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Investment Consulting

Real Estate - The Swiss Pension Fund Perspective

PPCmetrics AG
Oliver Kunkel, MSc., Managing Director

Some of the graphs/pictures are not available online

Bern, September 18, 2019
Real Estate Exposure (Look-through)

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Benchmark</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Income CHF</td>
<td>SBI Domestic AAA - BBB</td>
<td>25.0%</td>
</tr>
<tr>
<td>Fixed Income FC</td>
<td>Barclays Global Aggregate</td>
<td>15.0%</td>
</tr>
<tr>
<td>Swiss Equities</td>
<td>SPI Index</td>
<td>10.0%</td>
</tr>
<tr>
<td>Global Equities</td>
<td>MSCI World ex CH</td>
<td>20.0%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>KGAST Immo Index</td>
<td>20.0%</td>
</tr>
<tr>
<td>Other</td>
<td>N/A</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

Asset allocation based on the latest BFS Pensionskassenstudie (2017)

Swiss pension funds hold approx. 20% in «real estate» and approx. 35% in total real estate related investments.

«Look-through» Real Estate

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate Equity</td>
<td>1.5%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Real Estate Debt</td>
<td>11.0%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Asset allocation based on the latest Pensionskassenstudie (2017); look-through analysis based on annual reports of index members (single securities). Source: Bloomberg, SXI, MSCI, KGAST

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Swiss Real Estate: the last 20+ Years...

Swiss unlisted Real Estate Foundations did not have a single year with negative returns since 1998!

Monthly returns of the KGAST Immo Index (unlisted real estate portfolios); Source: KGAST
On the risk of unlisted real estate and valuation issues, see «Kunkel und Skaanes, 2016, «Analyse der Volatilitäten und der Zinsrisikoeigenschaften bei Immobilien-Direktanlagen», Swiss Real Estate Journal 12, 27-33»
Swiss Real Estate: Differences in Returns...

Reason for differences in returns?

Source: PPCmetrics Swiss Immo Tool; the sample includes direct portfolios and unlisted collective investments.
... largely driven by valuation assumptions

In the last 20 years, lower interest rates have been very slowly incorporated into RE valuations.

Source: PPCmetrics Swiss Immo Tool; the sample includes direct portfolios and unlisted collective investments.
Assumptions: Discount Rate and Risk Premium

Discount Rate Applied to the Real Estate Valuation

- Interest rate for long term government bonds
- Discount rate (effective)
- Constant Risk Premium of 3.1%

Implied “Risk Premiums” applied to valuations have undergone significant changes!

Source: SNB; Interest on long-term government bonds equals the YTM for 30 year Swiss Govt. Bonds
## Competition for Investor Capital

<table>
<thead>
<tr>
<th>Anbieter</th>
<th>Anlagegefäss</th>
<th>Rechtsform</th>
<th>Kapitalerhöhung in CHF Mio.</th>
<th>Aktuelles Volumen in CHF Mio.</th>
<th>Kapitalaufnahme in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adimora</td>
<td>Omega</td>
<td>Anlagestiftung</td>
<td>30</td>
<td>285</td>
<td>10.5%</td>
</tr>
<tr>
<td>Akara Funds AG</td>
<td>Swiss Diversity Property Fund PK</td>
<td>Anlagefonds</td>
<td>150</td>
<td>750</td>
<td>20.0%</td>
</tr>
<tr>
<td>Baloise Swiss Property Fund</td>
<td>Baloise Swiss Property Fund</td>
<td>Anlagefonds</td>
<td>0</td>
<td>275</td>
<td>0.0%</td>
</tr>
<tr>
<td>ECOREAL Anlagestiftung</td>
<td>SUISSESELECT</td>
<td>Anlagestiftung</td>
<td>20</td>
<td>410</td>
<td>4.9%</td>
</tr>
<tr>
<td>Fundamenta Group Investment Foundation</td>
<td>Swiss Real Estate</td>
<td>Anlagestiftung</td>
<td>0</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Greenbri Anlagestiftung</td>
<td>Greenbri Housing</td>
<td>Anlagestiftung</td>
<td>70</td>
<td>280</td>
<td>25.0%</td>
</tr>
<tr>
<td>Helvetica Property Investors AG</td>
<td>Helvetica Swiss Commercial</td>
<td>Anlagestiftung</td>
<td>75</td>
<td>310</td>
<td>24.2%</td>
</tr>
<tr>
<td>Helvetica Anlagestiftung</td>
<td>Immobilien Romandie</td>
<td>Anlagestiftung</td>
<td>0</td>
<td>240</td>
<td>0.0%</td>
</tr>
<tr>
<td>IST Investmentstiftung</td>
<td>IST Immobilien Schweiz Wohnen</td>
<td>Anlagestiftung</td>
<td>55</td>
<td>254</td>
<td>21.7%</td>
</tr>
<tr>
<td>J. Safra Sarasin Anlagestiftung</td>
<td>Nachhaltig Immobilien Schweiz</td>
<td>Anlagestiftung</td>
<td>100</td>
<td>484</td>
<td>20.7%</td>
</tr>
<tr>
<td>Patrimonium Anlagestiftung</td>
<td>Gesundheitsimmobilien Schweiz</td>
<td>Anlagestiftung</td>
<td>30</td>
<td>180</td>
<td>16.7%</td>
</tr>
<tr>
<td>Patrimonium Anlagestiftung</td>
<td>Wohnimmobilien Schweiz</td>
<td>Anlagestiftung</td>
<td>15</td>
<td>520</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pensimo Anlagestiftung</td>
<td>Casareal</td>
<td>Anlagestiftung</td>
<td>25</td>
<td>1'864</td>
<td>1.3%</td>
</tr>
<tr>
<td>Pensimo Anlagestiftung</td>
<td>Proreal</td>
<td>Anlagestiftung</td>
<td>19</td>
<td>471</td>
<td>4.0%</td>
</tr>
<tr>
<td>SFP Anlagestiftung</td>
<td>SFP AST Swiss Real Estate</td>
<td>Anlagestiftung</td>
<td>100</td>
<td>50</td>
<td>200.0%</td>
</tr>
<tr>
<td>Steiner Investment Foundation</td>
<td>Swiss Development Residential</td>
<td>Anlagestiftung</td>
<td>100</td>
<td>190</td>
<td>52.6%</td>
</tr>
<tr>
<td>Swiss Life Anlagestiftung</td>
<td>Immobilien Schweiz Alter und Gesundheit</td>
<td>Anlagestiftung</td>
<td>67</td>
<td>52</td>
<td>128.4%</td>
</tr>
<tr>
<td>Swiss Prime Anlagestiftung</td>
<td>SPA Immobilien Schweiz</td>
<td>Anlagestiftung</td>
<td>250</td>
<td>1'502</td>
<td>18.6%</td>
</tr>
<tr>
<td>Turidomus Immobilien-Anlagestiftung</td>
<td>Casareal</td>
<td>Anlagestiftung</td>
<td>50</td>
<td>3'531</td>
<td>1.4%</td>
</tr>
<tr>
<td>Vontobel Real Estate Investments</td>
<td>Vontobel Sustainable Real Estate Switzerland</td>
<td>Anlagestiftung</td>
<td>57</td>
<td>170</td>
<td>33.5%</td>
</tr>
<tr>
<td>Die Anlagestiftung Immobilien DAI</td>
<td>Die Anlagegruppe Gewerbeimmobilien Schweiz DAGSIS</td>
<td>Anlagestiftung</td>
<td>0</td>
<td>111</td>
<td>0.0%</td>
</tr>
<tr>
<td>Telco Anlagestiftung</td>
<td>Immobilien Schweiz</td>
<td>Anlagestiftung</td>
<td>30</td>
<td>932</td>
<td>3.2%</td>
</tr>
<tr>
<td>Turidomus Immobilien-Anlagestiftung</td>
<td>Urban &amp; Mixed-use</td>
<td>Anlagestiftung</td>
<td>220</td>
<td>466</td>
<td>47.2%</td>
</tr>
<tr>
<td><strong>Summe</strong></td>
<td></td>
<td></td>
<td>1'493</td>
<td>13'327</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

We observe very different growth strategies (closed vs. extensive fund raising) & different qualities of newly launched products / portfolios!

Source: PPCmetrics Swiss Immo Tool; the table shows planned capital increases for the calendar year 2019 as of Q1 2019.
Conclusion 1: how to prepare for a storm?

- Pension funds will undoubtedly be impacted by a market correction of the Swiss real estate market.
- It is critical to prepare for a possible downturn:
  - **Strategy Risk**: A pension fund should be able to maintain the target allocation to real estate even in downturns. Therefore, Pension Funds need to understand the loss potential, even in extreme scenarios. Valuation uncertainty of unlisted real estate creates an additional challenge.
  - **Risk of Tactical Allocation**: A pension fund should understand the differences between its portfolio (e.g. local residential portfolio) and the broad market.
  - **Risk Concentration**: The portfolio should be reviewed with respect to possible risk concentrations, such as large single investments.
Theory: Go Global to Diversify!
Investments in global real estate are increasing, but from a low level.

Source: PPCmetrics Investment Controlling; our analysis includes pension funds that are currently investing in real estate abroad. Number of legal entities: 85; Total assets (total) of all legal entities: > CHF 270 billion; Investments in real estate in Switzerland: > CHF 34 billion; Investments in real estate abroad: > CHF 6 billion
Global Real Estate: Tactical Positioning

On average, global real estate is slightly overweight vs. SAA.

Source: PPCmetrics Investment Controlling; our analysis includes pension funds that are currently investing in real estate abroad. Number of legal entities: 85; Total assets (total) of all legal entities: CHF 270 billion; Investments in real estate in Switzerland: CHF 34 billion; Investments in real estate abroad: CHF 6 billion.
Global Real Estate: Implementation

The table shows how often the respective implementation variant is used – All size segments include investors who currently use one or more of the three variants. In all size segments, both Swiss and foreign legal forms are used.

– Investors with CHF 20 - 100m in global real estate: more frequent use of local Single Funds, selection & monitoring by pension fund itself

– Investors with more than CHF 100m global real estate: more frequent use of external portfolio management (segregated account of local single funds), tailor made solutions / single investor funds and strategic partnerships.

<table>
<thead>
<tr>
<th>Size of Pension Fund</th>
<th>Unlisted: Single Funds</th>
<th>Unlisted: Fund of Funds</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; CHF 1 Mrd.</td>
<td>24.6%</td>
<td>24.6%</td>
<td>50.9%</td>
</tr>
<tr>
<td>&gt; CHF 1 Mrd &lt; CHF 5 Mrd.</td>
<td>44.7%</td>
<td>10.5%</td>
<td>44.7%</td>
</tr>
<tr>
<td>&gt; CHF 5 Mrd.</td>
<td>50.0%</td>
<td>11.1%</td>
<td>38.9%</td>
</tr>
</tbody>
</table>

Source: PPCmetrics Investment Controlling; our analysis includes pension funds that are currently investing in real estate abroad. Number of legal entities: 85; Total assets (total) of all legal entities:> CHF 270 billion; Investments in real estate in Switzerland:> CHF 34 billion; Investments in real estate abroad:> CHF 6 billion
Swiss vs. Global Real Estate

Swiss Real Estate:
- Residential Properties
- Limited use of Leverage
- Highly regulated including investment limits

Global Real Estate...

Analysis PPCmetrics AG; Data Sources: Annual Reports of Investment Foundations and Real Estate Funds, KGAST, NCREIF, IPD, INREV, FTSE / EPRA, as at 31/12/2015
The number of tailor made “Swiss Pension Fund” products for global real estate has increased substantially.
The most often used products by Swiss pension funds follow a “core” strategy.

Source: myPPCmetrics Global MarktScreen
Most products are fund-of-funds investing in local, established single funds.
Global Products: Leverage

Products try, but often face difficulties to have a low leverage.

Source: myPPCmetrics Global MarktScreen

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Global Products: Sector Allocation

Products differ in the sector allocation. Residential is much lower than for Swiss real estate products.

% -share of residential in the KGAST Immo Index
Global Products: Return Driver

In 2018, the difference in returns were largely driven by the sector allocation.

Source: myPPCmetrics Global MarktScreen
Global Products: Costs

Products for global real estate are much more expensive than Swiss real estate products.

TER on NAV of the KGAST Immo Index
Swiss vs. Global Real Estate Returns

Since the financial crisis, global real estate is still lagging the Swiss market.

Absolute Returns over Time
Lines: cumulative, Bars: periodic

Time series 01.02.2008 - 31.03.2019
Conclusion 2: going global?

- In principle, the international diversification in global real estate is a good solution to mitigate or reduce the impact of a correction of the Swiss real estate market.
- The number of investment vehicles for global real estate has significantly increased.
- However, products for global real estate differ significantly from local products: higher leverage, less residential properties, higher fees and alter the risk / return properties of the real estate investments.
Thank you!

Oliver Kunkel

MSc
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Division Manager Asset Manager Selection & Controlling

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Master of Science in Economics (financial market theory, real estate finance), Universities of Maastricht and St. Gallen

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Global Property Research, Amsterdam: research stay

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