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PURPOSE OF THE STUDY

- Historically the sector has been relatively straightforward: actively managed, benchmarked vehicles, providing exposure to the global listed real estate sector.

- More recently there have been a number of developments, in particular:
  - **Cost pressures**: Increased use of lower cost, passive vehicles (ETFs)
  - **Funds flow**: Large inflows into Global REIT strategies from Japanese investors
  - **Liquidity bias**: Emphasis on “liquid” strategies
  - **Search for Income**: Investor demand for income oriented funds
  - **Non market cap index strategies**: Interest in alternative index strategies (“smart beta”)
  - **Diverse Product use**: Use of Global REIT trackers for the increasingly important Defined Contribution market
  - **Competition**: Competing for same capital pool as Infrastructure Funds

- The purpose of this study is to examine the development, current structure and performance of the sector to ascertain how it will respond to these developments.

- Two main sources have been used: EPRA Report – Use of listed real estate securities in asset management, and Consilia Capital Monthly Funds Monitor Reports
The US has been the clear beneficiary of positive funds flow to the listed sector post GFC, followed by Global mandates.

Source: Consilia Capital January 2013
In the Consilia database we monitor just under 750 funds with combined AuM of US$286bn. This compares to a global listed sector valued at US1,155bn (source: EPRA May 2013). i.e. specialist funds represent c. 25% of the listed sector.

The true figure for dedicated funds is higher than this, due to separate account mandates.

Global funds represent c. 22% of the total AuM, and Global REIT Funds around 12%.

ETFs represent c.19%, but is the fastest growing sector. (ETFs linked to EPRA Global Index +85% to US$8.7bn in 12 months to Feb. 2013)

<table>
<thead>
<tr>
<th>Fund Mandate</th>
<th>ETF No.</th>
<th>AuM($m)</th>
<th>Active Funds No.</th>
<th>AuM($m)</th>
<th>Total No.</th>
<th>AuM($m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>10</td>
<td>892</td>
<td>55</td>
<td>3,459</td>
<td>65</td>
<td>4,352</td>
</tr>
<tr>
<td>European</td>
<td>10</td>
<td>2,603</td>
<td>77</td>
<td>11,294</td>
<td>87</td>
<td>13,897</td>
</tr>
<tr>
<td>Global Infrastructure</td>
<td>6</td>
<td>1,148</td>
<td>61</td>
<td>13,308</td>
<td>67</td>
<td>14,456</td>
</tr>
<tr>
<td>Global Real Estate</td>
<td>11</td>
<td>8,828</td>
<td>238</td>
<td>54,800</td>
<td>249</td>
<td>63,628</td>
</tr>
<tr>
<td>Global REIT</td>
<td>3</td>
<td>2,044</td>
<td>74</td>
<td>32,379</td>
<td>77</td>
<td>34,423</td>
</tr>
<tr>
<td>Japan</td>
<td>7</td>
<td>1,123</td>
<td>44</td>
<td>12,404</td>
<td>51</td>
<td>13,528</td>
</tr>
<tr>
<td>US</td>
<td>29</td>
<td>37,059</td>
<td>121</td>
<td>105,504</td>
<td>150</td>
<td>142,562</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76</td>
<td>53,697</td>
<td>670</td>
<td>233,148</td>
<td>746</td>
<td>286,845</td>
</tr>
</tbody>
</table>

Source: Consilia Capital, May 2013
LISTED GLOBAL REAL ESTATE FUND STRATEGIES

Universe of Listed Real Estate Securities

- Long Only Strategies
  - Benchmark
    - Indexed/ETF
  - Non benchmark
- Long/short strategies
  - Income Funds
  - Hedge Fund
  - 130/30 style

Source: EPRA report “Use of listed real estate in asset management“ by Alex Moss and Andrew Baum
Excellent 2012 (and longer term) risk adjusted performance
Greatest fund choice and liquidity
• Second strongest recovery from the trough (March 2009)

• Remains below peak (Feb 2007) levels

Source: Consilia Capital, May 2013
Variety of strategies leads to wide dispersion of performance

Chart below shows 5 year returns rebased in US $ with returns on horizontal

Source: Consilia Capital, May 2013
### PERFORMANCE RELATIVE TO OTHER ASSET CLASSES

- **Superior returns (raw and risk adjusted)**
- **Maximum drawdown, however, is inferior.**
- **Studies show that with mechanical trading rules based on momentum, risk parity, and trend following portfolio maximum drawdown can be reduced dramatically**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Buy and Hold</th>
<th>Momentum</th>
<th>Risk Parity</th>
<th>Trend Following</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average returns pa %</td>
<td>6.71</td>
<td>10.90</td>
<td>6.78</td>
<td>9.11</td>
<td>15.65</td>
</tr>
<tr>
<td>Sharpe ratio</td>
<td>0.28</td>
<td>0.54</td>
<td>0.60</td>
<td>0.86</td>
<td>1.01</td>
</tr>
<tr>
<td>Maximum drawdown %</td>
<td>46.60</td>
<td>45.12</td>
<td>20.46</td>
<td>6.86</td>
<td>18.34</td>
</tr>
</tbody>
</table>

**Source:** Professor Andrew Clare, Cass Business School
LISTED GLOBAL REAL ESTATE: USE AND APPLICATIONS

Source: EPRA report “Use of listed real estate in asset management” by Alex Moss and Andrew Baum
COMBINING WITH OTHER ASSET CLASSES

A Listed real estate
B + Direct real estate
C + External unlisted real estate funds
D + Single internal real estate fund
E + Real estate debt
F + other real assets, ie commodities, infrastructure
G + Derivatives

Source: EPRA report “Use of listed real estate in asset management“ by Alex Moss and Andrew Baum
The European listed Universe remains too small (c.12% of the Global Index) to warrant new Fund launches, with Global the most popular mandate for new Funds.

New global funds being launched require a greater strategy than purely sector exposure to gain credible AuM.

Existing Funds with insufficient critical mass are being wound down/integrated

Fund strategies either recently launched or in the process of being launched have focussed on:
- Income
- Long/short, 130/30 style
- Multi factor optimisation models
- Liquidity provision for DC schemes
• There has been increased interest in using Global listed real estate securities funds in multi asset portfolios with:
  • All other asset classes
  • Purely real estate assets
  • Other “real assets”, infrastructure, commodities

• Possible future Fund styles would include:
  • Sector specialisation – Global Office, Global Logistics etc.
  • Real estate specific “Smart Beta” funds, particularly Fundamentally Weighted selection with a liquidity weighting

• The greatest current challenge are:
  1) The competition for capital from infrastructure funds
  2) Downward pressure on fees, hence the increased interest in passive strategies