

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
 - Social Benefits Including Climate Change, Energy & Global Security
- Reduced Risk & Higher Valued Collateral
- Cheaper Cost of Capital & Enhanced Liquidity
- Green Building Underwriting Standards
- Economic Stimulus & Innovation



Capital Markets Partnership

Acting Now to Secure a Healthy & Prosperous Tomorrow

1511 Wisconsin Avenue, NW
Washington, DC 20007
202-338-3131

CAPTIAL MARKET BRIEFING PAPER

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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

Contributors

Leanne Tobias, Malachite LLC

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.

Debra A. Italiano, Merintra Co., LLC

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 (IPCC) 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.

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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.