

Opportunities and Risks in the Residential Sector During a Green Transition: House Prices, Energy Renovations and Rising Energy Prices

Alessandro Martinello and Niels Framroze Møller, Danmarks Nationalbank

Abstract

Transitioning to a low-carbon economy implies both risks and opportunities in the Danish housing sector, which accounts for one fourth of Denmark's CO₂ emissions. We study the heterogeneous impacts on house prices of rising energy prices and energy renovations by combining micro-level data on sales and housing characteristics with data from the official mandatory energy rating reports. We find that higher energy prices reduce the prices of houses without district heating mainly in rural areas. Most renovations will not increase sales prices enough to cover the costs. Those renovations whose price effect will cover the costs have a lower-than-average impact on CO₂ emissions, are cheap, and typically concern houses located in and around towns and mid-sized cities and other areas with a higher population density and well-developed road networks connected to towns and cities. We conclude that while opportunities for profitable energy renovations are concentrated in these areas, transitional risks are instead associated with peripheral rural areas, where both the exposure to rising energy prices and the risk of financing renovations is highest.