Global Market Inefficiencies

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Summary

Objective: this paper investigates whether and how deviations from fair value predict future returns in global markets.

Method: Bartram and Grinblatt (2017)

Sample: • April 1993 to September 2016
  • 25,731 stocks from 36 countries

Findings: • A trading strategy based on deviations from fair value yields significant risk-adjusted returns globally.
  • Return prediction is more pronounced in emerging markets than in developed countries.
  • Pre-transaction-cost alphas are positively related to trading costs but exceed country-specific institutional trading costs.
Bartram and Grinblatt (2017)’s measure in global markets (1)

Bartram and Grinblatt (2017)’s measure

As noted earlier, firm $j$’s date $t$ fair value is the prediction, $P_{j,t}$, from a cross-sectional regression of firms’ actual market values, $V_{j,t}$, on accounting variables known by market participants at date $t$. For each of the portfolio formation dates $t$, and each stock $j$, we calculate a mispricing signal,

$$M_{j,t} = \frac{P_{j,t} - V_{j,t}}{V_{j,t}}.$$  \hspace{1cm} (1)

Each month, fair value regressions of market capitalization on accounting data are performed separately for each country having at least 30 firms.

With each country or across all countries:

• There is a tradeoff to estimate the fair value regressions either within each country or across all countries.

• The coefficients of accounting regressors may vary substantially across countries.

• Many emerging markets have a small set of firms.
Bartram and Grinblatt (2017)’s measure in global markets (2)

Regressions are performed with all 21 accounting regressors (11 from the balance sheet, 9 from the income statement, and 1 from the cash flow statement)

Regressors:

- How are 21 accounting variable selected from 28 accounting variables used in Bartram and Grinblatt (2017)?

- It would be interesting to report the summary statistics for the coefficients (t-statistics) of regressors, and understand how these coefficients vary across countries.

- Besides missing observations, what are the reasons that forward-looking variables such as analysts forecasts are not used as regressors?
Accounting standards:

- Earnings quality (accounting numbers) is a function of the firm’s fundamental performance (e.g., Dechow, Ge, and Schrand, 2010).

- A country’s legal institutions and accounting standards affect how economic performance is reported in financial reports.

- Emerging markets have poor earnings quality, thus can we say that fair value estimated in emerging markets is less accurate than in developed markets?

- Implications: differences in mispricing signal’s monthly alphas of 40-70 basis points between emerging and developed markets are underestimated.
Summary statistics of mispricing signal

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Correlation</th>
<th>Q1 (Overvalued)</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5 (Undervalued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>1.97</td>
<td>1.00</td>
<td>-6.06</td>
<td>-0.43</td>
<td>0.54</td>
<td>1.91</td>
<td>13.91</td>
</tr>
<tr>
<td>Mispricing</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>World (excl. U.S.)</td>
<td>1.97</td>
<td>1.00</td>
<td>-5.93</td>
<td>-0.55</td>
<td>0.57</td>
<td>2.06</td>
<td>13.70</td>
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<tr>
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<td></td>
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</tr>
<tr>
<td>United States</td>
<td>2.25</td>
<td>1.00</td>
<td>-5.33</td>
<td>-0.13</td>
<td>0.50</td>
<td>1.60</td>
<td>14.63</td>
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<tr>
<td>Mispricing</td>
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</tr>
</tbody>
</table>

**Overvaluation vs. undervaluation:**

- It seems that there are more stocks under undervaluation than overvaluation.
- Should we expect the opposite result?
The results show significant return spreads from mispricing signals for both equally- and value-weighted portfolios.

- The significant results are only based on the prediction of 21 accounting variables.
- The results are robust to the inclusion of 80 factors

Why would market investors **overlook a simple linear combination** of these accounting variables?
Mispricing interpretation

\[ Observable\ variables_t \rightarrow R_{t+1} = E(R_{t+1}) + CF\ News_{t+1} + DR\ News_{t+1} \]

Predictability

1) The risk channel \[ Observable\ variables_t \rightarrow E(R_{t+1}) \]
2) The mispricing channel \[ Observable\ variables_t \rightarrow CF\ News_{t+1} + DR\ News_{t+1} \]
3) The data mining channel \[ Observable\ variables_t \rightarrow R_{t+1} \]

- Engelberg, Mclean, and Pontiff (2017) decompose returns based on 97 anomalies into returns on news days and returns on non-news days, and show that anomaly returns are seven times higher on earnings announcement days and two times higher on corporate news days.

- If mispricing signals indeed capture mispricing, should we expect a similar pattern on news days?
Short-sell constraints

In the test of country-level determinants of trading profits

Panel A: Fama MacBeth Regressions with Firm and Country Characteristics

<table>
<thead>
<tr>
<th></th>
<th>OLS (1)</th>
<th>OLS (2)</th>
<th>TS (2)</th>
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<td>Coef</td>
<td>t-stat</td>
<td>Coef</td>
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<tr>
<td>Mispricing Signal Q5</td>
<td>0.0376</td>
<td>[0.29]</td>
<td>1.4506</td>
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<td>Trading Costs</td>
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<tr>
<td>Regulatory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mispricing Signal Q5 * Short Sales Dummy</td>
<td>0.0001 [0.00]</td>
<td>-0.1526 [-0.19]</td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Fama-MacBeth Regressions of Factor Model Alphas

<table>
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<tr>
<td>Regulatory</td>
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<tr>
<td>Short Sales Dummy</td>
<td>0.9398</td>
<td>[1.15]</td>
<td>0.7704</td>
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</tbody>
</table>

- Should we expect a significant result of short-selling constraints?
- Any reasons?
Conclusion

Question: this paper answers a very important question

Measure: the mispricing signal derived from 21 accounting variables is a powerful predictor

Writing and tests: well written and executed

Minor issues: could be addressed easily