

Real estate investing

Bernt Arne Ødegaard

18 April 2023



1 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

2 Size of the real estate market

Figure 1 estimates total real estate assets world-wide.

As an institutional investor who desires to match the world market portfolio, ask how large the real estate asset class is relative to the total market. Figure 2 answers this, by providing estimates of real estate relative to the total pension fund assets.

Table 1 Global market for real estate, by sector

Global real estate investment sectors

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

Nieuwerburgh et al. (2015)

Figure 1 Market size estimates

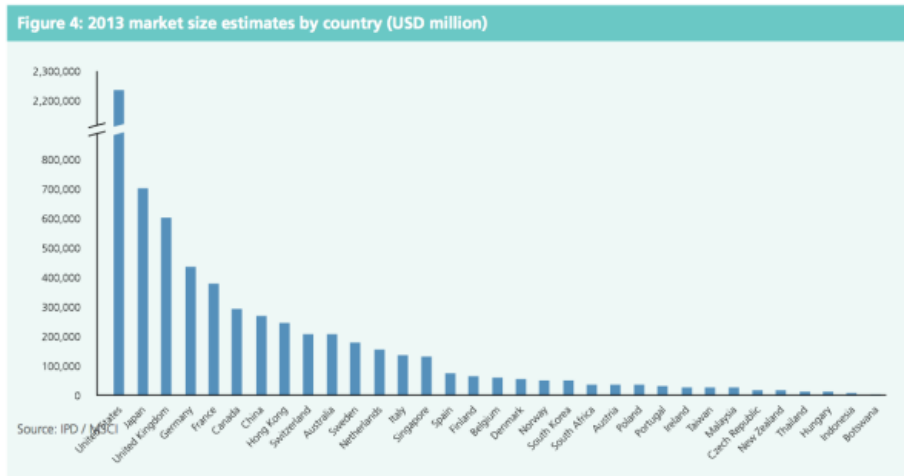


Figure 1: 2013 Real-estate market sizes by country (Figure 4 from Clacy-Jones and Teuben, 2014)

Nieuwerburgh, Stanton, and de Bever (2015)

Figure 2 Real estate fraction



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

Nieuwerburgh et al. (2015)

3 Real estate returns

Figure 3 Real estate - REIT vs real estate

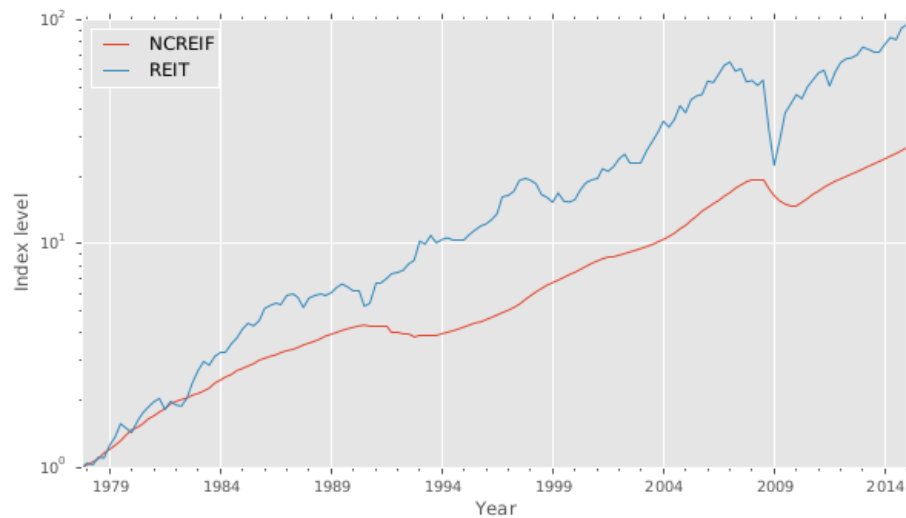


Figure 9: Cumulative returns on REITs versus NCREIF Property Index (NPI), 1978Q1–2015Q1.

Nieuwerburgh et al. (2015)

4 Real estate in the GPF

4.1 Facts

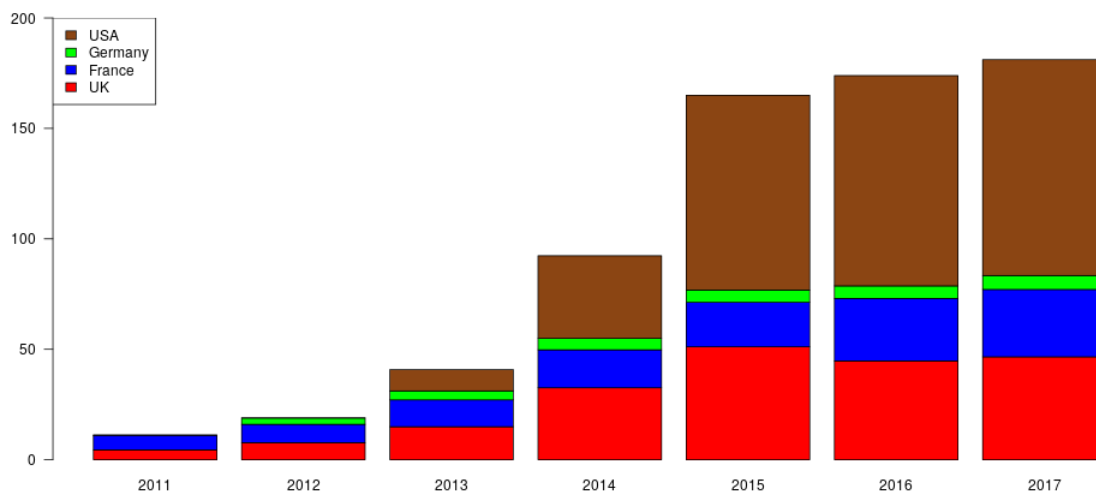
Real estate as an asset class entered the fund in 2010. The initial mandate was that up to 5% of the fund's assets could be in unlisted real estate.

Show some illustrative results.

4.2 Costs

Figure 5 shows that costs are large.

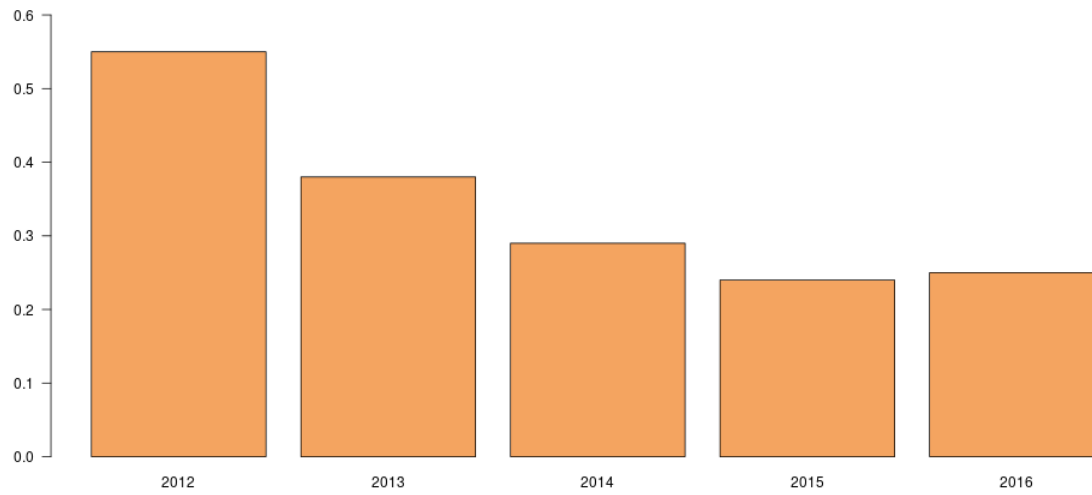
Figure 4 Real estate NAVs by country



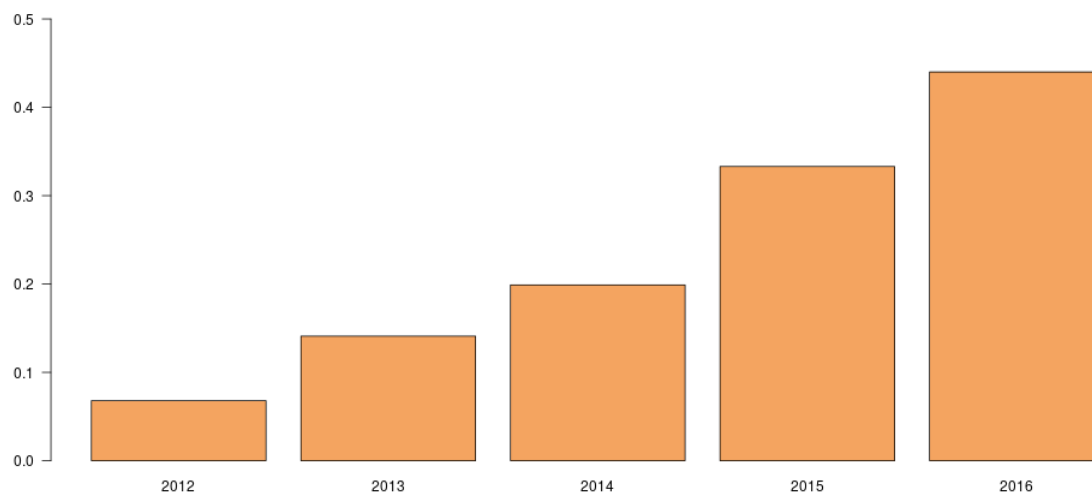
The figure shows NAVs for real estate investments in NOK billion. The NAVs are end-of-year values translated into NOK, using exchange rates from Norges Bank. The NAVs for 2017 are per June 30, 2017. The NAVs are by country of investment: the UK, France, Germany, and the USA. Data source: NBIM.

Figure 5 Annual management costs for real estate.

Panel A: Costs in % of AUM



Panel B: Total costs (NOK billion)

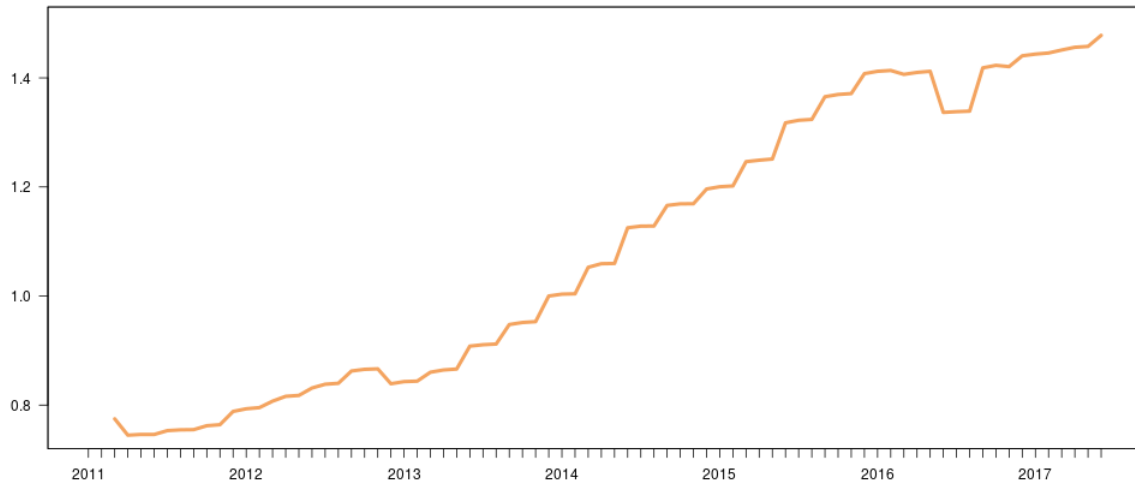


The figure shows annual management costs for real estate. Panel A shows the costs in % of AUM in real estate; Panel B shows the costs in NOK billion. Data source: NBIM.

4.3 Returns

Figure 4.3 shows that measuring returns is very different from stocks. Mainly quarterly revaluations.

Figure 6 Cumulative changes in real estate NAVs – UK.

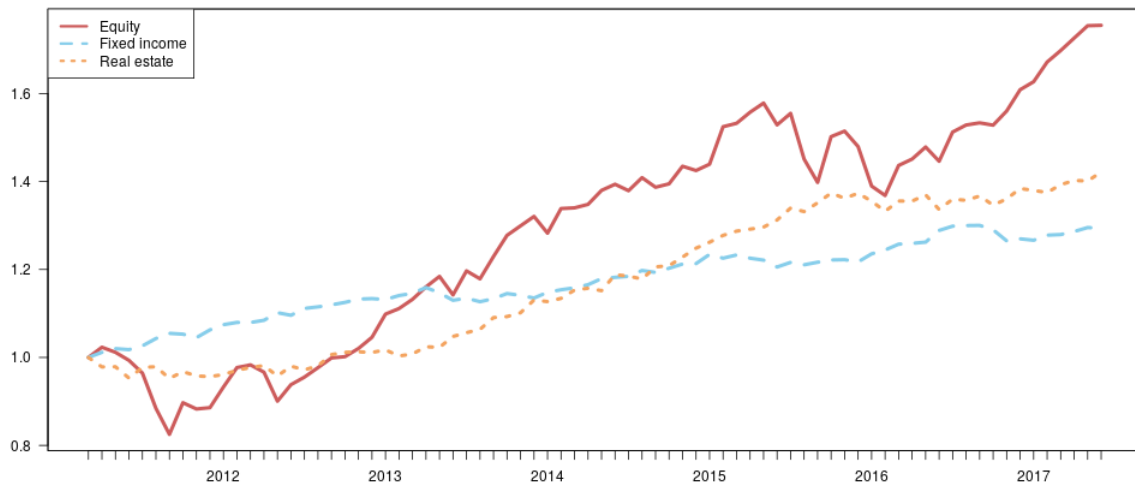


The figure plots the cumulative returns for the Fund's real estate investments in one major markets: the UK These returns are normalized by setting the cumulative return equal to one at the beginning of 2014. Returns are expressed in each country's currency. Data source: NBIM.

References

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

Figure 7 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.
