Non-Listed Real Estate Risk Factors

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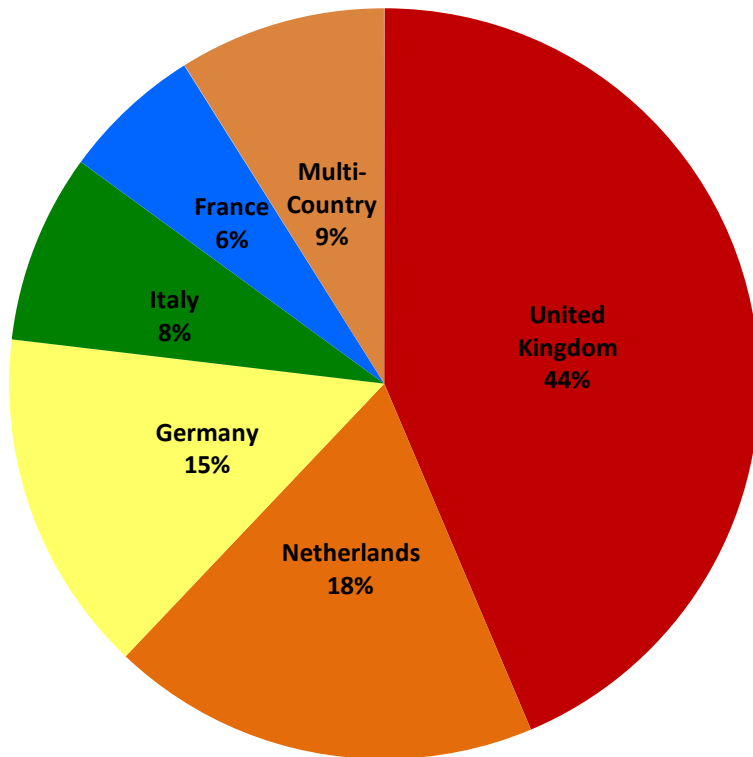University of Geneva

Structure

- Overview
- Descriptive Analysis
- Model Results
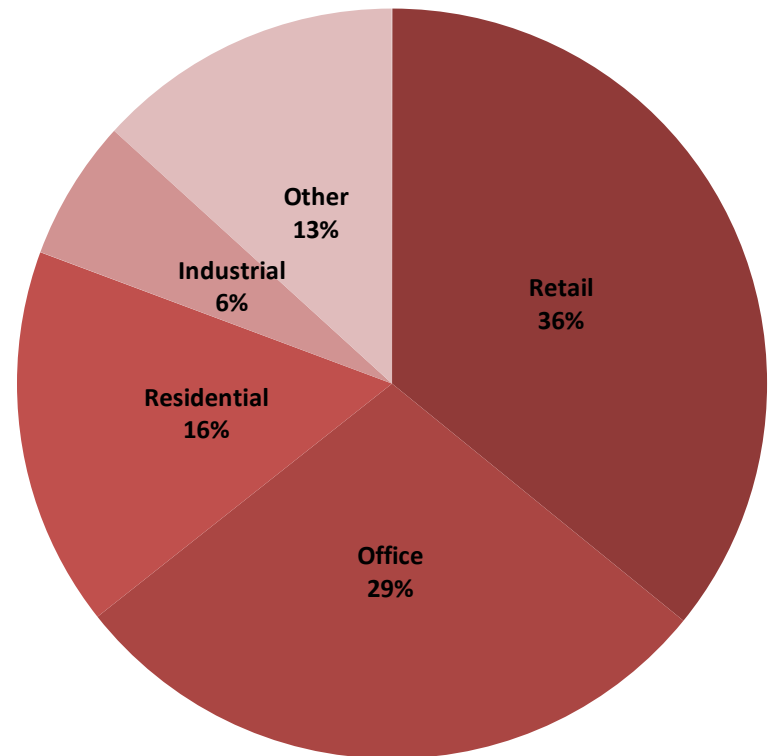- Practical Implications
- Concluding Remarks

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
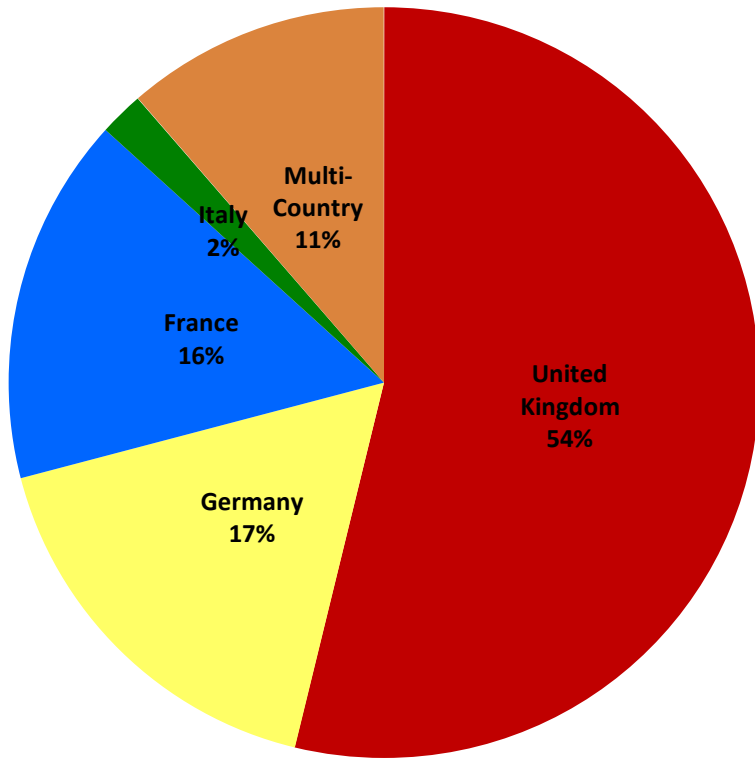
Country Breakdown for Non-Listed Funds

- United Kingdom 44%
- Netherlands 18%
- Germany 15%
- Italy 8%
- France 6%
- Multi-Country 9%

Sector Breakdown for Non-Listed Funds

- Retail 36%
- Office 29%
- Residential 16%
- Industrial 6%
- Other 13%

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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%
- Industrial 3%
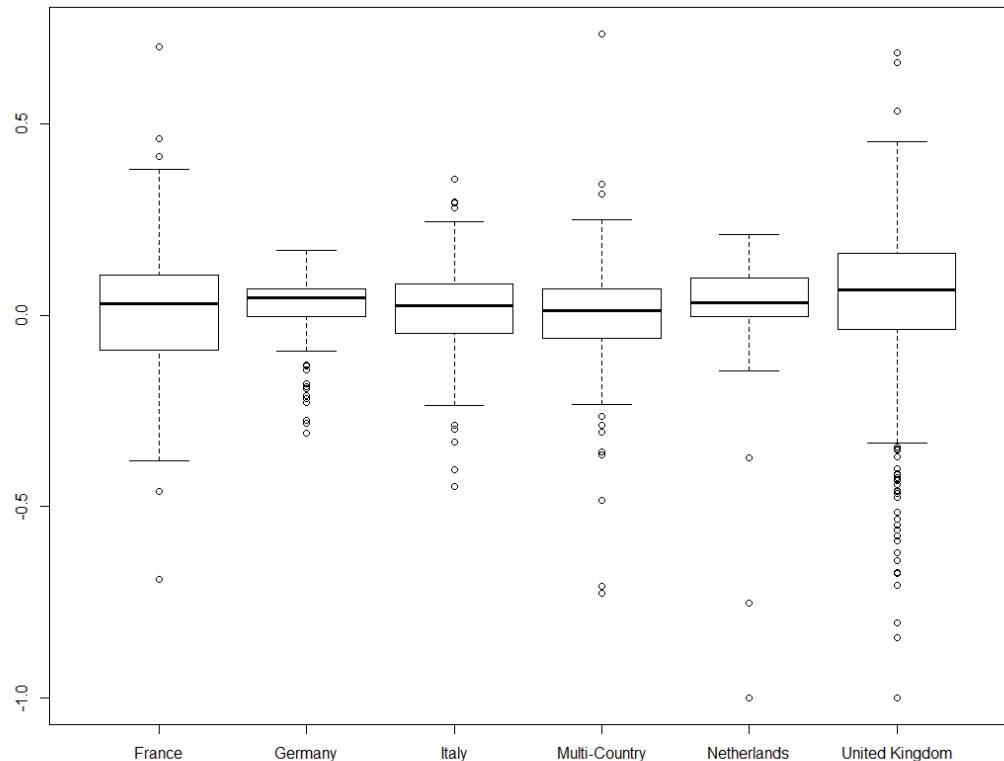- Other 15%
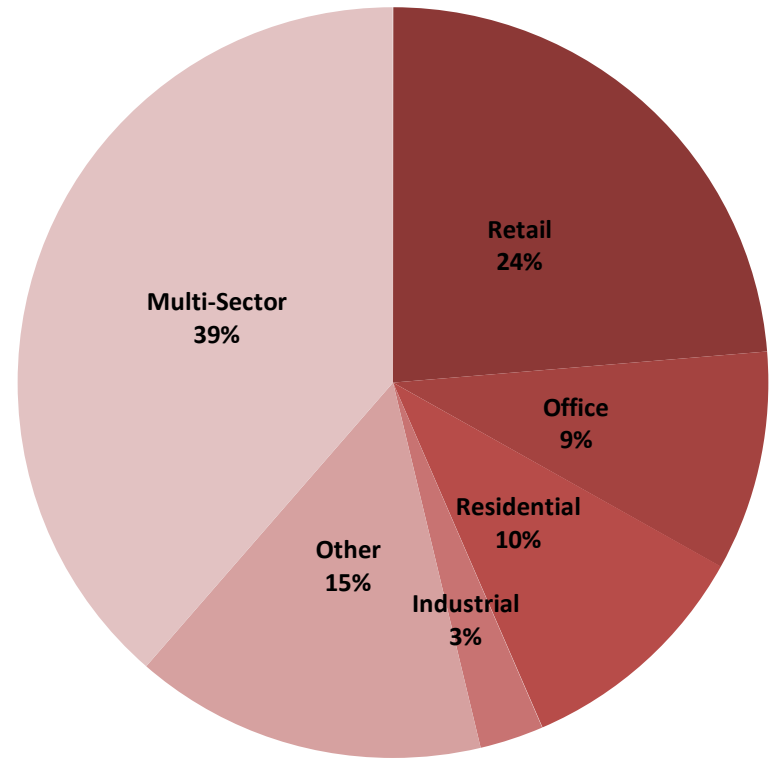
Descriptive Analysis

Total Return by Year
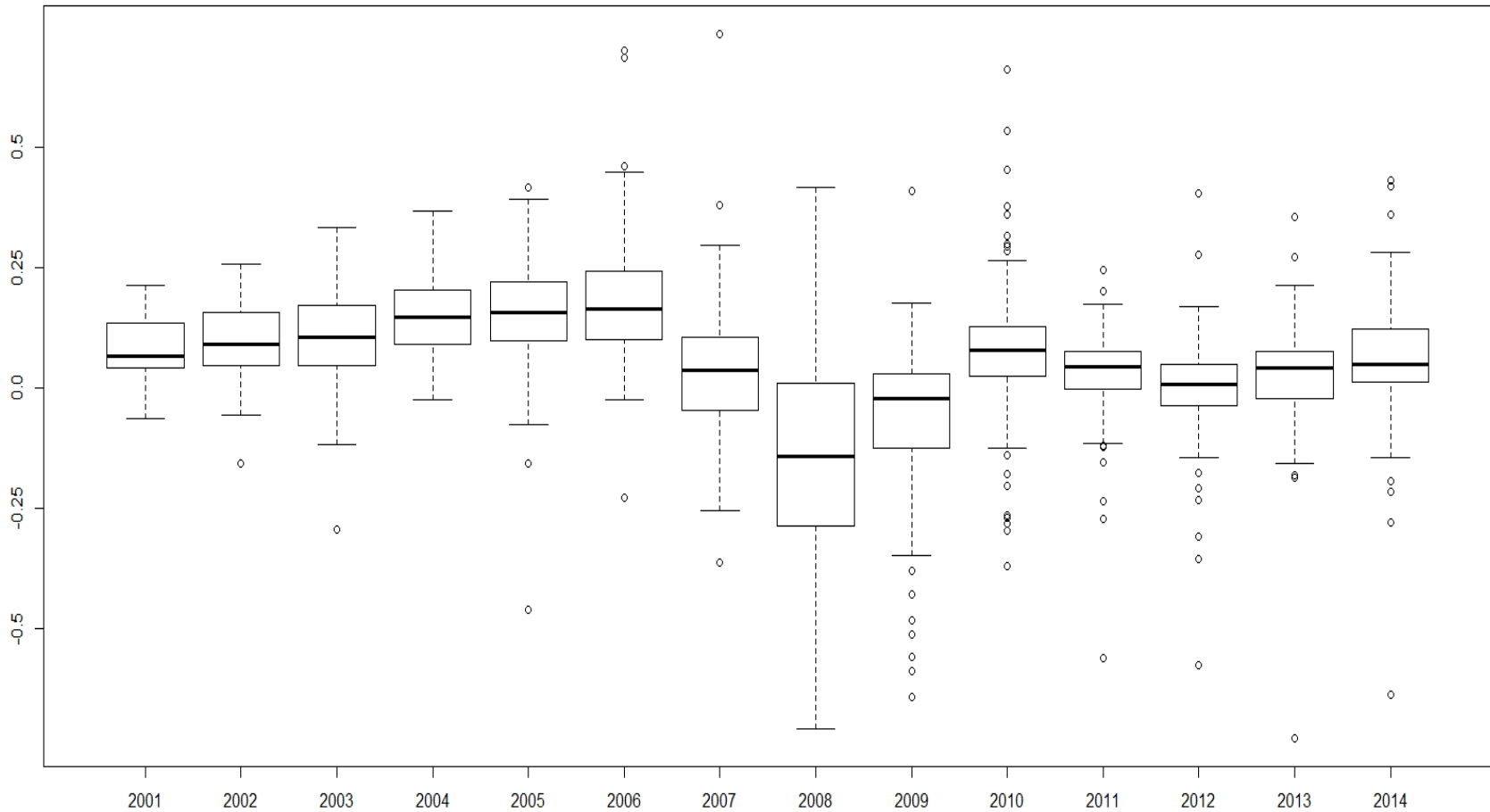
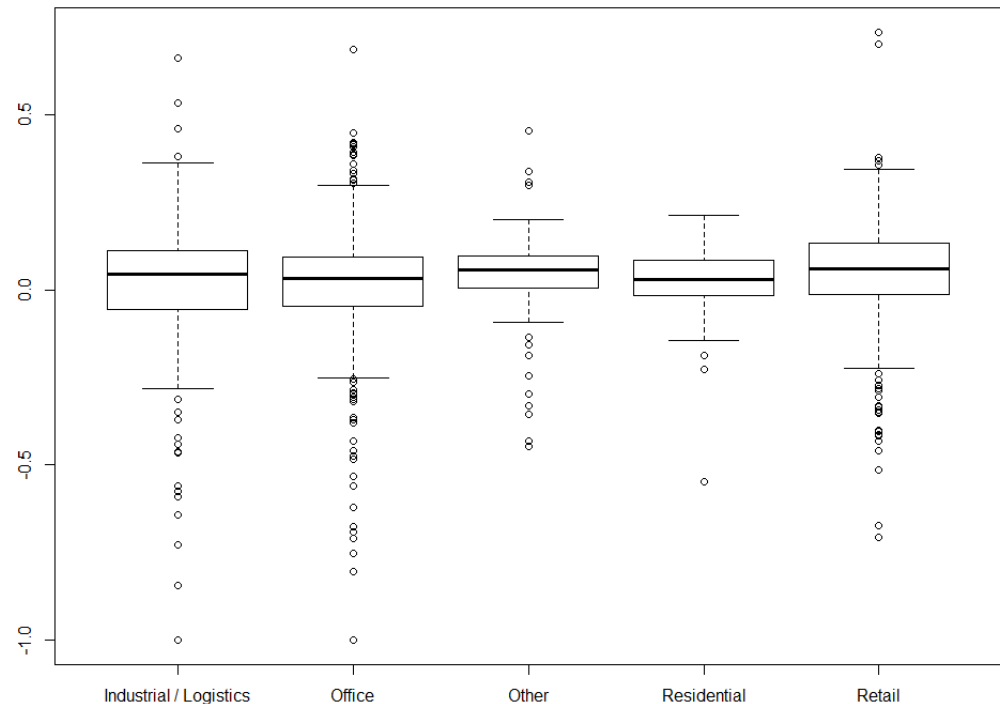# Descriptive Analysis

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
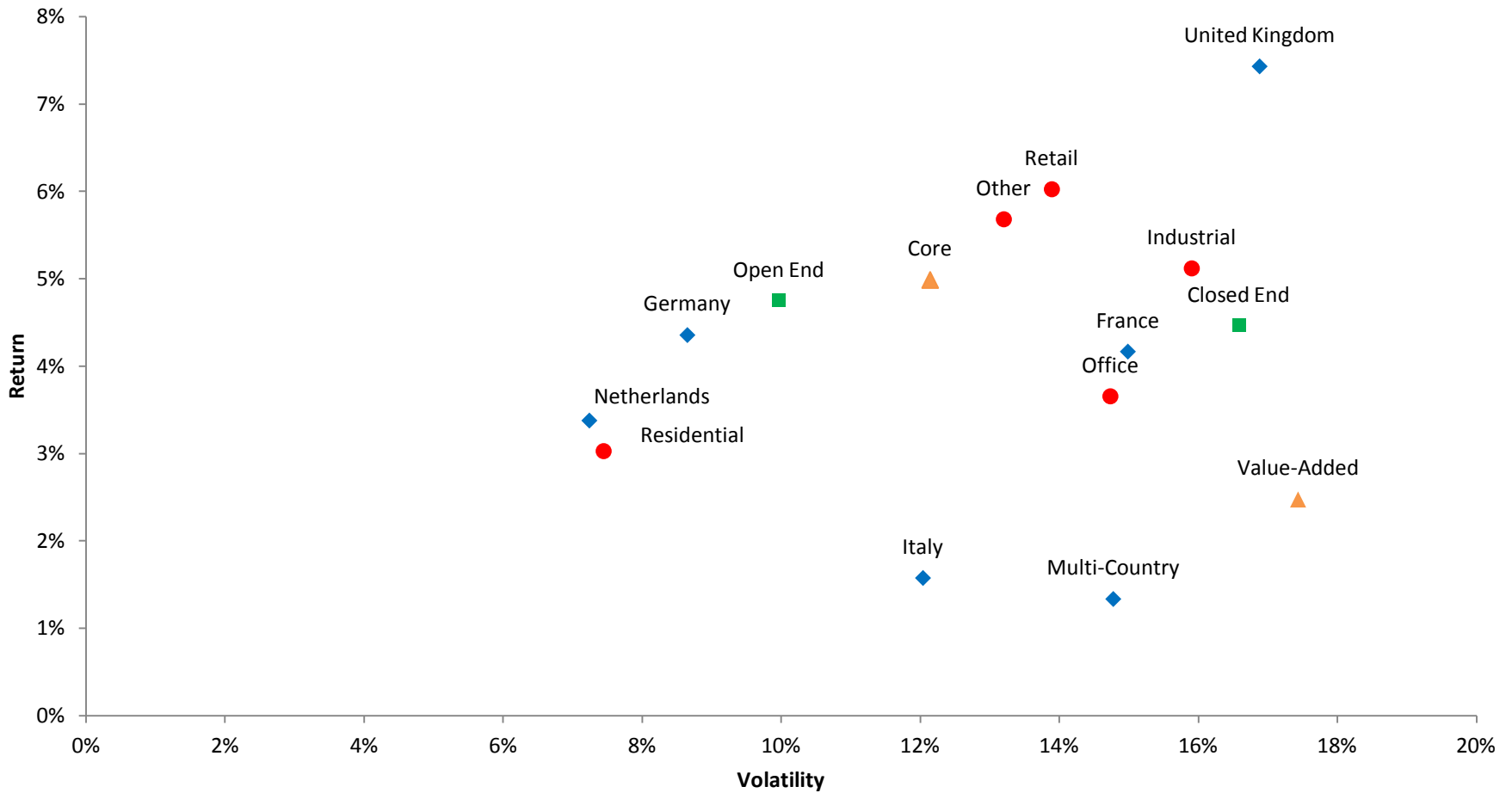
Descriptive Analysis

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

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: Listed companies:

$TR =$

$+ 2.49 \cdot \text{real GDP growth}$

$+ 4.93 \cdot \text{inflation}$

$- 6.80 \cdot \text{unexpected inflation}$

$- 0.01 \cdot 10Y \text{ real int. rate}$

$+ 0.43 \cdot \text{real M1 growth}$

$+ 0.24 \cdot \text{real stock returns} | UK, FR, IT$

$TR =$

$+ 6.05 \cdot \text{real GDP growth}$

$- 2.84 \cdot \text{inflation}$

$+ 20.96 \cdot \text{unexpected inflation}$

$- 0.02 \cdot 10Y \text{ real int. rate}$

$+ 2.63 \cdot \text{real M1 growth} \; | GE$

$+ 0.50 \cdot \text{real stock returns}$

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

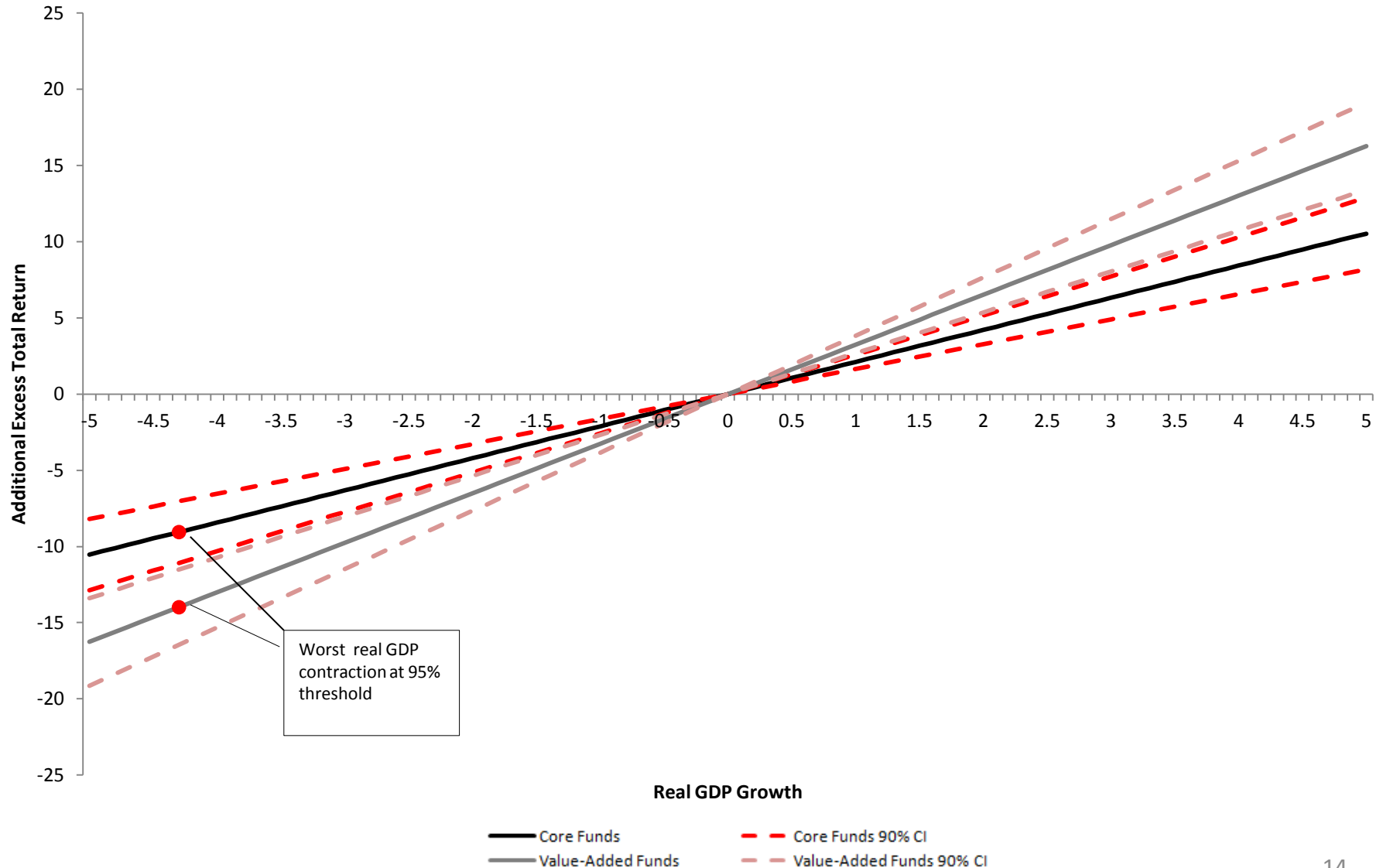- France and Italy better than others during and after crisis

Practical Implications

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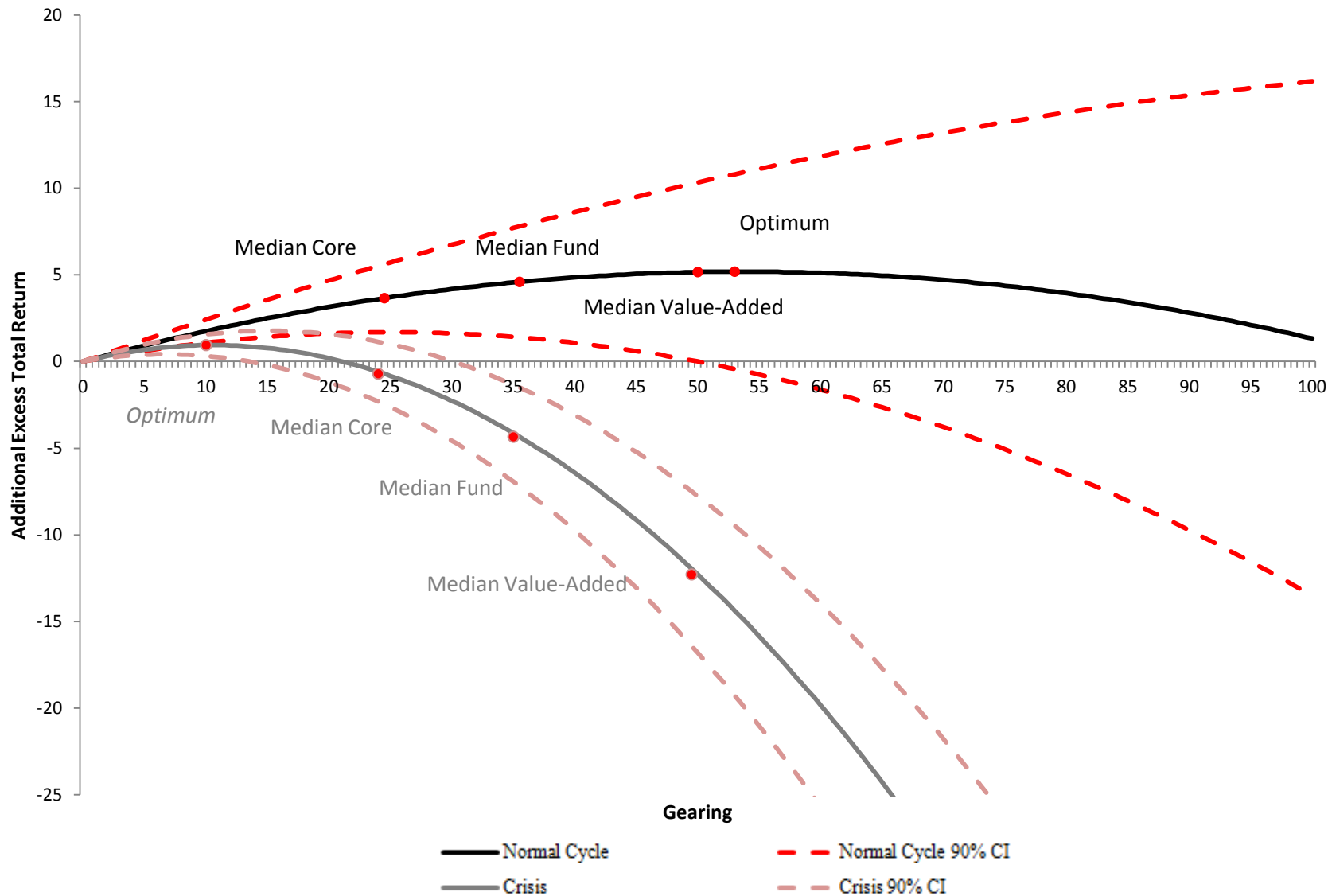
Practical Implications

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

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