Home Bias – Swiss Pension Fund Experience

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PPCmetrics AG
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Zürich, June 16, 2015
Home Bias
The Popular Perspective

Home, Sweet Home (Bias)

«There is no place like home»
Home Bias
Possible Explanations

Home Bias: Overweighting of the home market compared to its market capitalization (French and Poterba (1991))

- **Possible explanations:**
  - Higher return expectations (French and Poterba (1991))
  - Hedging possibilities against domestic risks such as local goods price (Adler and Dumas (1983)).
  - Trading costs, taxes, and border control barriers (Glassman and Riddick (2001)).
  - Information asymmetries (Ahearne, Griever, and Warnock (2004))
  - Governance (Dahlquist, Pinkowitz, Stulz, and Williamson (2003))
  - Behavioral explanations, i.e., familiarity, patriotism and overconfidence (e.g., Coval and Moskowitz (1999))
  - Exchange rate volatility (Fidora, Fratzscher, and Thimann (2006))
Home Bias
Home Bias in Equities

Switzerland = 0.50
Home Bias
Home Bias in Bonds
Home Bias
Some Stylized Facts

• The home bias ...
  – … is significantly declining due to the internet or mutual funds, especially for equities (Amadi (2005)).
  – … is larger in the case of bonds, especially strong in the US (Fidora, Fratzscher, and Thimann (2006)).
  – … is larger for investors from emerging markets for equities as well for bonds (Coeurdacier and Rey (2013)).
  – … is larger for countries with larger (real) currency volatility (Fidora, Fratzscher, and Thimann (2006)) .
  – … is also existent for US and EU pension funds (Hochberg and Rauh (2013), Bakker (2006)).
  – … is larger in countries with poorer corporate governance (Dahlquist, Pinkowitz, Stulz, and Williamson (2003)).
Home Bias
Home Bias for Swiss Pension Funds (1)

Average strategy over time - Overview

01.01.2007 - 31.12.2013

Swiss Pension Funds
Equity = 0.39
Bonds = 0.70

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n: Number of pension funds / Pension fund assets according to art. 44 BVV 2 as at end of period in m of CHF: 244'196
Home Bias
Home Bias for Swiss Pension Funds (2)

Strategy - Overview

Date: 31.12.2013

© PPCmetrics AG  Number of pension funds: 141 / Pension fund assets according to art. 44 BVV 2 as at end of period in m of CHF: 244'196

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Home Bias
Home Bias for Swiss Pension Funds (3)

Average strategy over time - Real Estate
01.01.2007 - 31.12.2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocation (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 07</td>
<td>Swiss Real Estate 13.9%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 1.2%</td>
</tr>
<tr>
<td>Dec 08</td>
<td>Swiss Real Estate (NAV) 11.5%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 1.0%</td>
</tr>
<tr>
<td>Dec 09</td>
<td>Swiss Real Estate (NAV) 10.4%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 1.1%</td>
</tr>
<tr>
<td>Dec 10</td>
<td>Swiss Real Estate (NAV) 12.2%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 4.0%</td>
</tr>
<tr>
<td>Dec 11</td>
<td>Swiss Real Estate (NAV) 12.0%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 4.7%</td>
</tr>
<tr>
<td>Dec 12</td>
<td>Swiss Real Estate (NAV) 11.2%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 6.8%</td>
</tr>
<tr>
<td>Dec 13</td>
<td>Swiss Real Estate (NAV) 11.4%</td>
</tr>
<tr>
<td></td>
<td>Global Real Estate 7.1%</td>
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</tbody>
</table>

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n; Number of pension funds / Pension fund assets according to art. 44 BVV 2 as at end of period in m of CHF; 47'684
What’s the Problem Anyway?
Generally, what are the Costs of a Home Bias?

- According to **financial theory**: The home bias leads to a **lack of international diversification** and, therefore, to **lower expected risk-return profiles** (Sharpe (1964), Lintner (1995), French and Poterba (1991))
  - Even in the presence of transaction costs
  - However, these costs of the lack of international diversification decreased due to globalization (Agnesens (2014)), but they are still there…

- According to **macroeconomic theory**: The home bias leads to **suboptimal international risk sharing for consumption** (Lewis (1991))
  - But this view does not account for direct foreign investments…
What’s the Problem Anyway?
Pension Funds: Are Bonds different?

- Yes, because of their liability hedging capabilities
- What’s the problem with foreign bonds?
  - There might be no adequate compensation for currency risk
  - CHF hedged foreign currency bonds are not an exact match of the liabilities
  - Problem of «hedging costs»

<table>
<thead>
<tr>
<th></th>
<th>Swiss Government Bonds</th>
<th>Swiss Aggregate Bonds</th>
<th>Global Government Bonds (hedged)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlation with liability proxy</strong></td>
<td>0.96</td>
<td>0.90</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>Tracking error with liability proxy</strong></td>
<td>1.18%</td>
<td>1.63%</td>
<td>3.69%</td>
</tr>
</tbody>
</table>

Source: Own calculations, data from January 1973 to March 2015

![Currency Hedging USD CHF](image_url)
What’s the Problem Anyway?
Pension Funds: What about Equities then?

• **Information asymmetries, governance, or behavioral explanations** are **not good reasons** for having a home bias.

• But what about **hedging possibilities, trading costs**, or **exchange rate volatility**? And what about **return**?
What’s the Problem Anyway?
Pension Funds: Hedging or Transaction Costs?

• What about hedging then?
  – Since equities are **not a good investment from a liability matching perspective** the hedging argument fails as well…
    ⇒ There might be even an **argument to exclude** home equity markets. Negative correlation between the ability of the employers as well as the employees to provide recapitalization contributions and equity markets returns.
    ⇒ On the other side, they might be a good **hedging instrument** for **wage increases** (e.g., Black (1989)).

• What about **trading cost or taxes**?
  – Bid ask spreads are in most of the developed equity markets smaller than in Switzerland.
  – Taxes are also not a good argument because Swiss pension funds are tax exempt in most countries.
What’s the Problem Anyway?
What about Equities: Less Currency Risk?

Drop between January 15 and 16:
• SPI – 14.7%
• MSCI World – 16.2%
What’s the Problem Anyway?
What about Equities: Concentration Risks
What’s the Problem Anyway?
What about Equities: Fat Tails or «Japan Szenario»

Japan’s global domination  «The lost two decades»

Total Return Index (Log Scale, 31.01.1971 = 100)

What’s the Problem Anyway?
What about Real Estate

• Since Swiss Real Estate does not have any liability matching properties, the same arguments as in the case of equities do apply.
  – Generally, real estate is a questionable «asset class» since they are simply firms from a special industry and since most other firms own real estate.

• However.... actually, there are some practical arguments!
  – Not sufficient access to the market (direct investments)
  – Information asymmetries (direct investments)
  – No(t many) appropriate collective investment schemes
  – At the moment, selling Swiss direct investments is not reasonable because they are traded at a large discount.
Case Study
Sovereign Wealth Funds

• **What is a SWF?**
  – According to the IMF a SWF is a state-owned investment fund or entity established as stabilization fund, savings fund, reserve investment corporation, development fund, or contingent pension reserve fund.

• **Home bias of selected SWF («self selection problem»)**

<table>
<thead>
<tr>
<th>SWF</th>
<th>Size (bn CHF)</th>
<th>Home Bias (Equity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska Permanent Fund</td>
<td>52</td>
<td>-0.23</td>
</tr>
<tr>
<td>CPP Investment (Canada)</td>
<td>18</td>
<td>0.12</td>
</tr>
<tr>
<td>Future Fund (Alaska)</td>
<td>72</td>
<td>0.17</td>
</tr>
<tr>
<td>Government Pension Fund (incl. Norway)</td>
<td>802</td>
<td>0.02</td>
</tr>
<tr>
<td>National Pensions Reserve Fund (Ireland)</td>
<td>20</td>
<td>0.01</td>
</tr>
<tr>
<td>Temasak (Singapore)</td>
<td>154</td>
<td>0.31</td>
</tr>
</tbody>
</table>
Bottom Line

• **Home bias is typical** for the average investor, even for large and sophisticated investors such as pension funds or sovereign wealth funds (even without the development funds).
  – Generally, it is smaller for the larger and more sophisticated ones.

• In the case of **bonds**, a home bias can make sense because hedged foreign bonds are not an instrument for **liability matching**.

• **There are many reasons such as currency risks for a home bias in the case of equities (or real estate), but almost none of them are good ones!**

> Reassess your allocation towards Swiss equities and real estate, find your reasons for this allocation and question it.
Thank you!
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