Suggested vs. Actual Institutional Allocations to Real Estate in Europe: A Matter of Size?

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CUREM & ERES
ZÜRICH
March 24th, 2006

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The research case

• Model based research indicates that the optimal allocation to real estate in a mixed-asset portfolio should be in the range 15-25 percent

• Actual allocation in Europe is, according to our calculations, 5.3 percent

• Is it possible to increase the average allocation to 15 or 25 percent?
Mean Variance related approaches

• Ennis and Burik (1991), Ziobrowski and Ziobrowski, (1997)
  – Allocation to real estate of 10-30 percent is warranted

• Chen and Mills (2004)
  – Core real estate assets make out 14 percent of the capitalization of the investment universe
  – Real estate capitalization, excluding housing, account for 36 percent of the capitalization of the investment universe

• Hoesli, Lekander and Witkiewicz (2004)
  – Optimal allocation of between 15-25 percent if international investments into real estate allowed
Suggested weights - background

• Hoesli, Lekander and Witkiewicz (2004)
  – Issues addressed
    • Seven investor domiciles (UK, US, CH, FR, SE, AU, NL)
    • Addressing smoothing of RE returns
    • Bayes-Stein Estimator for expected return
    • With and without currency hedging
  – Three step analysis
    • Financial assets globally
    • Financial assets globally, domestic direct real estate
    • Financial assets globally, domestic and international real estate
Swiss Investor Perspective - Hedged Returns

-30%  -20%  -10%  0%  10%  20%  30%

Risk Reduction
Domestic RE
Global RE

% allocation to private RE

Risk reduction Fin Univ

MVP 10% 30% 50% 70% 90% Max
Result for strategy 10 percent up the risk axis – hedged

Hedged Returns, 10% risk strategy

<table>
<thead>
<tr>
<th>Country</th>
<th>International Allocation</th>
<th>Domestic Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>US</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Sweden</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Switzerland</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>UK</td>
<td>18</td>
<td>4</td>
</tr>
</tbody>
</table>
### Acutal weights – weights if actual equal to suggested

<table>
<thead>
<tr>
<th>Country</th>
<th>Allocation to property, %, at 31 December 2002 (1)</th>
<th>Pension fund property portfolio capitalization, €bn (2)</th>
<th>Equilibrium allocation of 15%, Capitalization, €bn</th>
<th>Equilibrium allocation of 25%, Capitalization, €bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1.0</td>
<td>0.1</td>
<td>0.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Norway</td>
<td>11.0</td>
<td>3.4</td>
<td>4.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Denmark</td>
<td>3.3</td>
<td>4.7</td>
<td>21.2</td>
<td>35.3</td>
</tr>
<tr>
<td>Italy</td>
<td>20.3</td>
<td>35.2</td>
<td>26.0</td>
<td>43.3</td>
</tr>
<tr>
<td>France</td>
<td>3.5</td>
<td>10.1</td>
<td>43.4</td>
<td>72.3</td>
</tr>
<tr>
<td>Switzerland</td>
<td>13.0</td>
<td>21.8</td>
<td>25.1</td>
<td>41.9</td>
</tr>
<tr>
<td>Spain</td>
<td>2.3</td>
<td>3.5</td>
<td>22.9</td>
<td>38.1</td>
</tr>
<tr>
<td>Ireland</td>
<td>7.7</td>
<td>3.0</td>
<td>5.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.8</td>
<td>22.6</td>
<td>70.5</td>
<td>117.5</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.0</td>
<td>7.5</td>
<td>28.1</td>
<td>46.9</td>
</tr>
<tr>
<td>Belgium</td>
<td>4.5</td>
<td>4.2</td>
<td>14.1</td>
<td>23.6</td>
</tr>
<tr>
<td>Germany</td>
<td>6.3</td>
<td>20.4</td>
<td>48.6</td>
<td>80.9</td>
</tr>
<tr>
<td>Finland</td>
<td>14.8</td>
<td>4.8</td>
<td>4.9</td>
<td>8.2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.3</td>
<td>45.9</td>
<td>208.5</td>
<td>347.5</td>
</tr>
<tr>
<td>Portugal</td>
<td>4.7</td>
<td>0.5</td>
<td>1.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Europe</td>
<td>5.3</td>
<td>187.6</td>
<td>526.2</td>
<td>876.9</td>
</tr>
</tbody>
</table>

(2) DTZ (2004)
Other estimates of actual allocation

- Actual allocation to real estate (Goldman Sachs and Russell survey, 2003):
  - US 7.1 %
  - Europe 8.3 %
  - Australia 11.5 %

- Appropriate allocation to real estate (Crowe, 2004), survey results
  - 11-15 % for 46 % of respondents
  - In excess of 15 % for 19 % of respondents
Possible explanations for discrepancy

• Data used to estimate real estate allocation
• Real estate illiquidity – makes real estate less attractive
• High transaction (and information) costs of real estate
• Management cost of real estate investments
• Heterogeneity of real estate – difficult to achieve systematic risk exposure
Why are investors increasing the allocation?

- Increased availability of benchmarks – transparency and measurability
- Economic integration on a regional basis – institutional integration of tax and legal dimensions
- Development of the Fund Industry - Increased accessibility
- Establishment of a working institutional framework – service providers lessens information gap
Attempting to measure the "Wall of Money"

• Up weighting real estate from 5.3 percent to 15 percent in the universe of pension funds
  – Inflow of capital corresponding to 338.6 B€ or an increase of 180% from current real estate holdings
• Assuming an equal allocation amongst all Institutional investors
  – Inflow of capital corresponding to 674 B€
Avenues to exposure

- Direct Funds
- REIT's
- Real Estate Stocks
- Mezzanine
- CMBS
- Derivatives

Private

Public

Equity

Debt
• 6 trillion €
  – Roughly half is debt
  – 1.7 €trillion out of the 6 €trillion is held by professional investors, 4.3 €trillion held by ”non-investors”
  – Real estate equity assets held by non investors is estimated at 2.2 € trillion
• 31 percent of assets held by non-investors would have to be acquired by investors to achieve a 15 percent allocation to real estate
• There is precedence of this from the US (2/3rds of the market is held by investors)
# Real Estate exposures – pros and cons

<table>
<thead>
<tr>
<th>Direct Real Estate</th>
<th>Listed Real Estate</th>
<th>REITs</th>
<th>Property Funds</th>
<th>Derivatives</th>
<th>Goal with Real Estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure RE exposure</td>
<td>Liquid and low transaction costs</td>
<td>Tax transparent</td>
<td>Pure RE exposure</td>
<td>Pure, immediate RE exposure</td>
<td>Diversification</td>
</tr>
<tr>
<td>Inflation hedge</td>
<td>Homogeneous</td>
<td>Liquid and low transaction costs</td>
<td>Inflation hedge</td>
<td>Inflation hedge and diversification</td>
<td>Immediate exposure</td>
</tr>
<tr>
<td>Diversification</td>
<td>Transparent market</td>
<td>Homogeneous</td>
<td>Diversification</td>
<td>Fairly liquid and low transaction costs</td>
<td>Inflation Hedge</td>
</tr>
<tr>
<td>Control of assets</td>
<td>No information asymmetries internationally</td>
<td>Transparent market</td>
<td>Tax transparency (?)</td>
<td>Tax transparency</td>
<td>Liquidity satisfying investor requirements</td>
</tr>
<tr>
<td>Tax transparency</td>
<td>No information asymmetries internationally</td>
<td>No information asymmetries internationally</td>
<td>Active management</td>
<td>No market impact</td>
<td>Tax efficiency</td>
</tr>
<tr>
<td>Active management</td>
<td></td>
<td></td>
<td></td>
<td>Index exposure</td>
<td></td>
</tr>
</tbody>
</table>

- **Management intensive**
- **Expensive to achieve systematic risk and high transaction costs**
- **International information asymmetry**
- **Fairly Illiquid**

- **Stock market factor**
- **Pricing subject to capital flow effects**
- **Market depth**
- **Not tax transparent**
- **Not a substitute to direct real estate**

- **Limited availability**
- **Few markets accessible**

- **Tax transparent**
- **Liquid and low transaction costs**
- **Homogeneous**
- **Transparent market**
- **No information asymmetries internationally**

- **Illiquid**
- **No immediate exposure**
- **Low transparency**
- **High transaction costs**
- **Buy and Hold strategy**
- **Manager risk**
Conclusion

• Investors should pursue several approaches if they want to achieve an increase in allocation
  – Direct real estate transactions outside the traditional pool of real estate
  – Private funds, both domestically and internationally
  – Real estate stocks and REITs
• Not impossible to match increase in exposure with stock of assets, if owner occupiers are willing to sell
  – Balance sheet structure
  – Credit calculations
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