Discussion of “Do Intermediaries Matter for Aggregate Asset Prices?”
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Does Intermediary Asset Pricing matter?

- Claim: Intermediaries price assets
  - Empirical evidence shows limits to arbitrage (see references in Duffie 2010)
    ⇒ frictions in asset markets & institutions matter
    ⇒ drive wedge between investors and investing agents
  - Micro-evidence connects price dispersion to dealer net worth
  - Theory of intermediary asset pricing w/ agg effects e.g., He&Krishnamurthy 2012; Brunnermeier&Samnikov 2014

- Frictionless alternative: fundamentals and household specific state variables matter for asset prices

- This paper: seeks causal evidence that intermediaries are important for aggregate asset prices
Theoretical Framework

- Two period model with intermediaries & households
  Hs subject to investment costs take $D_I$ as given
- Optimal demands for risky assets

\[
D^*_I = \frac{\text{expected risk premium}}{\gamma_I \Sigma}
\]

\[
D^*_H = \frac{\text{expected risk premium} - \gamma_H \Sigma D_I}{\gamma_H \Sigma + \text{Cost}}
\]

\[
\text{expected risk premium}^* = S \gamma_H \Sigma \left( \frac{\Sigma + \frac{1}{\gamma_H} \text{Cost}}{\Sigma + \frac{1}{\gamma_I} \text{Cost}} \right)
\]

- Intermediary state variables matter iff
  (i) H & I different effective risk-aversion and
  (ii) H face positive asset specific investment costs
Identification Proposal

- Goal: identify movements in asset prices due to movements in intermediaries’ state variables

- Challenge: $\Delta$ in $\gamma_I$ could be caused $\Delta$ in $\gamma_H$

- Proposed solution:
  - Intermediaries matter more where costs are high
  - Identify impact off of cross-section of risk premia

  Step 1. Rank assets acc. to how easy $H$ can invest
  Step 2. Predict norm. risk-premia with intermediary states
  Step 3. Check whether coefficients line up with ranking

- The higher the costs, risk-premia respond
  - more to $\gamma_I$ shocks
  - less to $\gamma_H$ shocks (implies $H$s sit out shocks)
Main Finding

Table 1: Main predictive regressions. Predictive regressions of future excess returns in each asset class on our proxy for intermediary risk aversion, \( \gamma_{\text{Int}} \). Our proxy is the average of the standardized versions of the AEM and HKM intermediary factors. We run:

\[
r_i, t+1 / E[r_i, t+1] = a_i + b_i x_t + \varepsilon_i, t+1
\]

and report \( b_i \) which gives the elasticity of the risk premium of asset \( i \) to \( x \). See text for more details. Bootstrapped standard errors are in parenthesis and adjust for the fact that unconditional expected returns (\( E[r_i, t+1] \)) are estimated. See text for more details.

<table>
<thead>
<tr>
<th></th>
<th>Panel A: Quarterly Returns</th>
<th>Panel B: Annual Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Stocks</td>
<td>(2) Bonds</td>
</tr>
<tr>
<td>( \gamma_{\text{Int}} )</td>
<td>0.71</td>
<td>0.48**</td>
</tr>
<tr>
<td></td>
<td>(0.57)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>( N )</td>
<td>167</td>
<td>148</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>1.4%</td>
<td>1.4%</td>
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</tbody>
</table>

- Risk premia elasticities wrt \( \gamma_I \) increasing in asset costs
- Across specific. intermediary states matter most for CDS
- \( R^2 \) suggest relevant role for CDS & EM sovereign bonds
- Broker/Dealer Leverage only seems to matter
Comments

1. Identification

2. Reframing suggestions
Identification concerns for the skeptic

- Identification based on differential response to $\gamma_j$ and $\gamma_H$ shocks likely to affect all assets proportionally.

E.g., dynamic model with learning about eff. costs

- Shock to $\gamma_H$ could lead to observationally equivalent results

$\Rightarrow$ Unless intermediaries learn/react faster (plausible)

- Timing matters - quarterly measures imprecise
Need $\gamma_I$ shocks orthogonal to $\gamma_H$ shocks

- Explore intermediaries based in different country with exposure to U.S. housing market as in Ma’s JMP (2018)

- Team up with FED folks to explore higher frequency measures of broker-dealer leverage (or VaR)

- Look at episodes that likely had $\gamma_H$ moving less relative to $\gamma_I$ (e.g., US banks exposure to European banking/debt crisis) and vice versa
Who are households? Right measure of $\gamma_H$?

- Retail investors? Warren Buffet? Pensions? Hedge Funds?

- CAY & habit good measures of $\gamma_H$?

- Question not whether retail investors or intermediaries matter but in which situations/ for which assets intermediaries matter over sophisticated investors / institutional investors / retail investors
Framing: for which asset classes do intermediaries matter the most

- Plausible that arbitrageurs/intermediaries matter for asset prices as suggested by wealth of evidence
  ⇒ Plausible that this aggregates meaningfully

- Reframe: under what conditions & for which asset classes intermediaries matter for aggregate asset prices

- Measure conditions (e.g. trading & search costs, product complexity (Célérier & Vallée 2017)) & their time variation

- When do micro effects aggregate?
  Compare your measures to microstudies - informative to evaluate external validity of event studies
Rise of ETF

- Are ETFs going to mitigate the role for intermediaries?
- ETF market grew enormously
Rise of ETF - Death of Intermediary Asset Pricing?

- Disintermediation of specialized intermediation activities
- Active/smart beta ETF funds on the rise
Conclusion

- Interesting paper tackles identification of aggregate effects
- Does it change any priors?
- Reframe as to what type of & when intermediaries matter