Non-Listed Real Estate Risk Factors

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Structure

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Overview

• Objectives of the research:
  – Analysis of non-listed real estate fund return risk factors
  – Comparison with listed real estate and direct real estate (ongoing analysis)

• Data sources:
  – INREV: Non-listed real estate funds
  – IPD: Direct real estate indices
  – Datastream: Listed companies, macroeconomic and market data

• Coverage:
  – Countries: UK, NL, GE, FR, IT
  – Sectors: Retail, Office, Residential, Industrial, Other
  – 2001 – 2014 period (annual data)

• Model:
  – Panel data analysis with 1,162 fund-year observations
Descriptive Analysis

Country Breakdown for Non-Listed Funds:
- United Kingdom: 44%
- Netherlands: 18%
- Germany: 15%
- Italy: 8%
- France: 6%
- Multi-Country: 9%

Sector Breakdown for Non-Listed Funds:
- Retail: 36%
- Residential: 16%
- Office: 29%
- Industrial: 6%
- Other: 13%
Descriptive Analysis

Country Breakdown for Listed Companies

- United Kingdom: 54%
- Germany: 17%
- France: 16%
- Italy: 2%
- Multi-Country: 11%

Sector Breakdown for Listed Companies

- Multi-Sector: 39%
- Retail: 24%
- Office: 9%
- Residential: 10%
- Other: 15%
- Industrial: 3%
Descriptive Analysis

Total Return by Year
Descriptive Analysis

Total Return by Country

- The sample average yearly total return is 2.4% with a volatility of 17.5%.

- Across countries:
  - No diff. in mean
  - Diff. in volatility
  - Diff in skew. & all < 0
  - Diff in kurt. & all fat-tailed
Descriptive Analysis

Total Return by Sector

- Tests indicate that Industrial and Office sectors have lower total return than Retail on average.
- Same conclusion on other distribution moments as for countries:
  - Diff. in volatility
  - Diff in skew. & all < 0
  - Diff in kurt. & all fat-tailed
Descriptive Analysis

Risk-Return Profile

Return vs. Volatility graph showing various countries and property types.
Model Results

Impact of specific characteristics on total return:

Non-listed funds:  
\[ TR = +4.03 \cdot \text{size} - 0.96 \cdot \text{size}^2 + 0.52 \cdot \text{gearing} - 0.01 \cdot \text{gearing}^2 + 7.84 \cdot \text{Open End|subprime} - 3.84 \cdot \text{Value-Added|post-subprime} \]

Listed companies:  
\[ TR = +11.63 \cdot \text{size} - 0.65 \cdot \text{size}^2 + 0.64 \cdot \text{gearing} - 0.01 \cdot \text{gearing}^2 \]
Model Results

Impact of macro and market factors:

Non-listed funds:

\[ TR = + 2.49 \cdot \text{real GDP growth} + 4.93 \cdot \text{inflation} - 6.80 \cdot \text{unexpected inflation} - 0.01 \cdot 10Y \text{ real int. rate} + 0.43 \cdot \text{real M1 growth} + 0.24 \cdot \text{real stock returns} | UK, FR, IT \]

Listed companies:

\[ TR = + 6.05 \cdot \text{real GDP growth} - 2.84 \cdot \text{inflation} + 20.96 \cdot \text{unexpected inflation} - 0.02 \cdot 10Y \text{ real int. rate} + 2.63 \cdot \text{real M1 growth} | GE + 0.50 \cdot \text{real stock returns} \]
Model Results

Differences by sector:
• No difference between sectors for non-listed real estate funds.
• For listed companies
  – Residential better than others in “normal” periods (13%)
  – Office & residential worse than others during crisis (-25%)

Differences by country:
• Germany better than others before subprime crisis
• France and Italy better than others during and after crisis
Practical Implications

Impact of Gearing on Excess Total Return during Normal Cycle and Crisis

Optimum
Median Core
Median Fund
Median Value-Added

Gearing

Additional Excess Total Return

-25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Normal Cycle
Normal Cycle 90% CI
Crisis
Crisis 90% CI
Practical Implications

Impact of Real GDP Growth for Core and Value-Added Funds

Worst real GDP contraction at 95% threshold
Concluding Remarks

• Attention should be paid to the following variables:
  – Real GDP growth
  – Long term real interest rate variation
  – Real money supply growth
  – Stock market real return
  – Inflation
Concluding Remarks

• Investors should consider advantages provided by several characteristics of non-listed funds:
  – Size
    • Results suggest an optimal size of around €bn 2
  – Gearing
    • Results suggest an optimal gearing level with respect to the cycle phase
      – 10% during crisis
      – 55% otherwise
    • Impact of gearing is also slightly more pronounced for value-added compared to core funds
  – Core investment style
    • More stable, it allows higher return of 4% on average than value-added in post crisis period
  – Open end structure
    • Allows for more flexibility, it delivers on average 8% more performance than closed end structure during crisis
Thank you for your attention