

Investments in Real Estate

Bernt Arne Ødegaard

University of Stavanger

April 18, 2023



Introduction

Investments in real estate

Asset class – large part of the economy, should enter a portfolio looking like the market portfolio.

Listed or non-listed

Special features of real estate investing

- ▶ Need for direct followup
- ▶ High costs

Market size estimates

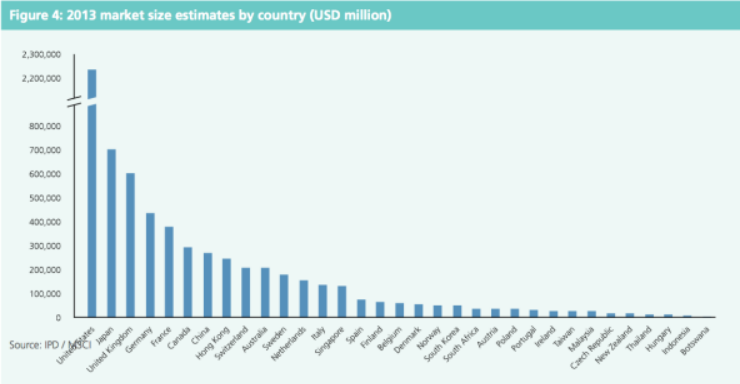


Figure 1: 2013 Real-estate market sizes by country (Figure 4 from Clacy-Jones and Teuben, 2014)

Source: Nieuwerburgh, Stanton, and de Bever (2015)

Real estate fraction

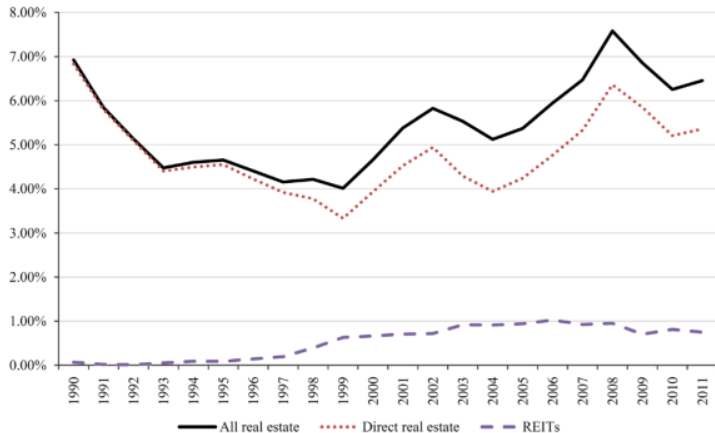


Figure 4: Real estate as a fraction of total pension fund assets (Figure 2 from Andonov et al., 2015)

Source: Nieuwerburgh et al. (2015)

Global market for real estate, by sector

Global real estate investment sectors

Office	34%
Retail	29%
Residential	18%
Industrial	9%
Other	10%

n

Source: Nieuwerburgh et al. (2015)

Real estate - REIT vs real estate

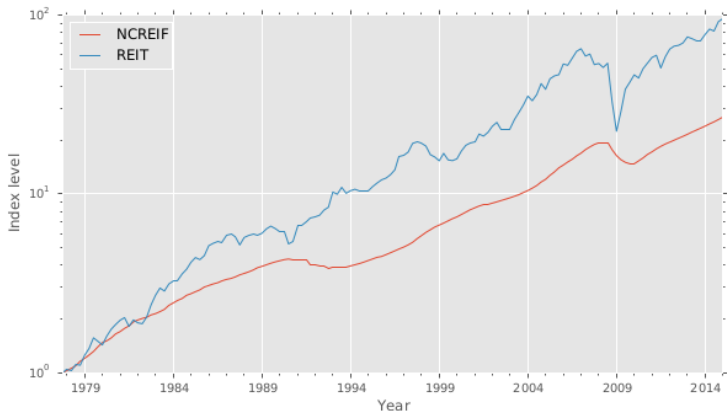


Figure 9: Cumulative returns on REITs versus NCREIF Property Index (NPI), 1978Q1–2015Q1.

Real estate in the GPFG

Bernt Arne Ødegaard

University of Stavanger

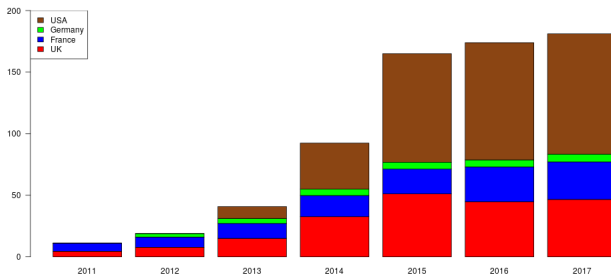
April 18, 2023

Facts

Real estate as an asset class entered the fund in 2010.

Initial mandate: up to 5% of the fund's assets could be in unlisted real estate.

Real estate NAVs by country

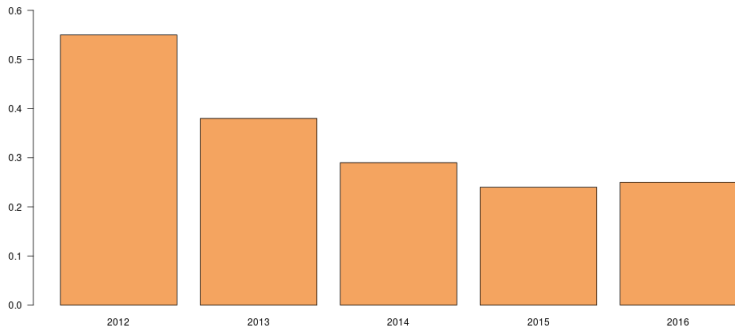


The figure shows NAVs for real estate investments in NOK billion. The NAVs are end-of-year values translated into NOK, using exchange rates from Norges Bank. The NAVs for 2017 are per June 30, 2017. The NAVs are by country of investment: the UK, France, Germany, and the USA. Data source: NBIM.

Costs

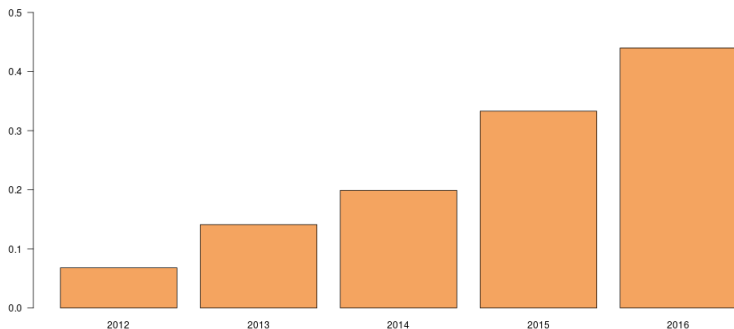
Annual management costs for real estate.

Panel A: Costs in % of AUM



Costs

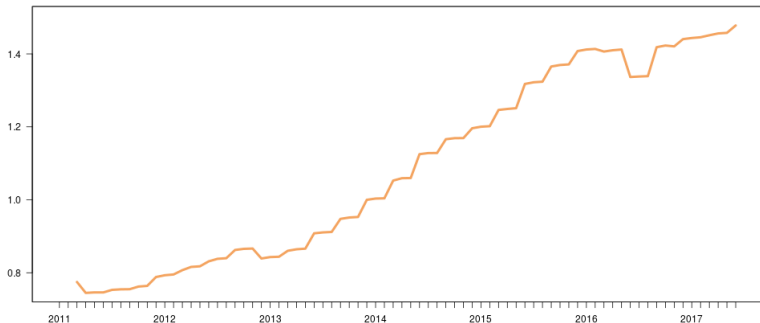
Panel B: Total costs (NOK billion)



The figure shows annual management costs for real estate. Panel A shows the costs in % of AUM in real estate; Panel B shows the costs in NOK billion. Data source: NBIM.

Returns

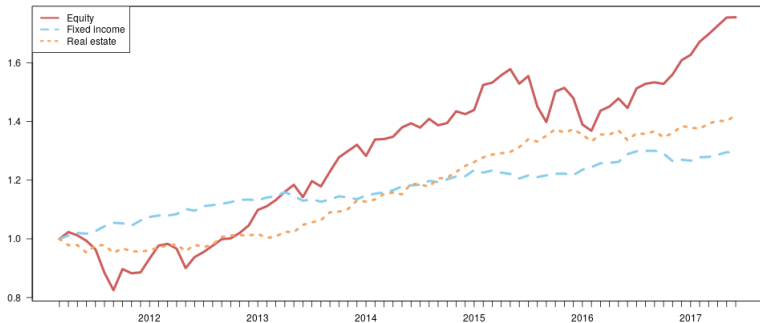
Cumulative changes in real estate NAVs – UK.



The figure plots the cumulative returns for the Fund's real estate investments in one major markets: the UK These returns are normalized by setting the cumulative return equal to one at the beginning of 2014. Returns are expressed in each country's currency. Data source: NBIM.

Returns

Cumulative returns for equity, fixed-income, and real estate portfolios



The figure plots the cumulative returns of the Fund's equity (red, solid), fixed-income (blue, dashed), and real estate (orange, dotted) portfolios. The returns are expressed in the Fund's currency basket. Data source: NBIM.

Lecture summary – Real Estate Investment

Investments in real estate

Asset class – large part of the economy, should enter a portfolio looking like the market portfolio.

Listed or non-listed

Special features of real estate investing

- ▶ Need for direct followup
- ▶ High costs

Stijn Van Nieuwerburgh, Richard Stanton, and Leo de Bever. A review of real estate and infrastructure investments by the Norwegian Government Pension Fund Global (GPFG). Report submitted to the Norwegian Ministry of Finance, December 2015.