The Challenges of Publishing in Top-Tier Finance Journals

First Meeting of the Association of Behavioral Economics

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and
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Publishing in top-tier finance journals

- Bad News.
- And
- Good News.

- Let's start with the bad news first.
Publishing in general is difficult

Number of publications in 16 academic journals

- Out of 4,990 unique authors, 55% published only one article over the twelve year period.
- 71% published no more than two articles.
- The top 5% published 8 or more articles.
- Publishing is hard work!
Why not publish in top-tier journals?

- It is harder to do in the top journals.
Why not publish in top-tier journals?

- And it is not getting any easier.

2006 Rejection Rates of Top Finance Journals

<table>
<thead>
<tr>
<th>Journal</th>
<th>Rejection Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>JF</td>
<td>92.86%</td>
</tr>
<tr>
<td>JFE</td>
<td>88.50%</td>
</tr>
<tr>
<td>RFS</td>
<td>86.17%</td>
</tr>
</tbody>
</table>

- So, what’s the good news?
Why you might want to publish in top-tier journals

- Publishing and mobility.
- All else equal.....
- Publication record strongly related to ability to “move up” to a higher ranked institution.
- Even stronger effect for publications in top-tier journals.
Why you might want to publish in top-tier journals

- Publishing and wages.
- All else equal.....
- Value of a first top-tier publication is as high as $33,754 (USD).
- Additional large returns to subsequent publications.
Your work is simply more visible

Impact Factors from the *Journal Citation Reports*, 1977-2006
(Data for 1998-99 partially corrected for errors in *JCR*)
How do you publish?

- Choose a good question to answer.
  - Try to address fundamental questions in finance and economics.
- Be careful of the latest “hot” topic. For example, publishing a paper on the book-to-market effect in investments or the diversification “discount” in corporate finance is likely to be difficult unless you have a pretty unique twist.
- Don’t look for data first and then try to find something to do with it.
- Do look for unique institutional details or different ways to use the data that might allow for powerful tests of interesting hypotheses.
Examples using Japanese data

- Kato, Lemmon, Luo, and Schallheim (2005, JFE)
  - Exploits the rule change allowing the use of employee stock options in Japan in 1997 to examine several hypotheses about why firms grant stock options to employees.

- Gan (forthcoming, JFE and RFS)
  - Uses the decline in property values in Japan in the 1990’s to identify a supply shock to lenders and traces the impact on corporate borrowers.
More publishing tips

- Tips from Rene Stulz
  (http://www.jfe.rochester.edu)

- Writing tips and paper topics from John Cochrane
  (http://faculty.chicagogsb.edu/john.cochrane/research/Papers/)
Empirical Corporate Finance

- Capital Structure
- Ownership Structure
- Payout Policy
- M & A

- Many stylized facts:
- Event studies
- Cross-Sectional Regressions
  - Performance on structure (e.g., Tobin’s Q on ownership)
  - Structure on Structure (e.g., Poison pill on ownership)
Competing Theories

- In many cases there are competing explanations that are consistent with the documented facts.
  - Not always mutually exclusive.
  - An important issue is to carefully distinguish between alternative explanations of the observed phenomena.
  - I will call this the identification issue.
  - Disclaimer: I am not attempting to advocate for either traditional or behavioral approaches. I think both are quite useful.
Stock Returns Around Seasoned Equity Issues

- **Traditional View:**
- **Myers and Majluf (1984).**
  - With asymmetric information an equity issue conveys bad news to the market.
  - Prices adjust immediately at the announcement.
  - No abnormal returns following equity issues.
Stylized Facts

- Large pre-issue runup.
  - 93% in year prior to issue (Loughran and Ritter (1997)).
- -2% to -3% price drop at announcement.
- Post Issue underperformance (Loughran and Ritter (1995)).

<table>
<thead>
<tr>
<th>Panel B. Firms Conducting SEOs</th>
<th>First 6 Months</th>
<th>Second 6 Months</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
<th>Fifth Year</th>
<th>Geometric Mean, Years 1–5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5) SEO firms (%)</td>
<td>5.6</td>
<td>0.5</td>
<td>6.6</td>
<td>0.1</td>
<td>7.5</td>
<td>9.1</td>
<td>11.8</td>
<td>7.0</td>
</tr>
<tr>
<td>(6) Matching firms (%)</td>
<td>5.7</td>
<td>6.8</td>
<td>12.9</td>
<td>12.3</td>
<td>16.2</td>
<td>17.7</td>
<td>17.4</td>
<td>15.3</td>
</tr>
<tr>
<td>(7) t-Statistic for difference</td>
<td>-0.22</td>
<td>-9.00</td>
<td>-5.59</td>
<td>-12.24</td>
<td>-8.08</td>
<td>-7.35</td>
<td>-4.50</td>
<td>-16.80</td>
</tr>
<tr>
<td>(8) Sample size</td>
<td>3,469</td>
<td>3,550</td>
<td>3,561</td>
<td>3,614</td>
<td>3,496</td>
<td>3,154</td>
<td>2,805</td>
<td>3,702</td>
</tr>
</tbody>
</table>
Stock Returns Around Seasoned Equity Issues

- The “New” View
- Investors become overoptimistic about some firms and push values away from fundamentals.
- Managers take advantage of these “windows of opportunity” and issue overvalued equity.
- The market reacts only partially at the announcement.
- Value continues to drift back toward fundamentals in the long run.
Behavioral Theory

- Investors are overconfident and have biased self attribution.
  - Good luck is skill, bad luck is just bad luck.
- Shows how underreaction can be generated by behavioral biases when arbitrage is limited.
  - Because of overconfidence investors underreact to equity issue announcement.
  - Only as more bad news accumulates do they revise downward their beliefs.
What should we really expect in an efficient market?

- Real options model of firm.
- Firm consists of assets in place and an option to expand.
  - Two types of firms in the economy.
- Investors revise their beliefs over time about the value of the growth option.
- The growth option is a levered position.
  - When the option is exercised, the risk of the firm falls.
  - Standard matching techniques are not adequate to capture risk differences.
Calibrated Real Options Model

B. Relative Wealth

- Where do the theories differ?
- Not clear what the behavioral theory says about dynamics of risk around equity issues.
- Real-options model says risk increases prior to issue and falls afterward.

**Graph Description**

- **RETURN**
  - Behavioral
    - Over reaction to good news
  - Real Options
    - Rational reaction to good news

- **Behavioral**
  - Slow realization of valuation error

- **Real Options**
  - lower risk and lower return

- **Return dynamics**
  - Behavioral and Real Options
Beta dynamics around new issues

![Graph showing beta dynamics over event time with 'Sample Firms' and 'Matches' lines.](image)
Capital Structure

- **Traditional Theories**
  - Tradeoff theory (DeAngelo and Masulis) (Tax benefits versus distress and agency costs).
  - Target capital structure.
  - Pecking order (Myers) (information problems lead to financing hierarchy: Internal funds, then debt, then equity).

- **New “Behavioral” Theories**
  - Market timing (Baker and Wurgler) (firms issue equity when their valuations are high and do not subsequently rebalance).
  - Inertia (Welch 2004) (the primary determinant of a firm’s current leverage is past stock returns).
Capital Structure

- Traditional tradeoff view of capital structure implies that firms rebalance their debt ratios in response to shocks.
- This implication has been questioned by recent empirical evidence.
- Let's review the stylized facts.
Partial Adjustment Models and Slow Adjustment

- Fama and French (2002): Leverage is slow to mean revert.
- Partial Adjustment Models

\[ \Delta \text{Leverage}_t = \alpha + \beta (\text{Leverage}_{t-1} - \text{Target}_{t-1}) + \varepsilon_t \]

- Estimates of \( \beta \) range from 10-16% \( \rightarrow \) “Mean reversion is at a snail’s pace”
Market Timing and Capital Structure

- Baker and Wurgler (2002): Firms fail to respond to timed equity issuances.
  - Managers time the market and issue equity when stock prices are high.
  - They do not appear to rebalance at other times.
  - Firms that have more market timing opportunities end up with low leverage.
Market Timing and Capital Structure

- Form a variable called external finance weighted market-to-book.

\[
\left( \frac{M}{B} \right)_{\text{efwa},t-1} = \sum_{s=0}^{t-1} \frac{e_s + d_s}{\sum_{r=0}^{t-1} e_r + d_r} \cdot \left( \frac{M}{B} \right)_s,
\]

- Takes on higher values if the firm raises external finance when market-to-book ratios are high.
  - Under the market-timing hypothesis this variable is negatively related to leverage.
Market Timing and Capital Structure

\[
\left( \frac{D}{A} \right)_t = a + b \left( \frac{M}{B} \right)_{sptwa,t-1} + c \left( \frac{M}{B} \right)_{t-1} + d \left( \frac{PPE}{A} \right)_{t-1} + e \left( \frac{EBITDA}{A} \right)_{t-1} + f \log(S)_{t-1} + u_t.
\]

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>(M/B_{sptwa,t-1} )</th>
<th>(M/B_{t-1} )</th>
<th>(PPE/A_{t-1} % )</th>
<th>(EBITDA/A_{t-1} % )</th>
<th>(\log(S)_{t-1} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPO + 1</td>
<td>2,652</td>
<td>-4.36 (−15.59)</td>
<td></td>
<td>0.13 (7.30)</td>
<td>−0.22 (−6.44)</td>
<td>5.00 (16.40)</td>
</tr>
<tr>
<td>IPO + 3</td>
<td>2,412</td>
<td>−4.93 (−8.40)</td>
<td>−0.86 (−1.50)</td>
<td>0.12 (6.63)</td>
<td>−0.31 (−7.41)</td>
<td>4.62 (15.53)</td>
</tr>
<tr>
<td>IPO + 5</td>
<td>1,668</td>
<td>−6.49 (−9.78)</td>
<td>0.05 (0.07)</td>
<td>0.12 (5.74)</td>
<td>−0.32 (−7.18)</td>
<td>4.30 (12.40)</td>
</tr>
<tr>
<td>IPO + 10</td>
<td>715</td>
<td>−10.81 (−10.59)</td>
<td>3.71 (3.23)</td>
<td>0.12 (3.65)</td>
<td>−0.38 (−5.01)</td>
<td>2.67 (4.82)</td>
</tr>
<tr>
<td>1980–1999 All firms</td>
<td>31,151</td>
<td>−7.21 (−21.20)</td>
<td>2.20 (3.38)</td>
<td>0.04 (3.62)</td>
<td>−0.48 (−7.20)</td>
<td>2.84 (21.79)</td>
</tr>
</tbody>
</table>

Panel A: Book Leverage %
Inertia and Capital Structure

- Welch (2004): Firms fail to respond to equity shocks.
  - Although they do actively issue securities.

\[
ADR_t \equiv \frac{D_t}{E_t + D_t}, \quad \text{IDR}_{t,t+k} \equiv \frac{D_t}{E_t \cdot (1 + x_{t,t+k}) + D_t},
\]

\[
ADR_{t+k} = \alpha_0 + \alpha_1 \cdot ADR_t + \alpha_2 \cdot \text{IDR}_{t,t+k} + \epsilon_t
\]

- Perfect readjustment hypothesis: \( \alpha_1 = 1, \alpha_2 = 0 \),
- Perfect nonreadjustment hypothesis: \( \alpha_1 = 0, \alpha_2 = 1 \).
## TABLE 8
Fama-MacBeth Regressions Explaining Future Actual Debt Ratios $\text{ADR}_{t+\delta}$ with Debt Ratios $\text{ADR}_t$ and Stock Return—Modified Debt Ratios $\text{IDR}_{t+\delta}$

<table>
<thead>
<tr>
<th>Horizon $k$</th>
<th>Constant</th>
<th>$\text{IDR}_{t+\delta}$</th>
<th>$\text{ADR}_t$</th>
<th>$R^2$ (%)</th>
<th>Cross-Sectional Regressions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Without Intercept</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-year</td>
<td>102.1 (1.4)</td>
<td>-5.1 (1.4)</td>
<td>96.3</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>3-year</td>
<td>94.6 (2.1)</td>
<td>9.4 (2.1)</td>
<td>90.4</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>5-year</td>
<td>86.7 (2.8)</td>
<td>18.7 (2.1)</td>
<td>86.5</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>10-year</td>
<td>68.3 (4.6)</td>
<td>37.7 (1.8)</td>
<td>80.0</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td><strong>B. With Intercept</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-year</td>
<td>2.7 (.1)</td>
<td>101.4 (1.8)</td>
<td>-5.3 (1.2)</td>
<td>91.3</td>
<td>37</td>
</tr>
<tr>
<td>3-year</td>
<td>6.8 (.3)</td>
<td>94.4 (1.5)</td>
<td>-4.2 (1.4)</td>
<td>78.4</td>
<td>35</td>
</tr>
<tr>
<td>5-year</td>
<td>9.8 (.4)</td>
<td>86.9 (2.1)</td>
<td>-5.1 (1.6)</td>
<td>70.2</td>
<td>33</td>
</tr>
<tr>
<td>10-year</td>
<td>13.8 (.6)</td>
<td>70.8 (3.7)</td>
<td>+6.9 (2.7)</td>
<td>56.0</td>
<td>28</td>
</tr>
</tbody>
</table>
Capital Structure

- The common theme of these findings is that shocks to leverage have a persistent effect.

- The recent studies view this evidence as contrary to the predictions of the tradeoff theory.

- How strongly should we view this evidence as proof of the demise of the tradeoff theory?
Leary and Roberts (2005, JF)
Do Firms Rebalance Their Capital Structures?

- Lets suppose a world where the tradeoff theory holds (i.e., there is a target capital structure), but there are transactions costs of rebalancing (e.g., fixed costs of issuing securities)

- What should the dynamics of leverage look like in this world?
  - Depends on the form of transactions costs.
  - Fixed.
  - Proportional.
  - Combination.
Leverage Dynamics with Adjustment Costs: Fixed Costs

- Fischer, Heinkel & Zechner (1989)
Leverage Dynamics with Adjustment Costs: Proportional Costs
Leverage Dynamics with Adjustment Costs: Fixed and Weakly Convex
Implications for Market Timing: Response to Equity Issuances

Matched Sample Comparison of Leverage for Equity Issuers vs. Non-issuers
Implications for Market Timing: Impact of Adjustment Costs on Market Timing

Baker & Wurgler (2002) All Firms Regression

\[ \text{Lev}_t = \beta_0 + \beta_1 \text{EFWA}_{t-1} + \beta_2 \left( \frac{MA}{BA} \right)_{t-1} + \beta_3 \left( \frac{PPE}{BA} \right)_{t-1} + \beta_4 \left( \frac{EBITDA}{BA} \right)_{t-1} + \beta_5 \text{Size}_{t-1} + \varepsilon_t \]

<table>
<thead>
<tr>
<th>Estimated Underwriter Spread</th>
<th>EFWA Coefficient ($\beta_1$)</th>
<th>Z-Sore</th>
<th>EFWA Coefficient ($\beta_1$)</th>
<th>Credit Rating</th>
<th>EFWA Coefficient ($\beta_1$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Cost</td>
<td>-10.04</td>
<td>High Cost</td>
<td>-8.15</td>
<td>High Cost</td>
<td>-9.32</td>
</tr>
<tr>
<td>Med Cost</td>
<td>-7.42</td>
<td>Med Cost</td>
<td>-8.94</td>
<td></td>
<td>-9.32</td>
</tr>
<tr>
<td>Low Cost</td>
<td>-5.18</td>
<td>Low Cost</td>
<td>-5.64</td>
<td>Low Cost</td>
<td>-6.39</td>
</tr>
</tbody>
</table>

- Firms “time” equity markets and this effect is persistent.
- But, persistence more likely due to adjustment costs, as opposed to indifference.
- And, firms appear to rebalance fairly quickly (~ 2 years).
Implications for Inertia: Statistical Power of Welch’s Empirical Model


\[
\frac{D_{t+k}}{D_{t+k} + E_{t+k}} = \alpha_0 + \alpha_1 \frac{D_t}{D_t + E_t} + \alpha_2 \frac{D_t}{D_t + E_t \left(1 + r_{t,t+k}\right)} + \epsilon_{t,t+k}
\]

<table>
<thead>
<tr>
<th>Horizon (k)</th>
<th>( \alpha_0 )</th>
<th>( \alpha_1 )</th>
<th>( \alpha_2 )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Year</td>
<td>0.03</td>
<td>-0.05</td>
<td>1.02</td>
<td>0.91</td>
</tr>
<tr>
<td>3-Year</td>
<td>0.07</td>
<td>-0.04</td>
<td>0.94</td>
<td>0.78</td>
</tr>
<tr>
<td>5-Year</td>
<td>0.09</td>
<td>-0.01</td>
<td>0.87</td>
<td>0.70</td>
</tr>
<tr>
<td>10-Year</td>
<td>0.14</td>
<td>0.07</td>
<td>0.71</td>
<td>0.56</td>
</tr>
</tbody>
</table>

- Empirical model has no power against alternative of tradeoff theory with adjustment costs.
Implications for Inertia: Statistical Power of Welch’s Empirical Model


\[
\frac{D_{t+k}}{D_{t+k} + E_{t+k}} = \alpha_0 + \alpha_1 \frac{D_t}{D_t + E_t} + \alpha_2 \frac{D_t}{D_t + E_t (1 + r_{t,t+k})} + \epsilon_{t,t+k}
\]

<table>
<thead>
<tr>
<th>Horizon (k)</th>
<th>(\alpha_0)</th>
<th>(\alpha_1)</th>
<th>(\alpha_2)</th>
<th>(R^2)</th>
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<th>(\alpha_1)</th>
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<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Year</td>
<td>0.04</td>
<td>-0.12</td>
<td>1.02</td>
<td>0.98</td>
<td>0.03</td>
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<td>0.94</td>
<td>0.78</td>
</tr>
<tr>
<td>5-Year</td>
<td>0.13</td>
<td>-0.19</td>
<td>0.83</td>
<td>0.89</td>
<td>0.09</td>
<td>-0.01</td>
<td>0.87</td>
<td>0.70</td>
</tr>
<tr>
<td>10-Year</td>
<td>0.21</td>
<td>-0.25</td>
<td>0.68</td>
<td>0.78</td>
<td>0.14</td>
<td>0.07</td>
<td>0.71</td>
<td>0.56</td>
</tr>
</tbody>
</table>

- Empirical model has no power against alternative of tradeoff theory with adjustment costs.
Implications for Partial Adjustment Models and Slow Adjustment

- Partial Adjustment Models

\[ \Delta \text{Leverage}_t = \alpha + \beta (\text{Leverage}_{t-1} - \text{Target}_{t-1}) + \varepsilon_t \]

- Estimates of $\beta$ range from 10-16% (Fama and French (2002)) → “Mean reversion is at a snail’s pace”.
- Simulated data result in estimates of 15 to 17%, despite the fact that firms are acting optimally.
- Partial adjustment models are hard to interpret when (1) adjustment is not continuous and (2) adjustments are not Target.
Capital Structure

- In short, dynamic versions of the tradeoff theory can create dynamics in leverage that are consistent with a large number of empirical regularities.

- Much still to be done here to better understand the frictions that create these leverage dynamics.
My views

- I think these examples illustrate some of the major challenges of moving forward in corporate finance.
- We often have different mechanisms that produce observationally equivalent matches to the stylized facts.
  - Sometimes competing traditional theories.
  - Sometimes competing behavioral theories.
  - Sometimes mixed.
My views

- Try to specify a reasonable null.
  - Is total readjustment really a reasonable benchmark?
  - What do return dynamics really look like in an efficient market with imperfect measurement?
- Consider all the implications of the theory.
  - Is it reasonable to assume that managers who are smart enough to time the market do not realize the tax and other benefits of debt?
My views

- Carefully consider where the predictions of the competing theories differ.
  - Risk dynamics compared to return dynamics.
  - Patterns in operating performance?
  - Focus directly on the security issuance decision.
- Try to construct powerful tests.
  - How good does measurement have to be to create a powerful test.
  - Simulations can be extremely useful.
  - Natural experiments.
  - Structural models with nested hypotheses.
Conclusions

- Good research will carefully specify the null that it is testing against and will design powerful tests to discriminate among competing explanations.
- I think this can be done both for traditional and behavioral theories.
- Done well, it will be publishable in the best journals.
  - Important for finance to move beyond just cataloging facts and move toward making quantitative predictions that can inform policymakers as well as other academics.