



Sustainability in Real Estate – “Do Green Buildings make investors happy?”

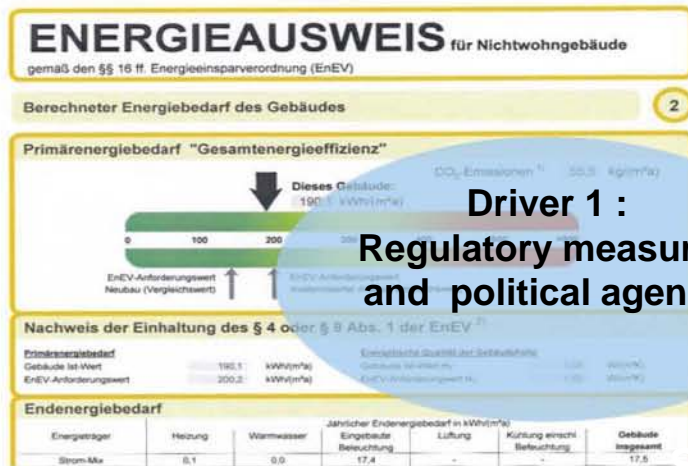
ICEBO '08
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Content

Union Investment Real Estate AG, an investor in sustainability

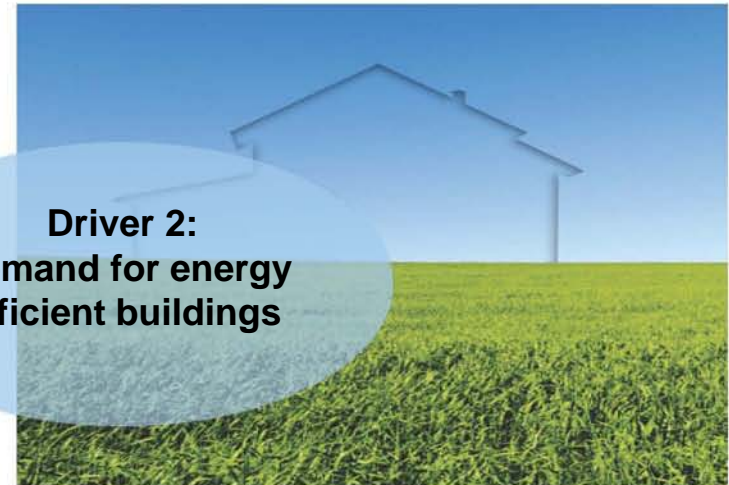
- Drivers for sustainability
- Risk and return
- Sustainability at Union Investment
- Results of opinion polls
- Certified buildings
- Sustainability in the portfolio
- „Green Building“: current examples
- Summary

Drivers advancing Sustainability

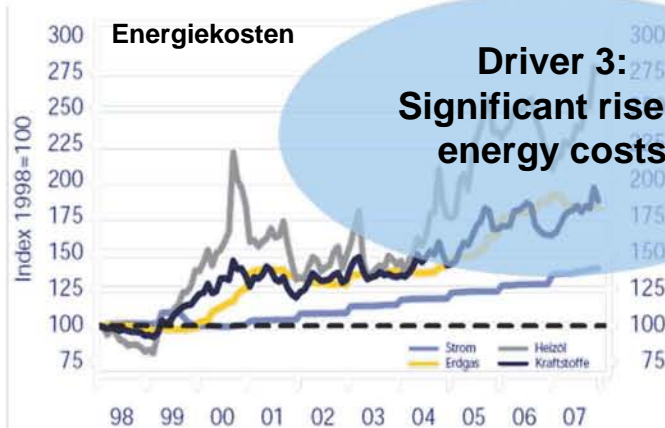


Driver 1 :
Regulatory measures and political agenda

Driver 2:
Demand for energy efficient buildings



Driver 3:
Significant rise in energy costs



Driver 4:
Corporate Social Responsibility gains momentum

British Land

HOCHTIEF

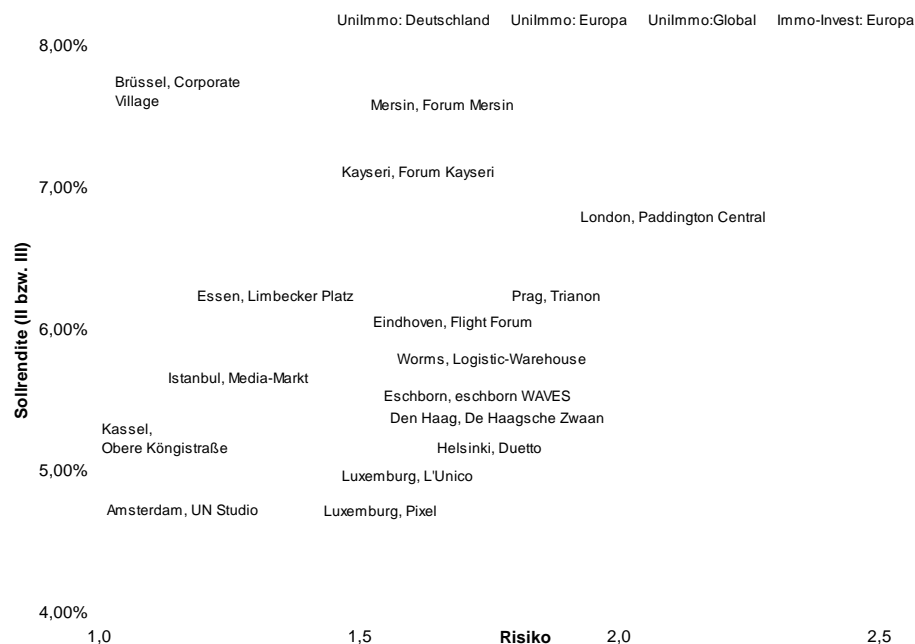
LandSecurities

Hammerson

ProLogis

Union Investment

Risk and Return



- Open-ended real estate funds deal with fiduciary money. Thus they are principally risk-averse and long term oriented.
- The focus is always on the financial reward: The goal is to achieve higher returns at the same level of risk or to reduce an investments risk at the same level of return.
- Union Investment Real Estate's primary motivation to increase the weighting for sustainability within our internal risk assessment system are clearly modified market conditions.
- In the future, a lack of sustainability constitutes an additional risk!

Mapping Risk/Return-Relation for real estate projects

Minimization of risk through sustainability?

Indikator	Gewichtung
Kostenrisiko während der Projektphase	6,58 %
Ertragsrisiko	32,89 %
■ Vermietungsstand	13,16 %
■ Miethöhe Hauptnutzung	6,58 %
■ Markt Hauptnutzung	3,95 %
■ Inflationsrisiko	5,26 %
■ Wettbewerb	3,95 %
Bauzeitverzögerung	2,63 %
Baurecht	2,63 %
Vertragsrisiken	3,95 %
Managementrisiko	10,53 %
■ Vollständigkeit der Projektplanung	2,63 %
■ Detaillierungsgrad der Projektplanung	1,32 %
■ Projektdurchführung	6,58 %
Gesamtprojekt (Präzedenzfall / Erfahrung)	11,84 %
■ Erfahrung	6,58 %
■ Zeitlicher Erfahrungshorizont	5,26 %
Objektkonzeption	3,95 %
Grundstück	3,95 %
Standort	6,58 %
Qualität	3,95 %
Finanzierung / Währung	10,53 %
■ Finanzierungskosten	3,95 %
■ Währungskursrisiko	6,58 %

- Buildings quality, location and Infrastructure are already identified as additional risk factors.
- Also, quality of design, buildings operational concepts and the quality of execution are crucial factors for an asset's performance.
- Especially vacancy rates and competition are vital to these considerations.
- Meanwhile a majority of UIR's tenants value sustainability issues with increasing priority (see opinion polls June '08)

Union Investment Real Estate AG is a founding member of the German Sustainable Building Council (DGNB)



- In November of 2007 UIR joined the German Sustainable Building Council and are a member active in developing the new Green Building Rating System in Germany.
- That new rating system will also incorporate economical issue and performance factors, which are currently undervalued in existing systems .
- Within a separate project Union Investment Real Estate is currently developing an in-house standard for evaluating sustainability in new acquisitions and the existing portfolio to analyze and explore the potential for further improvement and growth.

Sustainability in the urban fabric



DomAquaree, Berlin



DomAquaree, Berlin – Mixed uses: Hotel, Housing, Office

- Union Investment had started to focus on sustainability in a textural sense early on in the 1990's when the notion of a stable mix of uses led to the development of City-Quarters.
- Mixed use building in the heart of a city are inherently sustainable. Well executed they easily secure a high quality urban environment.
- We believe that the urban fabric of spaces and uses is at the heart of sustainability in cities.

Economic Sustainability



Economic Sustainability is at the core

- Sustainability is often just associated with Ecology and green values. The predominant reason for sustainability being successful, however is that it makes sense economically.
- Quality of a building is newly defined: Real estate is now being valued also reflecting its sustainable features. that makes those criteria relevant for future performance.
- A sustainable building is economical, efficient and profitable. A permanently marketable asset is future-proof.
- Potential purchaser and tenants will increasingly base their decisions on the energy efficiency of the building. The service charge becomes a pivotal factor
- Thesis: Sustainable real estate offers tenants the better deal and will therefore win in the long run.

Prime Property Award by Union Investment



- The initiative will reward innovative solutions in the sector which combine social responsibility with economically sustainable development.
- The competition's motto is: „Creating sustainable investment and places” reflecting Union Investment's holistic approach regarding sustainability.

The Prime Property Award will recognise European real estate investments that stand out by virtue of their ecological, social and economic performance. The search is on for commercially successful property investments that visibly promote the quality of their locations as part of a forward-looking investment policy, while also featuring environmentally friendly building planning.

Current Polls document an increasing relevance for investors

Around 70% state that, already today sustainability issues play an important or very important role

	very important	important	less important	not at all	don't know
Relevance of Sustainability in purchasing real estate (today)				4%	20%
Relevance of Sustainability in purchasing real estate (future)				17%	3%

Source:
 Immobilieninvestitionen in Europa 2007, Union Investment Real Estate AG,
 Feb 2008

In the U.K. sustainability is predominantly associated with ecology, while in Germany it is connected to economy

Overcodes

Country	Total n=98	Germany n=53	France n=20	UK n=25
Ecology	37	30	30	56
Diverse	24	21	35	20
Economy	21	32	5	12
Energy consumption	19	21	15	20
Building quality	14	17	10	12
Location / quality of life	12	19	10	0
Life span	10	13	5	8
Don't know	7	8	10	4

Angaben in %

Basis: alle Befragte

7. Ich möchte nun zum Thema Nachhaltigkeit bei Immobilien kommen. Wenn Sie den Begriff nachhaltige Immobilien hören, was verbinden Sie damit?

Developments work best to showcase sustainability



One Kingdom Street, London

- Certified Projects by *Union Investment*.
 - One Kingdom Street; BREEAM/ „Excellent“
 - One Coleman Street; BREEAM/ „Very Good“



One Coleman Street, London

Should Sustainability decide investment?



111 South Wacker Drive, Chicago, LEED/ „Gold“

- What are the consequences of sustainability?
 - Premiums for new sustainable buildings
 - Deductions for non-sustainable existing buildings
- What minimum standard criteria should reflect ecological and social sustainability?
 - Selection by rating : Positive Screening
 - Exclusive method: Negative Screening
- How can sustainability aspects be integrated into the due diligence process?
 - Definition of Standards?

Sustainability in the existing portfolio – From regulatory requirements to performance

Extra

- Long term: What needs to be done to achieve a positive rating ?

Basic (reg. req.)

- Short term: Energy Pass (required for commercial real estate in Germany as of July 2009). Tenants are now acting with increasing awareness.
- Screening of existing portfolio with sustainability criteria: documentation of status quo and development of specific course of action.

Green Building principles in refurbishment

Example: Emporio Offices, Hamburg



„Emporio Office Tower“, Hamburg

- The most common way: demolition and construction of a new building.
- But: the energy and material lost in demolition can only be compensated by the energetically superior new building after 25 years.
- Result: Refurbishments gain viability when viewed through sustainable glasses.
- Especially with listed building....

– Example „Emporio“ office tower, Hamburg:

Stepping up the existing :

- Energetically optimized „Double“Facade
- Nat. ventilation / night cooling
- sunscreens work under windy conditions
- Low emissions building material
- Energy Efficiency Index under 100 kwh/m²/a
- Low consumption technology

Green Building principles in new construction

Example: Riem West Offices, München



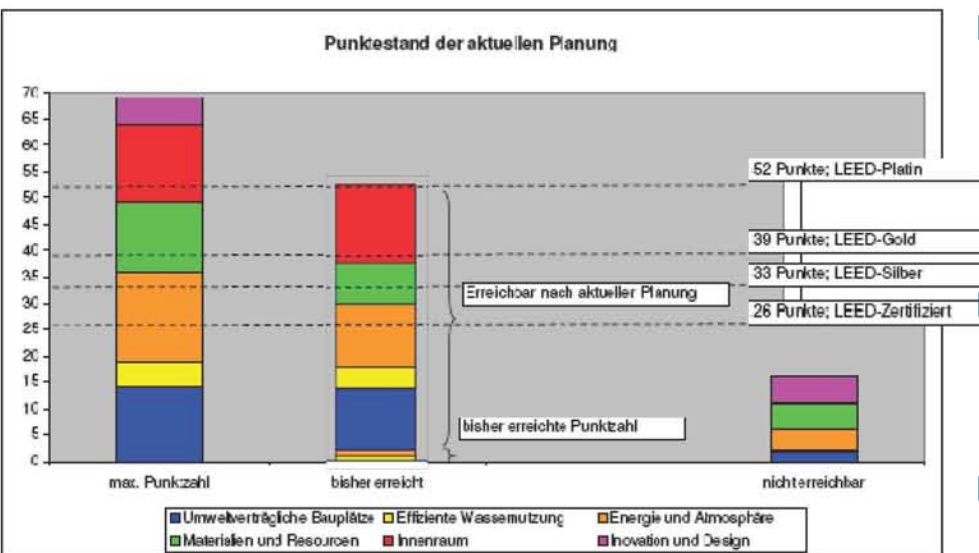
North elevation



Crosssection

- Riem West offices is a new development connected to „Stadtquartier Riem Arcaden“ in Munich.
- An office building of ca. 24,000 m² is being developed including many green aspects:
 - Completing an existing „Stadtquartier“
 - Building connected to the existing infrastructure and public transport
 - Geothermal energy for heating and cooling
 - Photovoltaic elements on portikus
 - Triple glazed windows
 - External sun shading
 - Technology to reduce consumption of water and energy
 - Low emissions building material
 - targeted energy efficiency index of 51 kwh/m²/a (required energy 132 kwh/m²/a)

LEED Quick-Check for München Riem West Offices



- A quick check at this stage of design shows that the project described above would be „platinum“ certified acc. to LEED-standards. What would be its rating acc. to DGNB?
- Practicability, transparency and its cost/benefit ratio are the critical factors for the acceptance of any new rating system.
- Its usefulness for marketing purposes is also not to be underestimated. American tenants are already asking for certificates and ratings when searching for new office space.



Summary

- The pivotal driver for change and the practical implementation of sustainability is its economic relevance. – Meanwhile natural resources are increasingly becoming a scarce good and consequently valuable.
- Risk considerations of institutional investors support that view and accelerate the development of sustainability as a new benchmark.
- Germany's real estate industry is still at a starting point but quickly picking up speed in this irreversible development.