



JACOBS LEVY EQUITY
MANAGEMENT CENTER
for Quantitative Financial Research

The History of the Cross Section of Stock Returns: Discussion

PRESENTER

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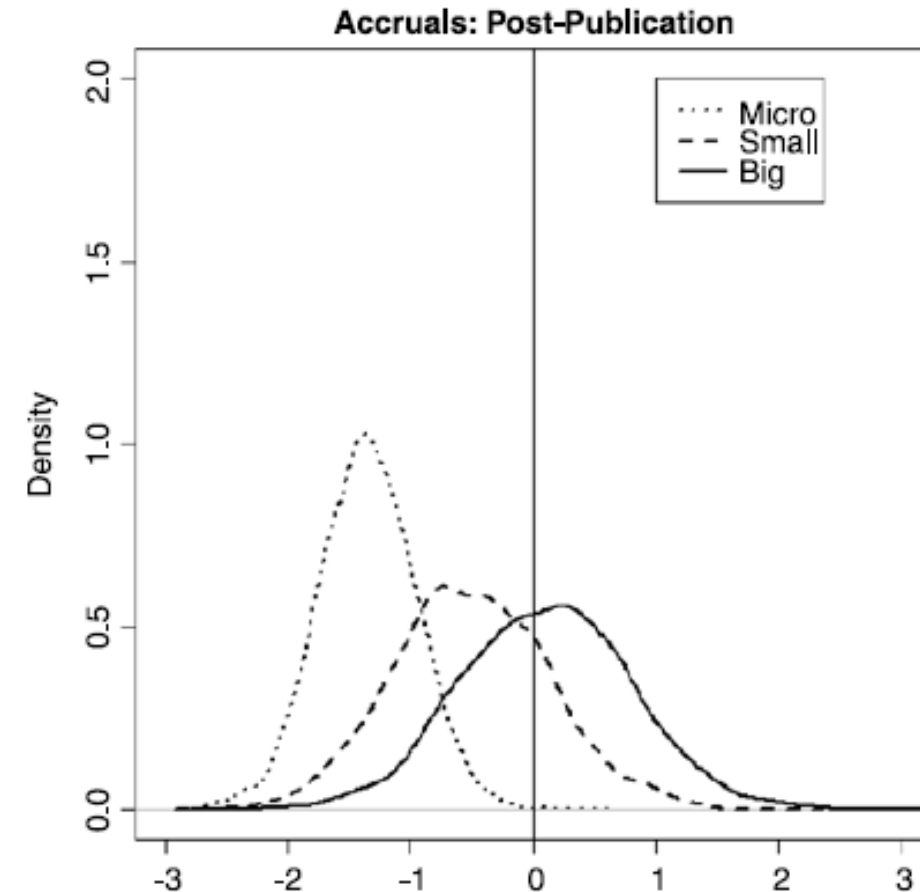
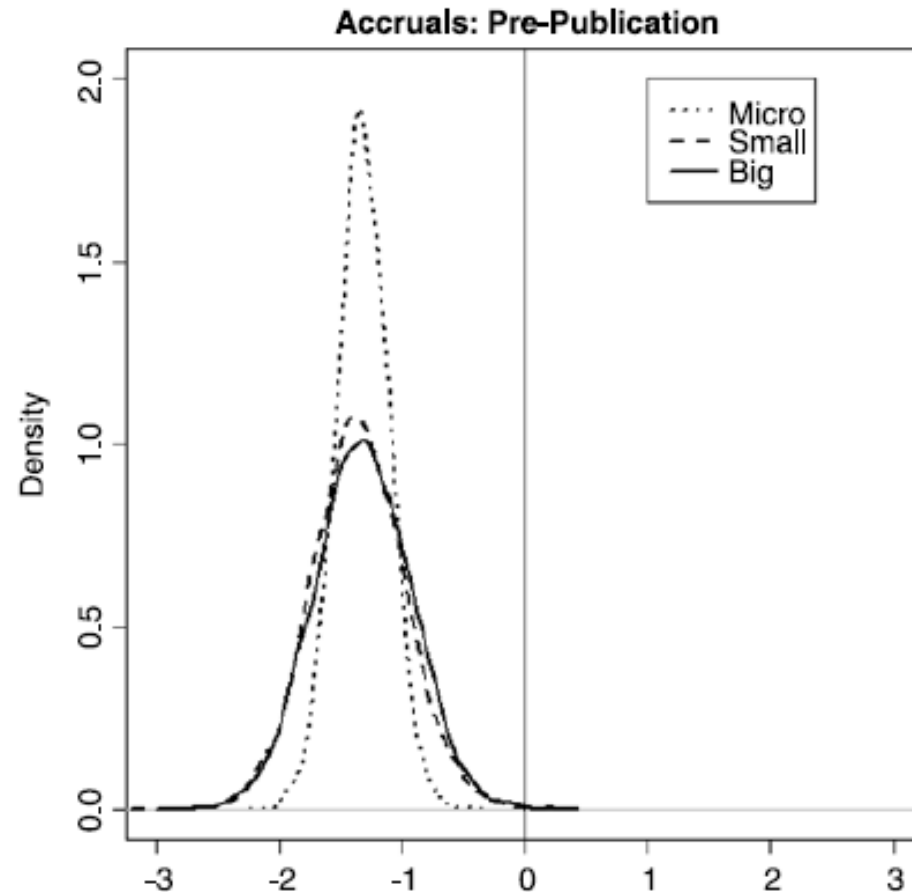
Anomaly Performance: Post-Sample

Anomalies Weaken or Disappear:

Data-snooping?

Exploited Alpha - Industry to Academia?

Exploitable Alpha - Academia to Industry?



Cederburg and O'Doherty, 2015, Asset-pricing anomalies at the firm level, Journal of Econometrics

Anomaly Performance: Pre-Sample

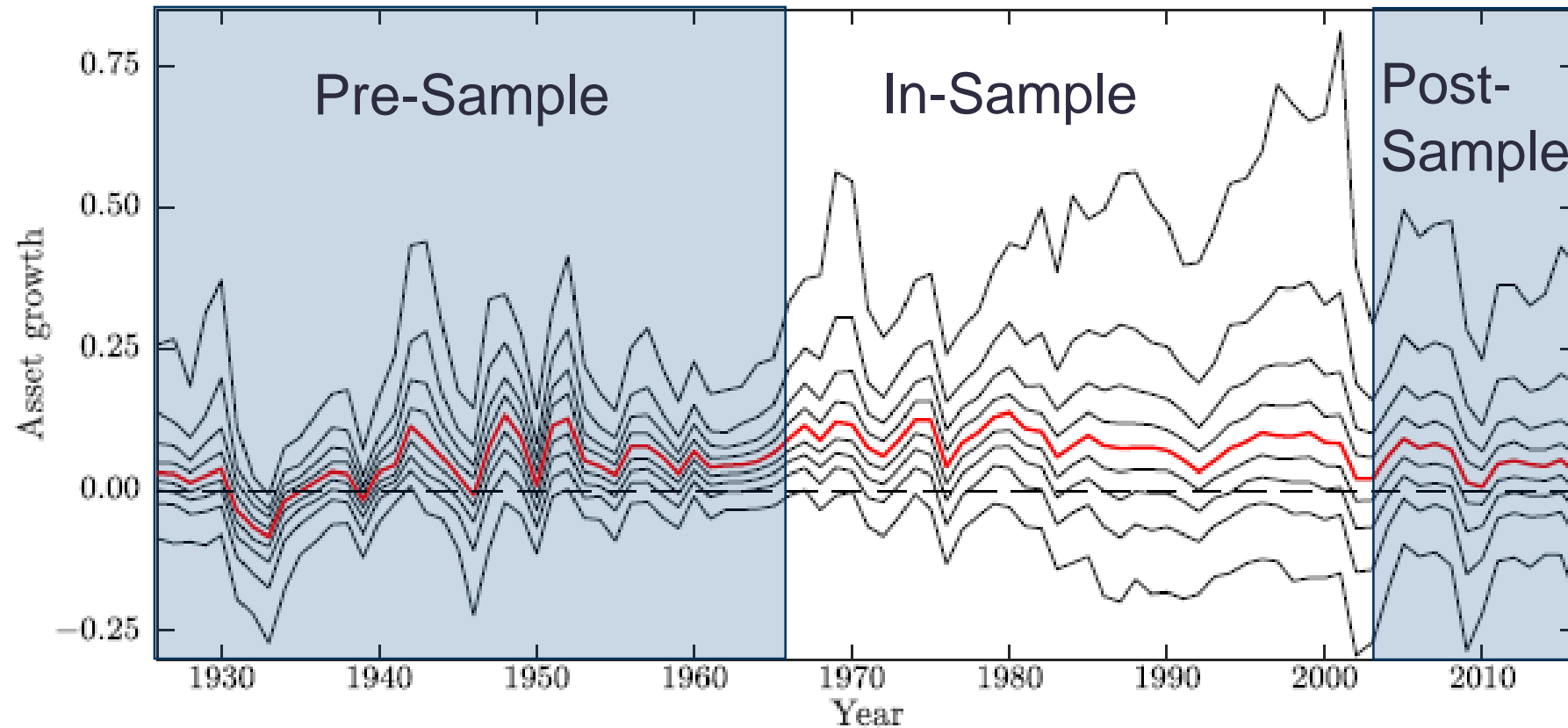
Anomalies Weaken or Disappear:

Data-snooping?

Statistical Power?

Figure 2 Panel B in the paper

10th – 90th Percentiles for Asset Growth



A Thought Experiment

Pre-sample period

345 firms in 1925

721 firms by 1960

Data most likely to be collected for large firms

Could the number and type of firms partially explain the pre-sample period results?

Strategy:

- 1) Use in-sample data (We know the anomalies work in-sample)
- 2) Randomly sample 700 firms per month
- 3) Calculate Anomaly Returns and T-Statistics
- 4) Repeat 1,000 times

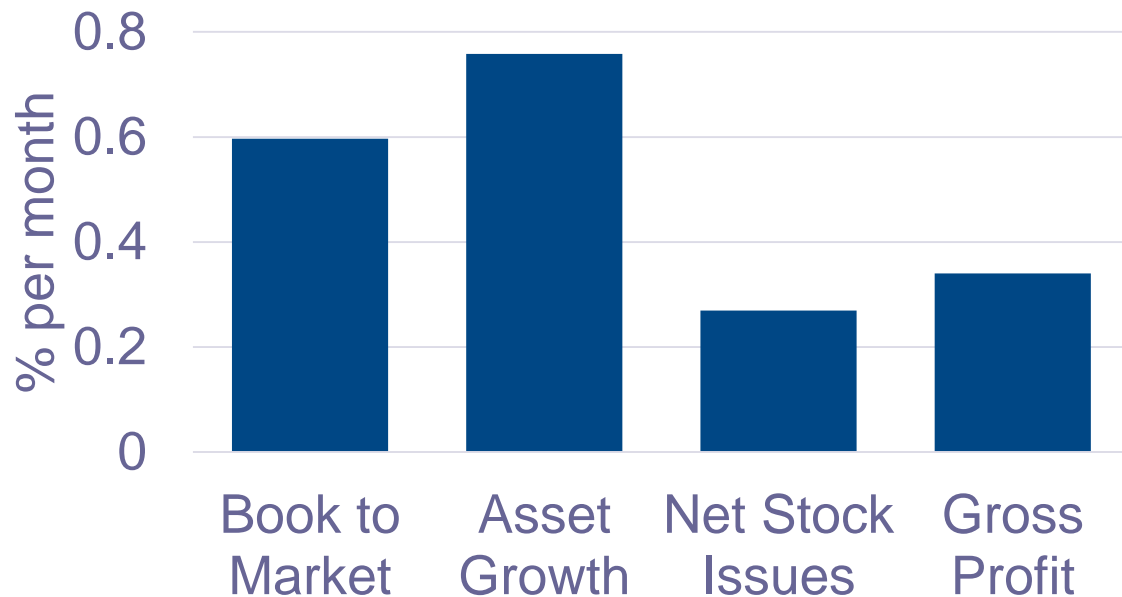
What if you randomly sample from a pool of large firms?

A quick trip to the data

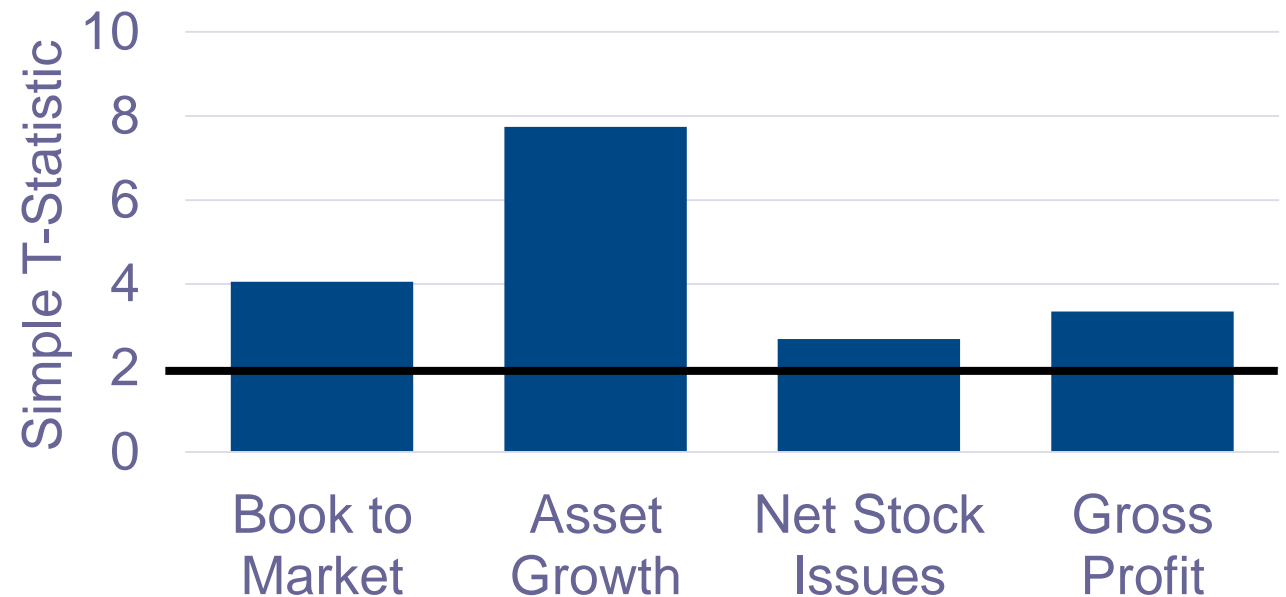
Disclaimer: Using annual accounting data and monthly returns from Compustat

- No delisting returns
- Utilities and Financials included
- 30% and 70% breakpoints based on NYSE Firms

Average in-sample Equal-Weighted Long-Short Returns



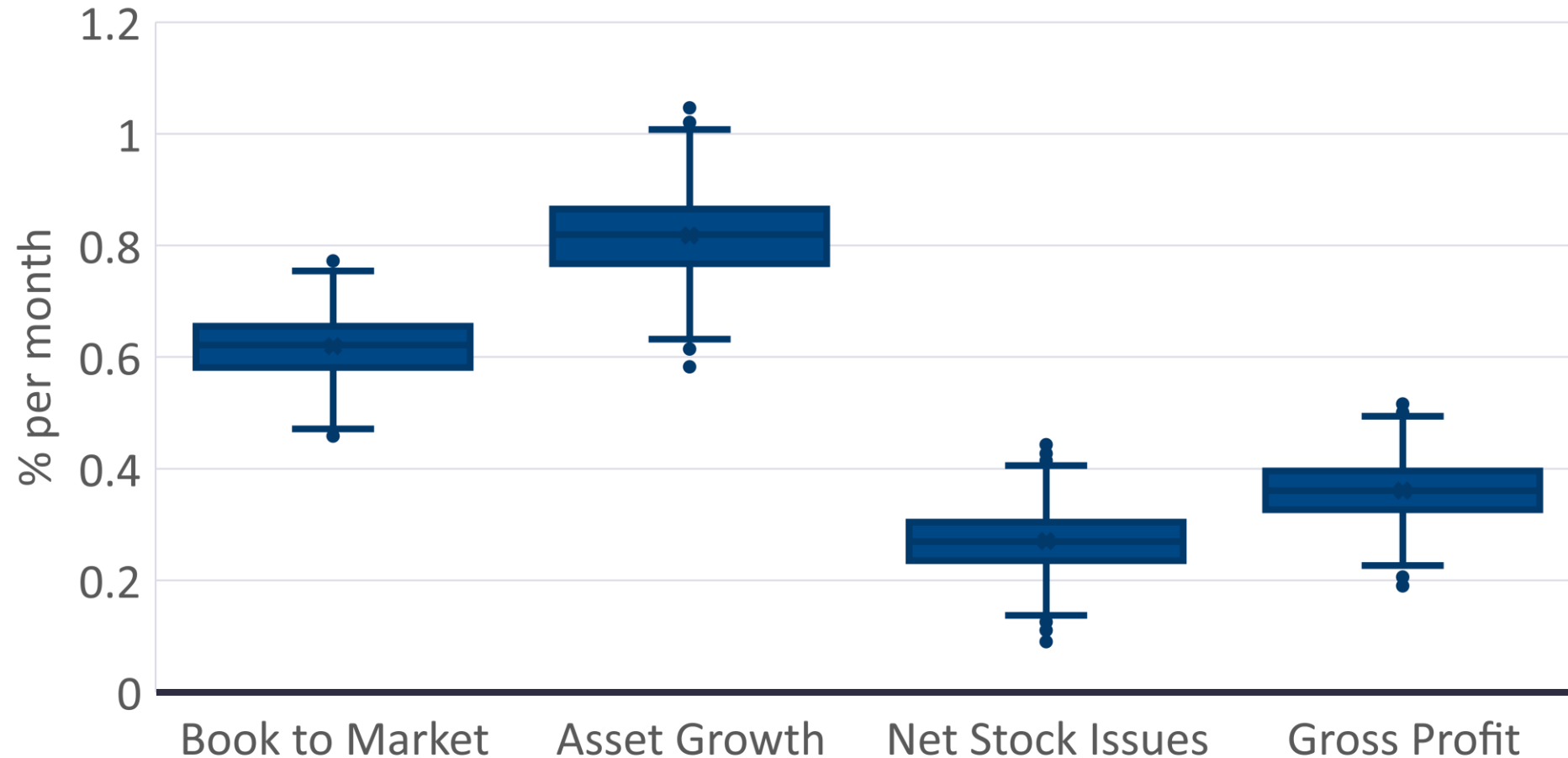
T-Statistic for in-sample Equal-Weighted Long-Short Returns



Back to the Thought Experiment

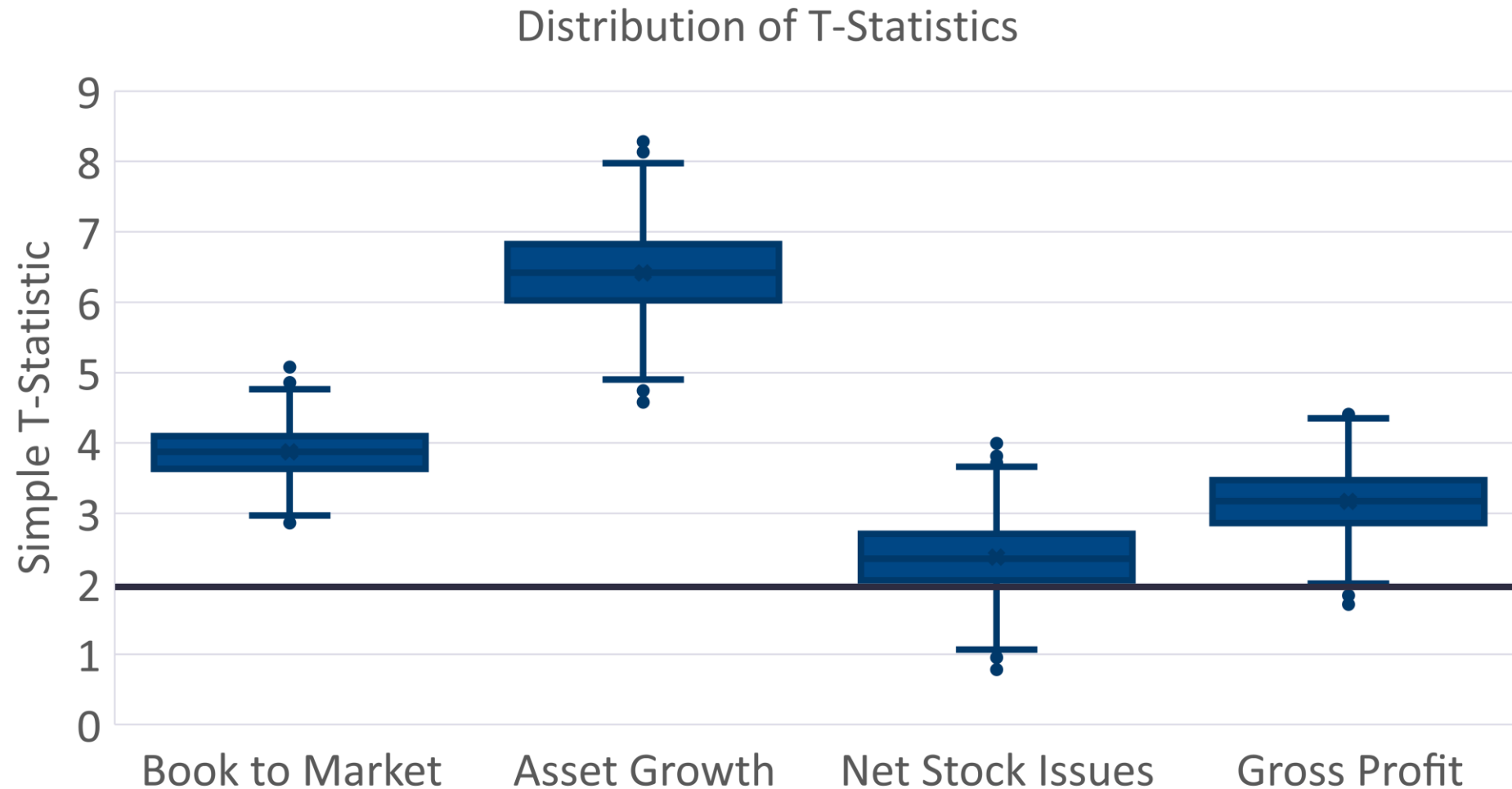
Randomly sample up to 700 firms per month within the in-sample period
Breakpoints (30% and 70%) based on all 700 firms

Distribution of Average EW Long-Short Returns



Back to the Thought Experiment

Randomly sample up to 700 firms per month within the in-sample period
Breakpoints based on all 700 firms



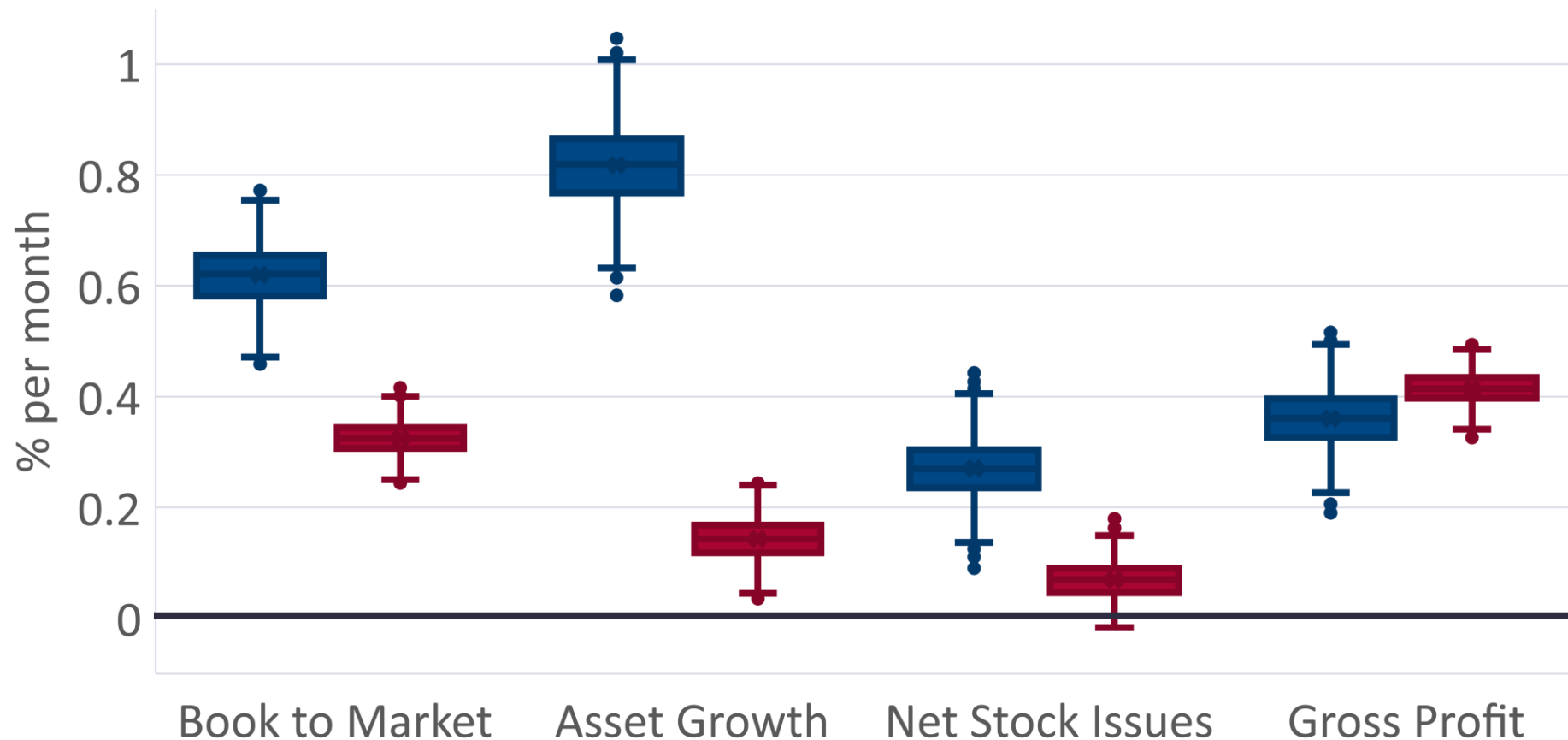
What if we look at larger firms?

Restrict sample to largest 1,500 stocks per month in the in-sample period

- Above median Mktcap in early periods when coverage is low

Randomly sample up to 700 LARGE firms per month

Distribution of Average EW Long-Short Returns

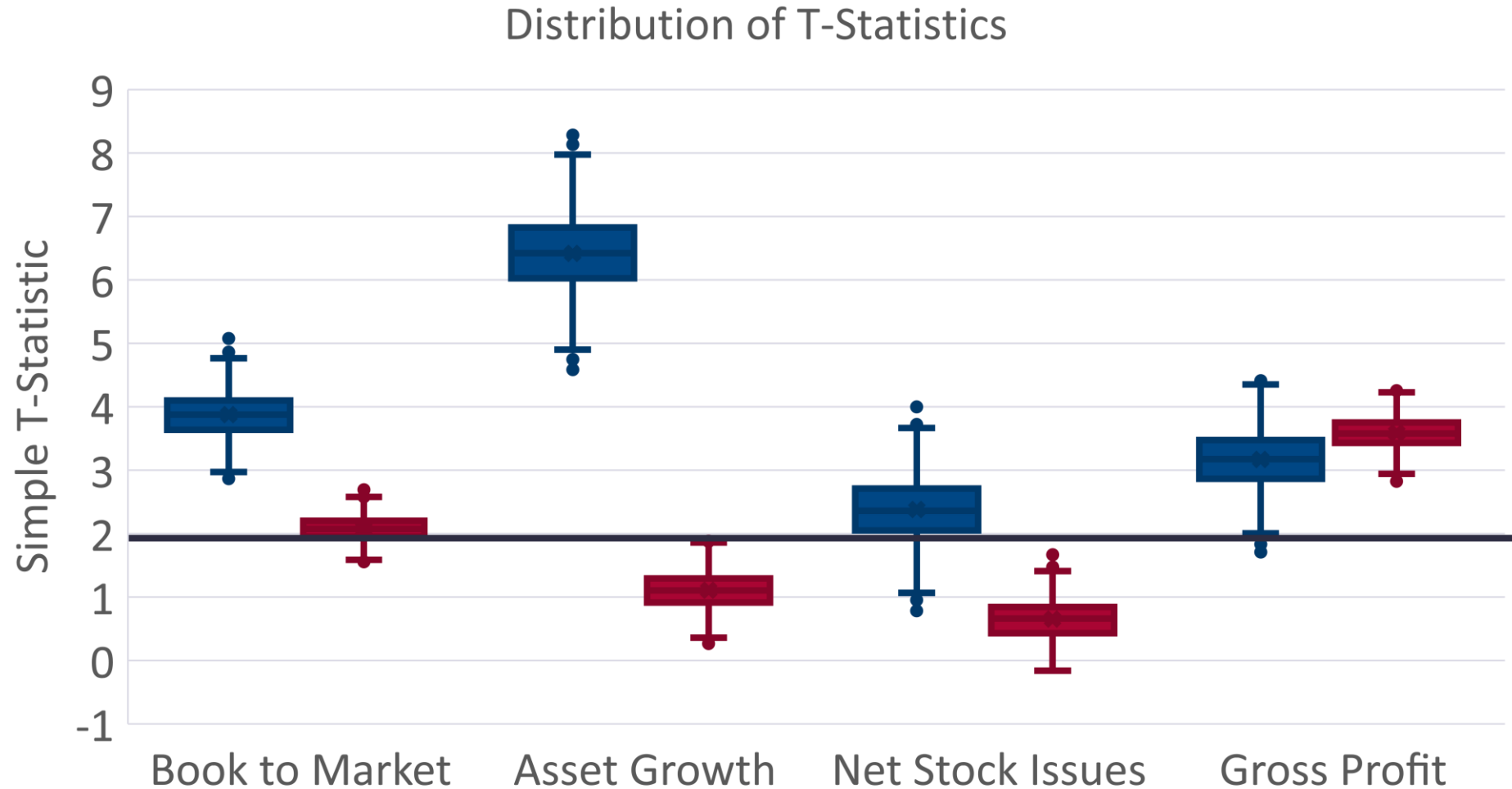


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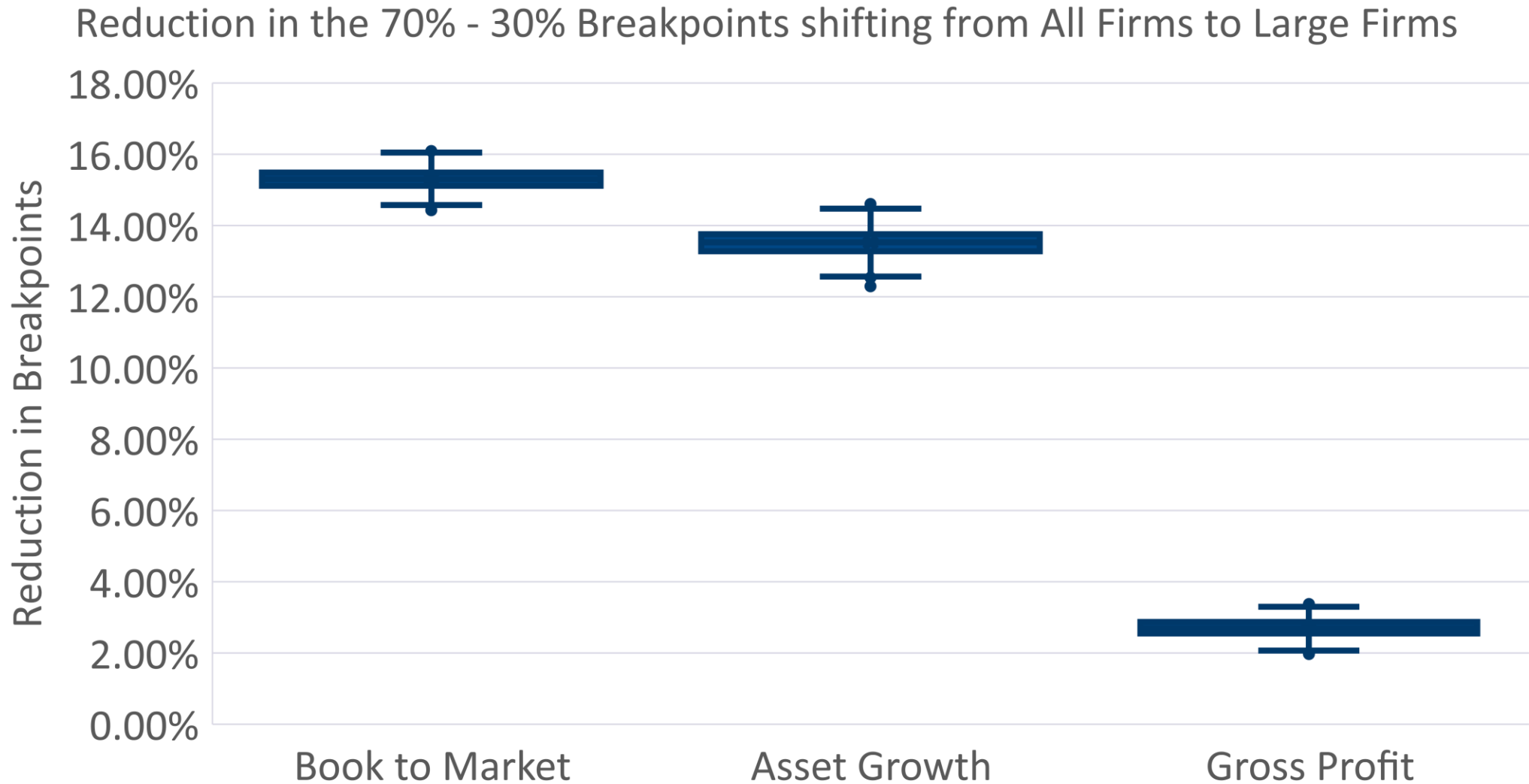
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What about the distribution of breakpoints?



Conclusion

Pre-sample results

Undoubtedly some anomalies are pure data-snooping

But...

Some negative results may be driven by the structure of the pre-sample data

Post-sample results

Does performance deteriorate prior to end date or only after the end date?

Industry to Academia?

Academia to Industry?