

# Research Briefing | Europe

## Real estate obsolescence risk lowest for the Nordics

### Economist

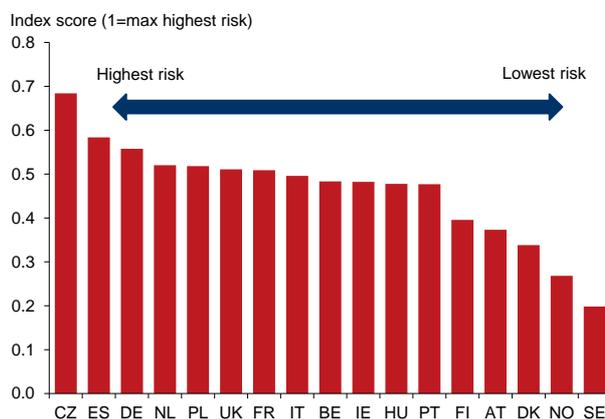
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- Our new index of European real estate obsolescence finds that the Nordic countries have the lowest risk of obsolescence and are best placed for the climate transition.
- We believe that locations with a lower obsolescence risk will benefit from more-defensive future returns over the medium to longer term, as investors re-weight portfolios to align with net-zero commitments.
- Less risky locations will benefit from the lower cost of capital from green finance, stronger demand from both investors and occupiers for sustainable buildings, and a reduction in compliance risk from upcoming changes to energy performance and building regulations.
- Countries that are higher up the obsolescence risk scale will present opportunities for value-add and opportunistic strategies to green the existing stock, however it also means that greater capital expenditure will be needed to keep up with ambitious government agendas.

Using climate-informed data and forecasts on macroeconomics, the energy market, real estate, and policy, we've constructed an index that measures the obsolescence risk associated with European real estate (page 4 summarises our approach). The recent proposal by the European Commission to decarbonise the European Union's building stock by 2050 is of vital importance to the real estate industry as this policy will determine the speed and stringency of energy performance standards and building regulations – which, in turn, will dictate the rate of obsolescence for non-compliant buildings.

**Figure 1:**  
**Commercial real estate obsolescence risk from the climate transition**

### CRE obsolescence risk from the climate transition



Nordic countries lead the way with the lowest obsolescence risk and are best placed for the climate transition.

# Real estate obsolescence risk lowest for the Nordics

## Early policy action required

At the current pace of change, world temperatures will rise by just over 2°C by 2050 relative to pre-industrial levels ([Oxford Economics baseline](#)). In order to reach net zero and limit the global temperature rise to 1.5°C by 2050, early policy action must be taken along with global coordination and technological advances (OE net-zero scenario). To gain an understanding of the risks associated with changing policy and the climate transition for European real estate, we have utilised data and forecasts from two of Oxford Economics new subscription services: the Global Climate Service (GCS) and the Real Estate Economics Service (REES).

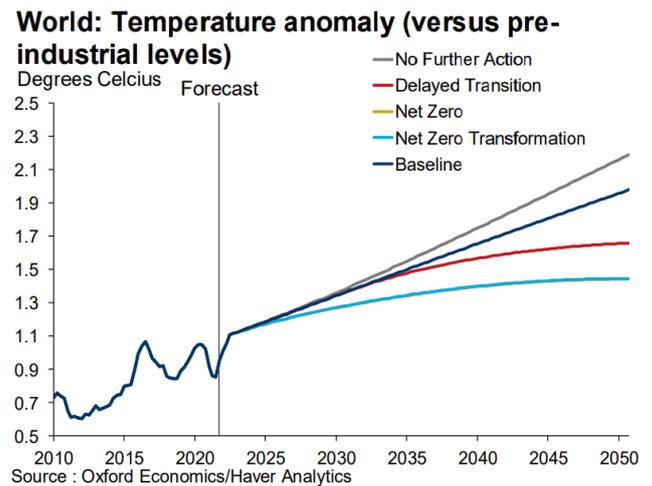
## Renovation rates need to double

In December 2021, the European Commission (EC) published a [proposal](#) to align the rules for the energy performance of buildings with the European Green Deal and decarbonise the EU's building stock by 2050. The revision to the Energy Performance of Buildings Directive (EPBD) translates the EC's Renovation Wave Strategy (RWS) into concrete legislative action. The RWS aims to more than double renovation rates in the next 10 years for both homes and commercial buildings, making sure that renovations lead to higher energy and resource efficiency.

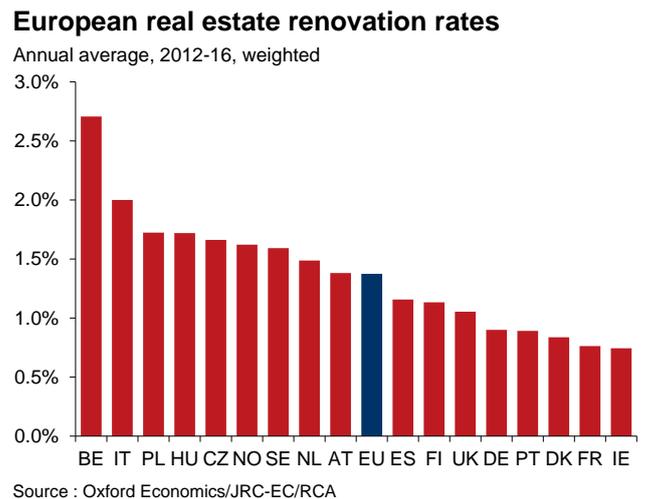
Buildings account for 40% of Europe's total energy consumption, and more than 75% of the building stock is inefficient by current standards. The majority of the building stock in 2050 will comprise buildings that already exist today, making the renovation of existing stock an urgent prerequisite to meet decarbonisation targets ([Boza-Kiss et al, 2021](#)). At the current [renovation rate](#), which is estimated at 1% per annum (1.4% when weighted by transaction volumes as in Figure 3), it would take nearly a century to decarbonise the existing building stock. A renovation rate that is double to triple the pace will be required to meet current and upcoming policy objectives.

Thus, regulation is of vital importance to real estate owners and investors as it will determine the speed and stringency of energy performance standards and building regulations – and, in turn, will dictate the rate of obsolescence for non-compliant buildings and the capital expenditure requirements in order to remain compliant.

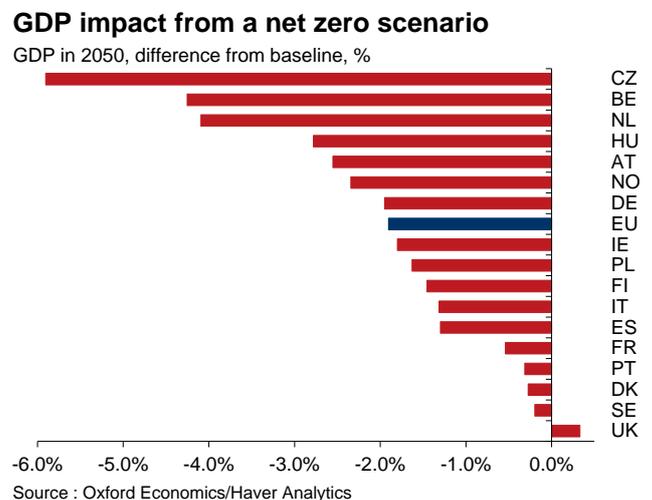
**Figure 2: Global temperatures will rise to just above 2°C by 2050 at the current pace of change**



**Figure 3: Many of the largest European economies have below-average renovation rates**



**Figure 4: Countries making good headway with green policies end up close to the baseline**



# Real estate obsolescence risk lowest for the Nordics

## Nordics lead the way

The Nordic countries are best placed as economies transition to lower carbon emissions, according to our index. Lower obsolescence risk for real estate in Sweden, Norway, Denmark, and Finland is a function of the lower carbon intensity in their built environments, supported by a larger share of renewables in their energy mix, above-average renovation rates, and energy usage that's closer to recommended levels.

We believe that the countries with lower obsolescence risk, as indicated by our index, will offer more-defensive future returns for four key reasons: Firstly, investors looking to reduce portfolio-level carbon emissions to meet net-zero commitments will need to re-weight towards lower-emitting buildings and locations; secondly, buildings with better sustainability credentials will benefit from the lower cost of capital offered by green finance; thirdly, stronger demand has emerged from both investors and occupiers for sustainable buildings, reducing leasing risk and improving liquidity; and fourthly, the least risky locations are likely to benefit from a more moderate impact from upcoming changes to energy performance and building regulations, reducing the capex required to remain compliant (or defend against obsolescence).

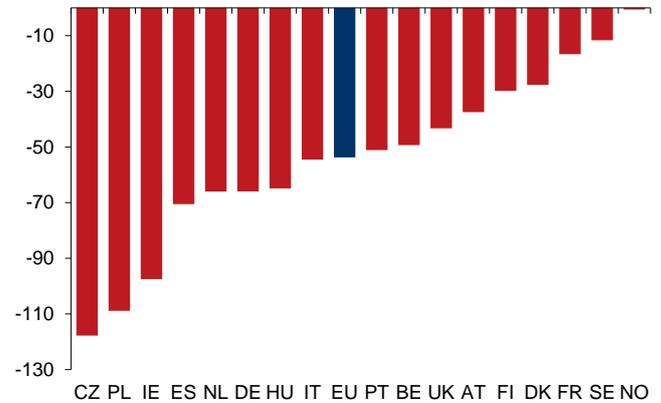
Countries that are higher up the obsolescence risk scale, such as Spain, Germany, and the Netherlands, will undoubtedly offer many low-risk green investment opportunities, but at an aggregate level they are considered riskier due to the macroeconomic effects of a net-zero climate scenario, steeper [decarbonisation pathways](#) for real estate, lower present-day renovation rates, and ambitious policies suggesting faster and more stringent regulation. This may present opportunities for value-add and opportunistic strategies to green the existing stock, but it also means that higher capital expenditure will be required in order to keep pace with government agendas.

Forthcoming research will extend this analysis by applying our new European obsolescence risk index to renovation cost data and then assess the impact on future risk-adjusted returns.

**Figure 5: The CEE decarbonisation pathway is steepest while the Nordics' course is shallowest**

### Real estate decarbonisation pathways

Delta 2020 to 2050, kgCO<sub>2</sub>/m<sup>2</sup>/yr, weighted

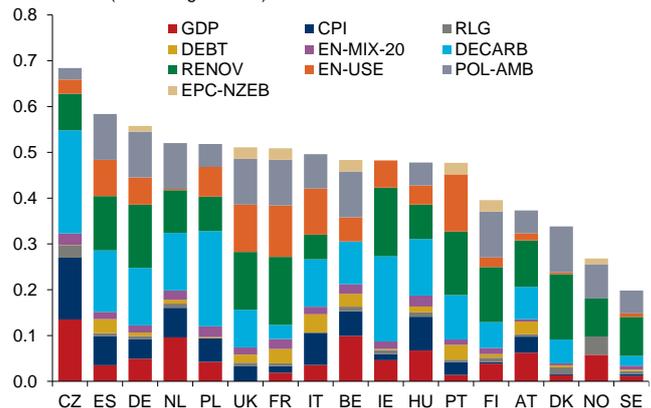


Source : Oxford Economics/CRREM/RCA

**Figure 6: Real estate obsolescence risk by component**

### CRE obsolescence risk from the climate transition

Index score (1=max highest risk)



Source : Oxford Economics/CRREM/JRC-EC/RCA/QualDeEPC-EU

## Our approach to measuring obsolescence risk

The Oxford Economics European Real Estate Obsolescence Risk Index is composed of four weighted groups: macroeconomic (35%), energy (2.5%), real estate (37.5%), and policy (25%). These groups include the 10 weighted features shown in Figure 6 and outlined below.

### Group 1: Macroeconomics

- GDP:** Measured by the impact on GDP from a net-zero scenario relative to the baseline by 2050.
- Rationale for inclusion: A lower 2050 GDP under a net-zero scenario vs. the baseline indicates greater pressure on real estate fundamentals.
- CPI:** Measured by the impact on CPI from a net-zero scenario relative to the baseline by 2050.
- Rationale for inclusion: Higher inflation under a net-zero scenario vs. the baseline suggests the costs for renovation works will be greater compared to other countries.
- RLG:** Measured by the impact on the 10-year government bond yield from a net-zero scenario relative to the baseline by 2050.
- Rationale for inclusion: A higher long-term bond yield in 2050 under a net-zero scenario vs. the baseline signals a higher risk-free rate and therefore some degree of relative pricing impact will flow through to real estate.
- DEBT:** Measured by the gross government debt-to-GDP ratio in 2021, according to the Oxford Economics baseline view.
- Rationale for inclusion: Lower public debt suggests a greater ability for government to incentivise renovation and carbon reduction.

### Group 2: Energy

- EN-MIX-20:** Measured by the share of renewable electricity output as at 2020, as a proportion of total electricity output.
- Rationale for inclusion: A lower share of renewable electricity production in 2020 suggests the built environment will need to work harder to meet decarbonisation targets.

### Group 3: Real Estate

- DECARB:** Measured by the CRREM decarbonisation pathway delta between 2020 and 2050, under the 1.5° warming scenario, weighted by RCA investment volumes.
- Rationale for inclusion: A steeper decarbonisation pathway is indicative of greater capex required for real estate to comply with national targets.

**RENOV:** Measured by the weighted average renovation rate for residential and non-residential as an annual average over 2012-2016.

Rationale for inclusion: Lower renovation rates make a faster pace of regulatory tightening more likely.

#### Group 4: Policy

**EN-USE:** Measured by the primary energy usage of residential and non-residential property in 2020. The actual energy usage is deducted from the recommended energy usage.

Rationale for inclusion: Countries that have a larger gap between actual building energy usage and recommended energy usage are more likely to require higher capex to meet guidance.

**POL-AMB:** Measured by a subjective assessment of the level of long-term renovation strategy policy ambition.

Rationale for inclusion: Higher policy ambition for renovations signals larger near-term capex requirements in order to comply.

**ECP-NZEB:** Measured by an [assessment](#) of whether the current EPC scheme for new buildings compatible with (national) NZEB requirements.

Rationale for inclusion: NZEB is a stated EU policy, EPC's that are not compatible will need to be tightened to comply.