DISCUSSION:
LOOKING FOR ALTERNATIVES
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Harvard University and NBER

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SUMMARY

1. Large shift of pension funds into alternatives (private equity, real estate, infrastructure, hedge funds, natural resources).

2. Active decision by fund managers.

3. Shift occurred across countries, fund sizes, and public and private funds.

4. Role of low global interest rates.
Important result documented in a very useful data set.

Role of interest rates.

Good? Bad?
Comments On Summary Statistics
IMPRESSIONIVE COVERAGE

- International aspect very welcome.
- I suspect within-country coverage better than paper claims:
  - Table 2 compares to pension assets reported by OECD.
  - OECD includes IRAs and pension-like liabilities of life insurance sector.
  - Preqin U.S. sample covers 28.5% of OECD pension assets but 49% of actual AUM in U.S. pension funds.
  - Preqin Canadian sample has $1.40T AUM while OECD reports $2.40T of pension assets. Statistics Canada National Balance Sheet Accounts reports $1.39T in pension funds.
- Alternatives not discernible in many data sets.
  - Example: U.S. Census ASPP (source data for FAUS) groups private equity, venture capital, and leverage buyouts under corporate stocks.
- One important drawback: data start in 2008.
MAIN RESULT: change in alt. share

AUM-weighted change, 2008 to 2017

ITA
DEU
CHE
SWE
BRA
PER
FIN
USA
KOR
ZAF
JPN
AUS
ESP
GBR
MYS
NLD
ISR
HKG
ISL
FRA
CAN
IRL
CHL
AUT
DNK
NOR
PRT
BEL

**Active choice?**

- Similar shifts across large and small funds, public and private.

- New commitments, not draw-downs of existing commitments.

- Not plausibly due only to capital gains.

  - Paper estimates required return to account for increase.

  - Even if returns high, managers can rebalance. But uncommitted capital rising.
Value-weighted allocation to alternatives in U.S. S&L pension funds.

Source: Center for Retirement Research at Boston College Public Plans Data.
Comments On Interest Rate Sensitivity
BACKGROUND: $r^*$ declining
## Results Review

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Average annual change in Alts share (% AUM), 2008-2017</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural rate</td>
<td>-0.4602**</td>
<td>-0.3574*</td>
<td>-0.4938**</td>
<td>-0.5301**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.179]</td>
<td>[0.190]</td>
<td>[0.202]</td>
<td>[0.232]</td>
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<tr>
<td>GDP growth</td>
<td>0.3058</td>
<td>0.3001</td>
<td>0.4140</td>
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<tr>
<td></td>
<td>[0.215]</td>
<td>[0.215]</td>
<td>[0.258]</td>
<td>[0.254]</td>
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<tr>
<td>Inflation</td>
<td>--</td>
<td>-0.2691</td>
<td>--</td>
<td>0.1237</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.265]</td>
<td></td>
<td>[0.357]</td>
<td></td>
</tr>
<tr>
<td>AUM</td>
<td>-0.0048*</td>
<td>-0.0050*</td>
<td>-0.0049</td>
<td>-0.0047</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.003]</td>
<td>[0.002]</td>
<td>[0.004]</td>
<td>[0.004]</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.8075</td>
<td>1.2191***</td>
<td>0.6658</td>
<td>0.4759</td>
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</tr>
<tr>
<td></td>
<td>[0.469]</td>
<td>[0.402]</td>
<td>[0.523]</td>
<td>[0.522]</td>
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<tr>
<td>Observations</td>
<td>867</td>
<td>867</td>
<td>1,595</td>
<td>1,595</td>
<td></td>
</tr>
<tr>
<td>R-sq.</td>
<td>0.048</td>
<td>0.050</td>
<td>0.037</td>
<td>0.037</td>
<td></td>
</tr>
</tbody>
</table>

Note: All explanatory variables correspond to five-year average. That is, Natural rate is the average natural rate for 2012-2016, GDP growth and Inflation correspond to annual growth rates over the sample period. Columns (1) and (2) are for the sample of funds with 10 years of data. Columns (3) and (4) are for the sample of funds with at least 5 years of data. Natural rates are available for U.S., Canada, Euro Area, U.K. and Japan. Sample includes a snapshot of funds (i.e., pure cross-section). Standard errors are clustered at the country level. ***, **, and * indicate statistical significance at 1%, 5%, and 10% respectively.
**INTERPRETATION OF COEFFICIENT**

- Multiply regression coefficient by change in $r^*$ and cumulate over 10 year horizon: $0.5 \times 1.5 \times 10 = 7.5\%$. change in alt. share. Big effect!

- Decline in $r^*$ is global and falling rates in one country may affect investment allocation in another.

  - Perfect international diversification $\Rightarrow$ regression coefficient is 0.
  - Practical impediments to perfect diversification: currency mismatch, information acquisition, regulatory barriers.
  - Conjecture: higher cross-border investment $\Rightarrow$ more attenuated cross-sectional coefficient.
  - Bigger effect!
Caveats

- No claim of causality.
- Driven by small funds? Weight or interact $r^*$ with fund size.
- Key regressor $r^*$ in levels or differences? Matters a bit:

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>Euro area</th>
<th>Canada</th>
<th>UK</th>
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</thead>
<tbody>
<tr>
<td>2012-2016 level</td>
<td>0.51</td>
<td>−0.07</td>
<td>1.49</td>
<td>1.58</td>
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<tr>
<td>Difference from 2003-07</td>
<td>−1.91</td>
<td>−1.90</td>
<td>−1.02</td>
<td>−0.98</td>
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</tbody>
</table>

- Inference challenging:
  - Standard errors clustered by country ⇒ 14 clusters. Should cluster at currency union level ⇒ 5 clusters. Asymptotic cluster formula over-rejects with few (14 or 5) clusters. Solution: wild-t bootstrap or LZ2.
  - Key variable $r^*$ is generated regressor. HLW: “estimates of the natural rate of interest are highly imprecise.”
Comments On Interpretation
Low interest rates ≠ bad news for pension funds and life insurance companies.

Even if $r^*$ declined, why shift into alternatives rather than equities? Something about comparative advantage of these funds.

Social question: who is best suited to hold these assets?
LOW INTEREST RATES ≠ BAD NEWS FOR INSURERS

High-frequency returns (b.p. or p.p.)

<table>
<thead>
<tr>
<th></th>
<th>TNote</th>
<th>Mkt</th>
<th>Insurers</th>
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</thead>
<tbody>
<tr>
<td>Dec 16, 2008</td>
<td>-16.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 18, 2009</td>
<td>-22.8</td>
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<th>TNote</th>
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<th>Insurers</th>
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<tr>
<td></td>
<td>1.3</td>
<td></td>
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<tr>
<td></td>
<td>3.6</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
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<td>4</td>
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</table>

Non-interest valuation change on securities portfolio (billions)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-127.5</td>
<td>94.8</td>
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</tbody>
</table>

Sources: Chodorow-Reich, “Effects of Unconventional Monetary Policy on Financial Institutions”; Chodorow-Reich, Ghent, Haddad, “Asset Insulators.”
Market equity of life insurers partially insulated from change in value of asset holdings.

Source: Chodorow-Reich, Ghent, Haddad, “Asset Insulators.”


**SHOULD PENSION FUNDS HOLD ILLIQUID ASSETS?**

- In equilibrium someone must bear risk of holding illiquid assets.

- Institutions with long and predictable liabilities naturally suited to bear this risk.

- Reason for pension funds to invest in alternatives rather than equities.

- Caveats (I agree with authors):
  1. Long-term investors must act like long-term investors and not dump assets at inopportune moments.
  2. Illiquid assets come with increased informational frictions, raising the risk of mismanagement. Reason for economies of scale.
Appendix slides