



# ECPI GLOBAL ECO REAL ESTATE & BUILDING EQUITY INDEX

The Index selects the best positioned Real Estate Companies vis à vis the Climate Change trend and the best positioned Real Estate Sector Suppliers owing to the environmental-friendly nature of their products or services

SEPTEMBER 2011

## BACKGROUND: CLIMATE CHANGE

Carbon dioxide and other gases (the Green House Gases [1], GHG) warm the surface of the planet naturally by trapping solar heat in the atmosphere. As a rule this is a good thing because it keeps our planet habitable however, by burning fossil fuels such as coal, gas and oil and by clearing forests the human being have dramatically increased the amount of carbon dioxide in the Earth's atmosphere and thus temperatures are increasingly rising. According to the Intergovernmental Panel on Climate Change (IPCC) [2], this era of global warming "is unlikely to be entirely natural in origin" and "the balance of evidence suggests a discernible human influence of the global climate".

### CAUSES

The climate change, and subsequently global warming, is strongly contributed by man-made GHG emissions, that absorbs and re-emits sun infrared radiation. To give no more than a hint of GHG emissions breakdown, as of 2000 carbon dioxide (CO<sub>2</sub>) emissions represented the 77% of total GHG emissions, with methane (CH<sub>4</sub>) contributing 14% and Nitrous oxide (N<sub>2</sub>O) 8%.

Relative to main GHG emitting sectors, in the same year Electricity and heat contributed 22% , Transport 13%, Manufacturing and construction 11%, Other fuel combustion 11%, Agriculture 14%, Land use change 18% and Waste 4% [3].

### EFFECTS

The world is already perceiving changes. Glaciers are melting, plants and animals are being forced from their habitat, and the number of severe storms and droughts is increasing.

Deaths from global warming will double in just 25 years to 300,000 people a year with the number of Category 4 and 5 hurricanes almost doubled in the last 30 years and Malaria already spread to higher altitudes in places like the Colombian Andes, 7,000 feet above sea level (World Health Organization).

Heat waves will be more frequent and more intense.  
Droughts and wildfires will occur more often.

Global sea levels could rise by more than 20 feet with the loss of shelf ice in Greenland and Antarctica, devastating coastal areas worldwide. The Arctic Ocean could be ice free in summer by 2050 as the flow of ice from glaciers in Greenland has more than doubled over the past decade.

More than a million species worldwide could be driven to extinction by 2050 (Time Magazine, Feeling the Heat, David Bjerklie, March 26, 2006). Actually at least 279 species of plants and animals are already responding to global warming, moving closer to the poles (Nature).

### RESPONSE

Climate change represents an issue human being can impact and must address.

The human response to climate change will give an impulse to economic growth and will positively impact several economic and financial activities. The need to increase energy capacity, while simultaneously reducing dependence on hydrocarbons, will cause radical restructuring in the years ahead (the so called "energy revolution") that may prove stimulative to economic growth.

A key role in the magnitude and timeframe of the change pattern will be played by new regulations and standards issued by National Governments or International Bodies along with other forms of incentive and taxation.

In fact some risks companies face from future climate change events include heightened regulation, increased impairment of physical property, loss of revenues and erosion of reputation, but it is also true that companies and industries most at risk of negative effects are also best positioned to benefit from changing regulations that may arise.

Investors need to place the nexus of climate change policies and energy scarcity at the mainstream of their asset allocation process.



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# FOCUS: ENVIRONMENTAL - FRIENDLY REAL ESTATE

## REAL ESTATE

The real estate industry impacts people's lives in a way that is literally 'close to home'. Real estate investment, development or financing companies have a strong influence and impact on society and on the environment.

Urban development, residential areas, offices, retail and leisure centers, car parks, use of open space and rural areas, etc. all infringe deeply into people's daily lives. This makes real estate companies vulnerable. It is for companies in this type of industry for which responsibility and environmental management are becoming a competitive edge.

Risk management and smart energy efficiency issues are familiar to real estate companies.

Not surprisingly, managing reputation in relation with Environmental, Governance and Social Issues is fast becoming a cornerstone of real estate investor relations and asset managers daily job.

The growing awareness requires an adjustment of the common process of financial risk and environmental management as the nature, the impact and the damage can go beyond individual company risk.

ECPI eases Investors job in selecting those corporate extra-skills, since those skills are increasingly recognized and awarded by global and smart investors with outperformance.



## ALPHA SCREENING

ECPI methodology is already a well recognized investment tool able to select investment exposures out of a wide range of opportunities in the financial markets.

In Equity Markets Alpha screening, the existing research process is also deepened and enhanced for the production of a rock-solid list of candidates for equity outperformance, on the basis of 400+ Positive Criteria –in the field of Environment, Social and Governance corporate priorities.

ECPI Global Real Estate & Building benefits from ECPI Alpha Screening process. This is aimed at singling out companies both exposed to the desired climate change-sensitive sectors and at the same time holding the highest unexpressed Intangible Value, according to ECPI Research.

## ENVIRONMENTAL-FRIENDLY REAL ESTATE SELECTION

Our goal is the selection of the winning stocks in the global warming environment of the foreseeable future, directly or indirectly belonging to the Real Estate Sector.

We have therefore analyzed the corporate Action Areas of Real Estate industry, identifying the Key Eco Issues that could lead to a positive reaction to the climate change trend, in particular:

Key Eco Issues	Corporate Action Areas
§Waste Management	§ Design
§Energy Use	§ Construction
§Emissions and Pollution	§ Operation
§Transportation	§ Demolition
§Land Use	
§Raw Material Selection	

Finally we have selected 15 Companies with the best score in terms of expressed or potential positive flexibility to those Key Eco Issues, in such Corporate Action Areas.

On top we have also added 10 companies, suppliers of the Real Estate Sector, that are best positioned to outperform in the Climate Change picture because of the environmental-friendly nature of the products or services they supply.

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## EQUITY SELECTION: RATIONALE

ECPI selects:

1. **the best positioned Real Estate Companies, according to their capacity of reaction/adaptation to the following Key Eco Issues, in some key Corporate Business Areas.**

	WASTE MANAGEMENT	ENERGY USE	EMISSION AND POLLUTION	TRANSPORTATION	LAND USE	RAW MATERIAL SELECTION
DESIGN	Waste management planning	Thermal insulation, passive solar system	Minimisation, set up of environmental accident risk management procedure	Consideration of public transportation infrastructure in the planning	Seek opportunities to redevelop plots of previously exploited land	Water consumption optimization, use of eco friendly materials
CONSTRUCTION	Environmental compliance required to suppliers and contractors	Suppliers and contractors Sustainability requirements Sustainability requirements	Minimisation, suppliers and contractors sustainability requirements	Production process optimization	Development of previously exploited land	Water consumption optimization, use materials obtained from sustainable sources
OPERATION	Centralized waste collection system, audits, conversion for green energy production	Installation of energy efficient technologies, energy monitoring and targeting, maintenance	Minimisation, set up of environmental event risk management procedure	Use of Public / Private transportation	Environmental friendly process	Water consumption optimization, use materials obtained from sustainable sources
DEMOLITION	Waste minimisation, material recycling	Minimisation	Minimisation, environmental assessment, remedial actions, removal of Asbestos	Material recycling	Land reclaim	Water consumption optimization, material recycling

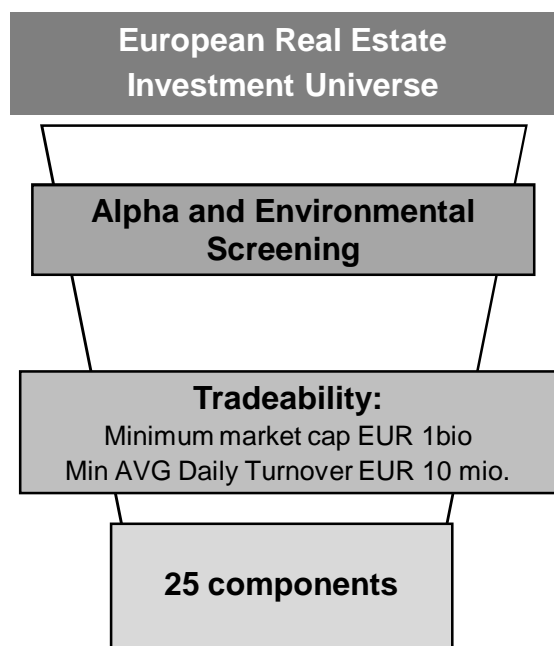
plus:

2. **the best positioned Suppliers to Real Estate Companies, according to the environmental-friendly nature of the supplied product or service**

- § Environmental friendly sanitary technology (Sanitary system: installation and flushing systems, waste fittings and traps and piping systems: building drainage, supply systems).
- § Insulation, water storage products, rain water collection systems and waste recycling systems
- § High performance and environmental friendly materials and products (e.g. Kaolinitic clay, photovoltaic roof)
- § Biomass boilers, lighting controls, energy management (software and advisory), LEED certification advisory.
- § Aluminum waste recycling, zinc waste recycling, industrial waste management, bioenergy, industrial engineering
- § Environmental-friendly heating, ventilating, refrigerating
- § Outstanding corporate environmental policy. Membership on international sustainability initiatives.

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## EQUITY SELECTION: MECHANICS



The index selects its components on the basis of:

### § Highest Alpha Rating

The ECPI European Top 10 ECO Real Estate is composed of the 25 Highest Alpha Rated stocks in the European Real Estate universe, selected according to ECPI® Alpha Methodology

### § Best Eco Selection

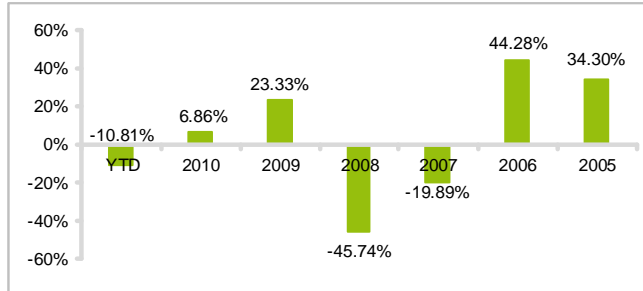
1. the best positioned Real Estate Companies, according to their capacity of reaction/adaptation to a selected list of Eco Issues, in some key Corporate Business Areas.
2. plus the best positioned Suppliers to Real Estate Companies, according to the environmental-friendly nature of the supplied product or service

### § Highest Tradeability

Companies have a minimum market cap of EUR 1 bio and a minimum average daily turnover volume of EUR 10 mio.

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Number of Constituents	<b>25</b>
Eligibility Monitoring	<b>Daily</b>
Component Weights	<b>Equal</b>
Component Minimum Market Cap	<b>EUR 1 bio</b>
Minimum 6 months ADV	<b>EUR 10 mio</b>
Index Rebalancing Frequency	<b>Annual</b>
Currency of Calculation	<b>EURO</b>
Average Market Cap (EUR bio)	<b>8.66</b>
Largest Market Cap (EUR bio)	<b>45.16</b>
Smallest Market Cap (EUR bio)	<b>1.23</b>
Highest Index Value (since 2003)	<b>3671.00</b>
Lowest Value (since 2003)	<b>878.58</b>



Average Since 2003	Annualized Volatility
	<b>19.44%</b>

Country	Fundamental Analysis	P/E Trailing	P/E Projected	P/B	P/S	P/CF	Dividend Yield
AUSTRALIA	3.87%	12.67	18.43	1.23	1.31	9.86	2.77
FRANCE	14.81%						
ITALY	3.26%						
JAPAN	12.75%						
NETHERLANDS	3.83%						
SPAIN	6.30%						
SWITZERLAND	8.78%						
UNITED KINGDOM	24.34%						
UNITED STATES	17.92%						
HONG KONG	4.14%						

Industry	
Building - Heavy Construction	3.16%
Building - Residential/Commercial	3.93%
REITS - Office Property	4.00%
REITS - Diversified	34.81%
Building & Constr prd- Miscellaneous	8.92%
Building Products - Cement/Aggr.	11.22%
Automotive/Truck Parts & Equ.	5.00%
Real Estate Management/ Services	4.32%
Real Estate Operating/ Develop.	8.51%
REITS - Warehouse./Industrial	4.61%
Aerospace/Defense - Equipment	4.31%
Engineering/R&D Services	3.14%
Building Products - Air & Heating	4.06%



Index Summary			
Asset Class	Equity	Bond	Alternative
Investment Objective	Beta	Alpha	Income
Constituents	Large Caps	Medium Caps	Small Caps
Screening	Positive	Negative	Both
Bias	Geographical	Industry	Quantitative

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## DEFINITIONS

**P/E trailing:** Current price/index earnings. Index earnings are calculated by summing up the trailing 12 months EPS before XO items of the member companies multiplied by the shares in the index and divided by the index divisor. US and Canada: calculated using trailing 12 month diluted EPS from continuous operations of each member.

**P/E projected:** Current price/index projected earnings. Index projected earnings are calculated by summing all members' best EPS in FY1 multiplied by shares in the index and divided by the index divisor.

**P/B:** Current price/index weighted book value. Index weighted book value is calculated by summing up current book value per share of the member companies, multiplied by the shares in the index and divided by the index divisor.

**P/S:** Current price/index sales. Index sales are calculated by summing up all trailing 12 month sales per share, multiplied by shares in the index and divided by the index divisor.

**P/CF:** Current price/index cash flow. Index cash flow is calculated by summing up the trailing 12 month cash flow per share of the member companies, multiplied by the shares in the index and divided by the index divisor.

**Dividend Yield:** Index dividend/current price. Index dividend is calculated by taking the sum of all members' last 12 month dividends, multiplied by shares in the index and divided by the index divisor. Market convention dividends use gross dividends except for Australia, New Zealand, and the United Kingdom, which use net.

Fundamental Data Source: Bloomberg

#### Notes:

[1] A gas, such as water vapour, carbon dioxide, methane, chlorofluorocarbons (CFCs) and hydro-chlorofluorocarbons (HCFCs), that absorbs and emits infrared radiation, warming the earth's surface and contributing to climate change (UNEP, 1998).

[2] The Intergovernmental Panel on Climate Change (IPCC) has been established by WMO and UNEP to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation.

[3] Data from World Resources Institute, Climate Analysis Indicators Tool.

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