Discussion

External Equity Financing Shocks, Financial Flows and Asset Prices

WFA – Monterey – Spring 2014

Erik Loualiche — MIT Sloan

June 17, 2014
Incorporate bits of corporate finance frictions into asset pricing

- Renewed interest in macroeconomics and finance for real role played by financial frictions
- Which firms’ cost of capital is most affected?
- Which mechanism transmits these frictions at the firm level: where does heterogeneity come from

Already large literature looking at these effects. Few at the cross-section of expected returns – *Adrian, Etula and Muir.*
Plan

1 Summary

2 Questions and extensions
Empirical results

- Construct a time-series measuring the cost of external equity issuance
- Innovation (shocks?) in the cost of equity issuance is priced in the cross-section
  - Large positive price of risk for a wide range of test assets
  - Heterogeneous exposure to issuance shock accounts for value/investment/size spread...

Theoretical results

- Production based partial equilibrium AP model proposes a mechanism accounting for the empirical fact
  - qualitatively and quantitatively accurate
- Firms with better future investment opportunities have higher collateral value: less sensitive to the cost of equity issuance: lower returns with a positive price of risk
Plan

1 Summary

2 Questions and extensions
What is the external issuance “innovation”?

<table>
<thead>
<tr>
<th></th>
<th>ICS</th>
<th>IMC</th>
<th>Entry</th>
<th>IPO</th>
<th>AE&amp;M</th>
<th>E&amp;M</th>
<th>Corp. Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS</td>
<td>1</td>
<td>0.02</td>
<td>0.40</td>
<td>0.17</td>
<td>0.05</td>
<td>-0.31</td>
<td>-0.42</td>
</tr>
<tr>
<td>IMC</td>
<td>1</td>
<td>0.17</td>
<td>0.14</td>
<td>-0.12</td>
<td>-0.36</td>
<td>-0.21</td>
<td></td>
</tr>
<tr>
<td>Entry</td>
<td>1</td>
<td>0.11</td>
<td>0.02</td>
<td>-0.56</td>
<td>-0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPO</td>
<td>1</td>
<td>0.006</td>
<td>0.02</td>
<td></td>
<td>-0.69</td>
<td>-0.41</td>
<td></td>
</tr>
<tr>
<td>AE&amp;M</td>
<td>1</td>
<td></td>
<td>-0.14</td>
<td>-0.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E&amp;M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What is the external issuance “innovation”? 

- What is the issuance cost?
- Residuals from VAR with TFP and fraction of firms issuing equity
- Captures supply of credit from intermediary sectors: orthogonalization of the shocks?
- Correlates with entry / corporate spread / Eisfeldt and Muir’s aggregate cost of external finance
- Theoretical underpinnings of the cost of equity (versus debt): adverse selection and/or agency
- Why is adverse selection moving over the cycle?
- Do we understand the fundamental mechanism that distorts the cost of debt vs. equity over the cycle
Measurement

The measure

- Innovations from VAR: $y_{t+1} = Ay_t + u_{t+1}$
- $ICS_t = u_t e_1$
- Identification assumption?

Not to worry about robustness!

- Price of risk does not move after orthogonalization and “SVAR identification”
- Add IPOs in $y_t$: price of risk in same ball park.

If the ICS measure is noisy, what about looking at the mimicking portfolio?

- Comovement of aggregate quantities?
- Again, how does it comove with other “cost of finance” measures
The substitution hypothesis

- Mechanism highlighted relies on substitution between debt and equity
- Firms with better investment opportunities: easier to take on debt
  - Hedge negative ICS shocks when they cannot use equity

Looking directly at substitution across firms
- Firms with high covariation with ICS factor:
  - Higher level and cyclicality of debt issuance?
  - Frederico showed some results in that direction: needs more
- What about the price of debt? Could we learn something from debt directly in the cross-section?

Looking for real effects
- Firms with higher exposure to ICS
- What are the effects on investment in bad times? Cyclicality of their investment policy?
Alternatives and extensions

Ruling out alternative hypothesis

- No cash management in the model
- Chen/Bolton/Wang: market timing hypothesis
  - some firms are able to hoard cash when they face uncertain aggregate conditions
- link between firms’ earnings or profitability and their exposure:
  - Who is able to time the market?

Why would the risk be priced in general equilibrium?

- If the friction is severe: where are firms hedging demand?
- Such large increase in the cost of capital would call for different capital budgeting policy in equilibrium
  - Wouldn’t debt prices and quantities adjust to accommodate the friction across all firms?
  - back to the fundamental theoretical underpinning friction driving the cost of equity
- Probably beyond the scope of this paper but perhaps a potential direction going forward
- Sharper prediction about the price of risk
Conclusion

Very rich paper

- Lots of quantitative results: “close” match of the data
  - aggregate moments
  - aggregate moments in the financial sector
  - cross-sectional moments

- “Simple” mechanism that captures most cross-sectional heterogeneity

Going forward...

- Some more direct test of ...
  - the substitution mechanism
  - the collateral debt value channel

- more precise economic rationale for the source of risk: which friction matters!

- measurement might seem *ad-hoc* at times, but is particularly robust...

- ... indicates this must definitely be a direction worth pursuing