NYU Stern CREFR - Fall Symposium

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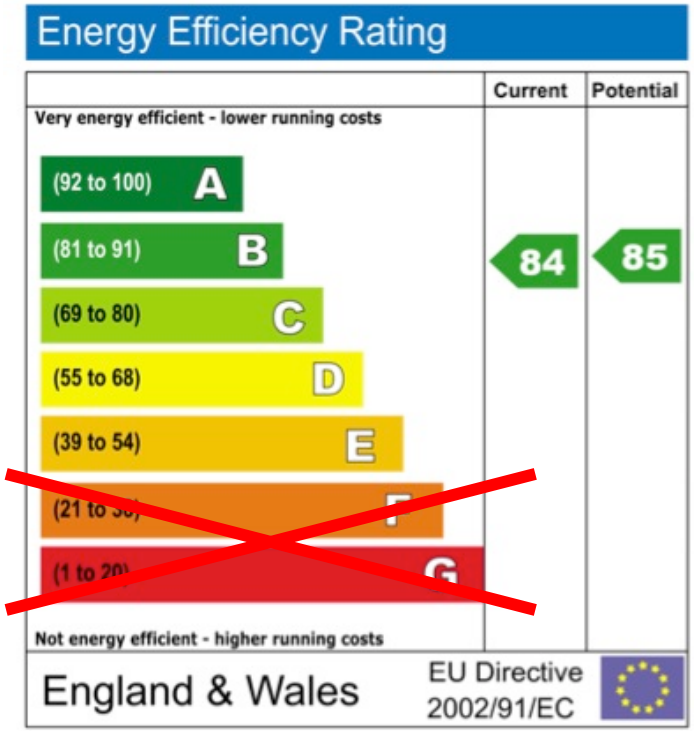
ESG AND REAL ASSETS – WHY

THREE EMERGING TRENDS

1. Focus on energy efficiency in the EU…

By 2018, buildings labeled “F” and “G” can no longer transact in the UK – law passed last month

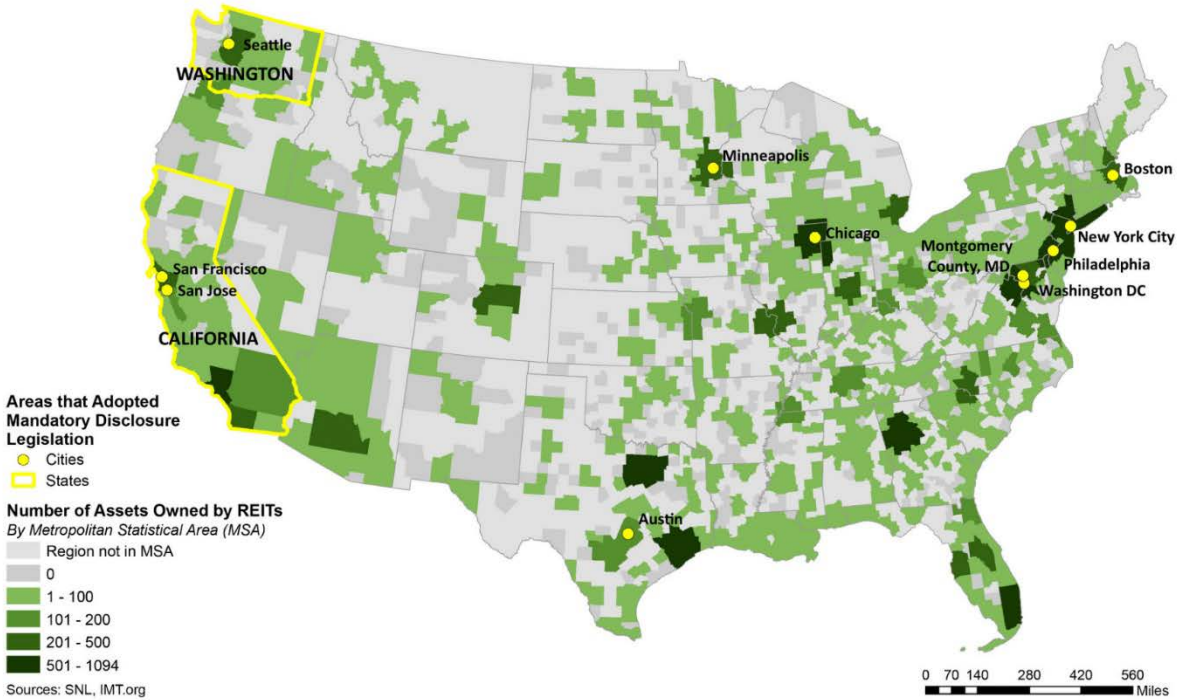
By 2020, all new construction needs to be zero-net energy



…and in the US

Legislation adopted in most of the largest US cities (and some states)

California 50/50/50 legislation further moves the needle



2. Broader ESG issues for real assets

Sector relates to many materials issues that fall under “ESG” umbrella

1. Water resources: millions at risk of water supply insecurity and scarcity – from developing to developed countries

1. Public health: design, construction, and operation influence physical health, nutrition, mental health, and injury prevention – affecting chronic diseases and thus healthcare costs

2. Exposure to climate change: real assets are fixed in location, vulnerable to fat-tail weather shocks and climate trends

3. Labor practices: health & safety in new construction, but also cleaning and maintenance practices

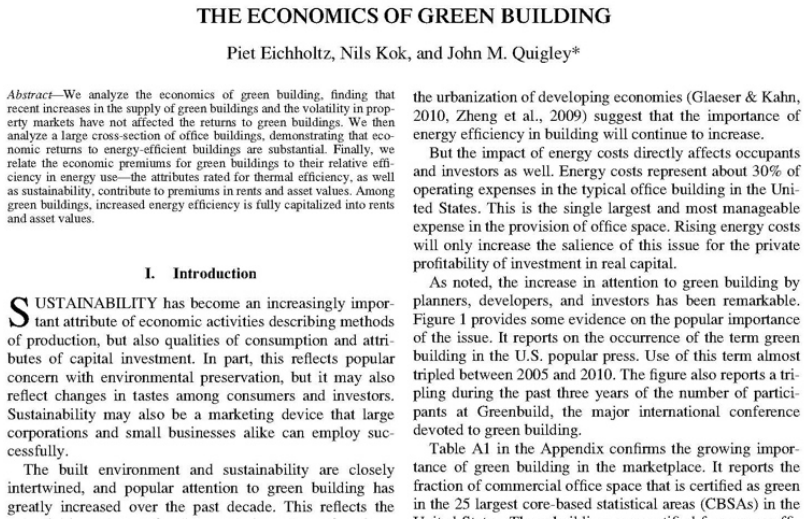
4. ….

3. Information is (already) priced in

"Green" building practices affect financial performance, and performance of funds/REITs

Performance differences based on LEED/Energy Star certificates:

- Rents: 3%
- Effective cash flows: 7%
- Transaction prices: 13%



THE ECONOMICS OF GREEN BUILDING

Piet Eichholtz, Nils Kok, and John M. Quigley*

Abstract—We analyze the economics of green building, finding that recent increases in the supply of green buildings and the volatility in property markets have not affected the returns to green buildings. We then analyze a large cross-section of office buildings, demonstrating that economic returns to energy-efficient buildings are substantial. Finally, we relate the economic premiums for green buildings to their relative efficiency in energy use—the attributes rated for thermal efficiency, as well as sustainability, contribute to premiums in rents and asset values. Among green buildings, increased energy efficiency is fully capitalized into rents and asset values.

I. Introduction

SUSTAINABILITY has become an increasingly important attribute of economic activities describing methods of production, but also qualities of consumption and attributes of capital investment. In part, this reflects popular concern with environmental preservation, but it may also reflect changes in tastes among consumers and investors. Sustainability may also be a marketing device that large corporations and small businesses alike can employ successfully.

The built environment and sustainability are closely intertwined, and popular attention to green building has greatly increased over the past decade. This reflects the

the urbanization of developing economies (Glaeser & Kahn, 2010, Zheng et al., 2009) suggest that the importance of energy efficiency in building will continue to increase.

But the impact of energy costs directly affects occupants and investors as well. Energy costs represent about 30% of operating expenses in the typical office building in the United States. This is the single largest and most manageable expense in the provision of office space. Rising energy costs will only increase the salience of this issue for the private profitability of investment in real capital.

As noted, the increase in attention to green building by planners, developers, and investors has been remarkable. Figure 1 provides some evidence on the popular importance of the issue. It reports on the occurrence of the term green building in the U.S. popular press. Use of this term almost tripled between 2005 and 2010. The figure also reports a tripling during the past three years of the number of participants at Greenbuild, the major international conference devoted to green building.

Table A1 in the Appendix confirms the growing importance of green building in the marketplace. It reports the fraction of commercial office space that is certified as green in the 25 largest core-based statistical areas (CBSAs) in the

ESG AND REAL ASSETS – HOW

DATA DATA DATA

Mapping the landscape

Sustainability reporting and benchmarking

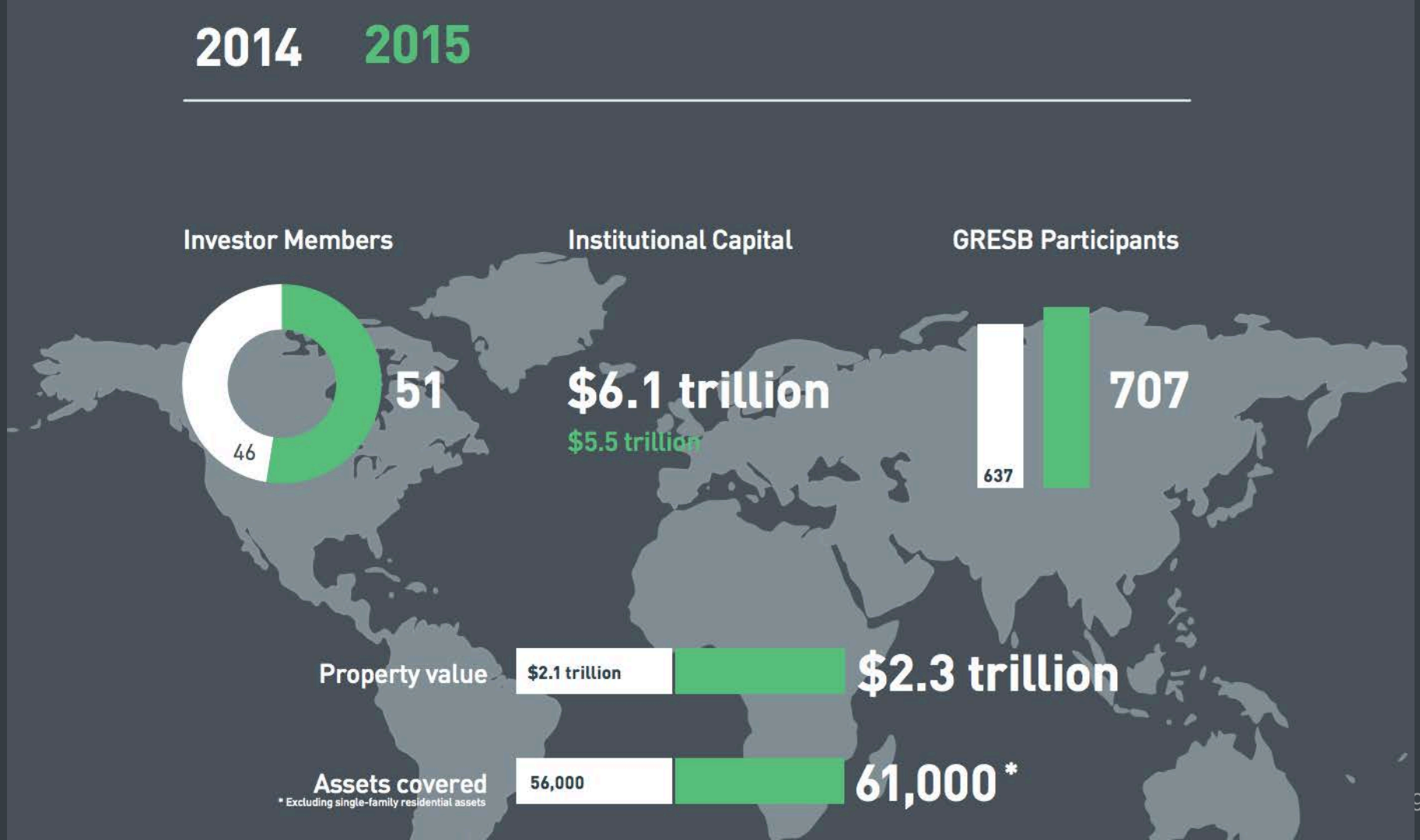
Mission & vision

Actionable transparency for institutional investors

- A platform to assess the performance of companies and funds
- A systematic approach to score listed companies and private funds
- Global benchmark for ESG performance

GRESB®

"GRESB's mission is to enhance and protect shareholder value by evaluating and improving sustainability best practices in the global real asset sector."


2014
2015
Investor Members
46
51
Institutional Capital
$6.1 trillion
$5.5 trillion
GRESB Participants
637
707
Property value
$2.1 trillion
$2.3 trillion
Assets covered
* Excluding single-family residential assets
56,000
61,000 *

GRESB Quadrant Model

Two dimensions, four quadrants

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