GREEN ECONOMICS

Two proposed tools would help show financial benefits of green buildings

The environmental benefits of green buildings are clear: less energy use, reduced emissions of greenhouse gases, less water used and reduced impact on the landscape.

Their economic benefits, however, are much less well understood. Today, facility experts and other industry professionals are working to bring these benefits to light, and the Institute for Market Transformation to Sustainability (MTS) is among the leaders doing so. Working with government, manufacturers, industry associations, environmental groups and building owners, MTS is drawing attention to the economic value of sustainably designed facilities and showing that green buildings are profitable.

MONEY WILL DRIVE GREEN BUILDINGS TO BECOME THE BENCHMARK FOR ALL BUILDINGS

Two important tools in MTS's efforts are its proposal for green building mortgaged-backed securities (GBMBS) and its draft economic benefits standard — the Standard Practice for Sustainable Products and Economic Benefits. With these two mechanisms, MTS could help assign a premium to the value of green buildings and demonstrate this economic benefit to real estate professionals.

The economics of green

Putting a dollar value on green benefits has been an uphill battle, but slowly changes are happening. A recent study, for instance, shows that appraisers in New York state are increasingly including energy costs in cash flow statements and are significantly more willing than in the past to recognize the ENERGY STAR building label in appraisals.

Despite these efforts, lenders nationally have mostly treated green buildings no differently than they have conventional buildings. The launch of GBMBS, however, could open the eyes and pocket books of Wall Street and take lenders and building owners into a whole new world of green buildings.

Michael Italiano, president and CEO of MTS and co-founder of the U.S. Green Building Council, expects to see exponential growth of green buildings once GBMBS hit the market.

That's not just wishful thinking. Italiano helped draft standards in the 1990s that encouraged market-based environmental solutions. One standard broke the political and economic gridlock and expedited the cleanup of Super Fund and other hazardous waste sites, saving companies and taxpayers billions of dollars. Another is the Phase 1 Environmental Site Assessment used for all commercial buildings today; it was incorporated into mortgage-backed securities.

By tapping into basic market forces GBMBS could take green buildings' share of new construction market from a few percent to the majority of the market, Italiano says.

"GBMBS are the congruence of speed, greed and sustainability," Italiano says.

And it doesn't hurt that the GBMBS are backed by U.S. Sen. Jon Corzine, former chairman and CEO of Goldman Sachs, and are getting a hearing both on Wall Street and in Washington, D.C.

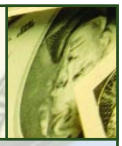
A better deal

Mortgage-backed securities are supported by a pool of residential and commercial mortgages. The issuers of a security buy the mortgages from banks and pool them. Fannie Mae and Freddie Mac are two of the biggest purchasers of residential and commercial mortgages.

According to proponents, GBMBS may take the market by storm because they should receive a higher credit rating than conventional mortgage-backed securities. The economic benefits of green buildings, such as lower operating costs and greater demand, better enable owners of green buildings to pay back their mortgages. Therefore, GBMBS will perform better and provide lower risk than mortgage-backed securities of conventional buildings, proponents say.

And GBMBS could succeed even if lenders and appraisers continue to be

Green Buildings: Tallying the Savings



Green building mortgage-backed securities (GBMBS) could have a dramatic economic impact on the real estate market and economy as a whole. According to the Institute for Market Transformation to Sustainability (MTS), the projected economic stimulus by GBMBS, assuming that 70 percent of new construction is green, would mean:

- **$36 billion per year in energy savings**
- **$6.7 billion in construction waste reduction**
- **$20 billion in water pollution savings**
- **$24 billion in energy savings from appliances and lighting**

And those are the hard numbers. There also may be a $632 billion annual savings in productivity gains, $800 billion annually in increased retail sales and an annual $1.1 billion added value in reduced utility emissions.

"In several years we could surpass the United State's Kyoto Protocol limits on CO_2 emissions without ever signing the pact," says Michael Italiano, president and CEO of MTS and co-founder of the U.S. Green Building Council.

slow to accept green buildings.

"Mortgage-backed securities don't depend on the value of the buildings but on their owners' ability to pay the loans," says Donald Reed, senior consultant with Ecos Corp. "There is a decent initial case now that green building owners do have a better ability to pay based on the economic benefits of the building."

This all makes sense to one large owner and developer.

"If a building costs less to operate, then there is less risk in owning that building," says Tom Owen, senior vice president of Hines. "Tenants will be attracted to that. The buildings are easier to keep leased in down times and can draw a premium rent in up times."

A critical step in bringing GBMBS to the market is the rating that they will receive from the Wall Street rating agencies of Standard and Poor's and Moody's investment services. Owen hopes the GBMBS will receive a more favorable rating or designation than conventional mortgage-backed securities.

If this happens, GBMBS might have another value. They may lower the cost of borrowing money. If a developer's mortgage has less risk attached to it, lenders would be willing to either loan money at a lower rate or loan more money for a project. That can have a big effect on an individual building, and on green buildings generally.

"If the owner has lower financing costs, you're effectively giving the owner money for less," Owen says. "As a result, the developer could borrow more money — money that can be applied to making the building even greener."

Owen says Hines has recognized the value of energy efficiency and green buildings. "It's time the agencies recognized this."

Green's value

While S&P and Moody's play a role in advancing green buildings, so does MTS' proposed economic benefits standard.

"The economic benefit standard as it relates to green buildings helps strengthen the case of mortgage-backed securities," Reed says.

Using recognized corporate financial benchmarks, the proposed economic benefits standard shows how green buildings are more profitable. Because green buildings can offer a range of benefits that are linked to bottom-line costs, their increased profitability can in turn be linked to the facility's value. For instance, green buildings have reduced liability, fewer regulatory constraints and greater public demand. They also help increase worker productivity and boost sales.

The whole idea of recognizing the economic value of green buildings is evolving, Italiano says. The standard, which will, no doubt, grow and change as the marketplace learns more, is a fitting place to start this process. It is built upon various tested and proven European and U.S. rating systems and studies that address everything from reduced costs of pollution to increased profits through productivity gains.

Determining the economic value of sustainable buildings is not an easy task, but the proposed standard offers a number of case studies, research reports and recognized valuation methods that are applied to environmental issues. Amassing numerous methods is necessary because there is no single formula that links sustainability and economic value.

But the real-life evidence of increased economic value also is reaching a critical mass. For instance, as peer reviewed by the U.S. Green Building Council, the Rocky Mountain Institute reports eight documented cases in which productivity gains in green buildings were as high as 16 percent. The monetary value of even modest productivity gains exceed the total capital and operating costs of a building over its design life. A study of the West Bend Mutual Insurance Co. showed that investment costs in its new green headquarters were recovered within a year.

"The economic benefits standard is taking something very complex, namely LEED and green buildings, and is turning it into a monetary value," Italiano says. "The economic benefits standard and green building mortgage-backed securities are about money, something that everyone can understand and that will drive green buildings to become the benchmark for all buildings."

This article appeared in the October 2003 issue of Building Operating Management *magazine.*