Building Alliance
Global Green
Paul Epstein, Harvard Medical School
Hoffmann & Associates,
Home First Mortgage Corp.
Investors' Circle
JPMorgan Chase
Lafarge
Malachite LLC
Milliken
Mortgage Green
My Energy Loan
National Association of Realtors
New Jersey Green Building Council
New York Green Building Council
NYSERDA
Philips
Prohoff & Associates
Sempra Energy
Social Investment Forum
State of California
State of New Jersey
Swinerton Builders
Turner Construction
UBS Securities
United Kingdom
US Green Building Council
US Treasury Department
Vancity Bank
Vinson & Elkins
Wachovia
Wells Fargo
Wendel Rosen Black & Dean
West Coast Green
World Green Building Council