Discussion of "Valuation and Long-Term Growth Expectations"

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Overview

- Motivation: while long-term growth is a significant part of firm valuation, academic and practitioners are inattentive towards it

- This paper:
  1. Builds a machine learning model to predict long-term growth rates
  2. Argues that long-term growth is mispriced in the market. Long/short decile portfolios based on predicted growth generates 10-13% alpha a year

- This is an important topic and the paper is well executed
  - My discussion will focus on the mechanism and economic magnitudes

1. Findings in this paper

Predicting long-term growth rates

- Which variables predict growth rates? The authors used LASSO:
  - Careful out-of-sample prediction exercise
  - Outcome variables: 5 or 10 year EBITDA/Sales growth rates

	Relationship with long-term growth	
Variable type	**Prediction**	**Result**
Valuation ratio (e.g. market/book)	+	+
Analyst forecast	+	+
Investment (CapEx)	+	+
Beta	?	-
Competitive positioning (patents, barriers to entry, etc)	+	+
Age and size	-	-

- The resulting R2 is decently high: 15 – 28%

Trading on predicted long-term growth

- Trading on this measure is profitable!
- Long/short decile portfolios generates 10-13% annual return
  - Not subsumed by conventional characteristics in Fama-MacBeth regressions
  - Caveat: results weaker when value-weighted (Table A5, A6)

Panel A	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P10-P1
E Return	0.0095	0.0098	0.0087	0.0099	0.0093	0.0092	0.0097	0.0105	0.0115	0.0160	0.0064
	(3.928)	(4.106)	(3.630)	(4.024)	(3.735)	(3.525)	(3.442)	(3.598)	(3.668)	(4.156)	(2.762)
CAPM alpha	0.0036	0.0039	0.0027	0.0038	0.0032	0.0030	0.0032	0.0038	0.0046	0.0086	0.0050
	(2.943)	(3.281)	(2.410)	(3.275)	(2.655)	(2.343)	(2.290)	(2.549)	(2.719)	(3.443)	(2.306)
3-f alpha	0.0017	0.0018	0.0011	0.0023	0.0019	0.0018	0.0022	0.0032	0.0045	0.0083	0.0066
	(2.261)	(2.388)	(1.582)	(3.593)	(2.801)	(2.801)	(2.804)	(3.650)	(4.101)	(4.620)	(3.321)
5-f alpha	0.0009	0.0008	0.0004	0.0020	0.0016	0.0020	0.0025	0.0035	0.0050	0.0096	0.0086
	(1.189)	(0.993)	(0.542)	(2.672)	(2.094)	(2.579)	(3.044)	(3.934)	(4.270)	(5.529)	(4.729)
6-f alpha	0.0020	0.0018	0.0014	0.0030	0.0026	0.0032	0.0035	0.0046	0.0062	0.0105	0.0085
	(2.779)	(2.618)	(2.024)	(4.128)	(3.917)	(4.250)	(4.371)	(4.965)	(5.033)	(5.622)	(4.583)

2. Discussion

1. Economic magnitudes

- How much money are investors leaving on the table?
- It is well-known that anomalies are larger in small caps stocks
  - Green, Hand, and Zhang RFS (2017), Hou, Xue, and Zhang RFS (2020)

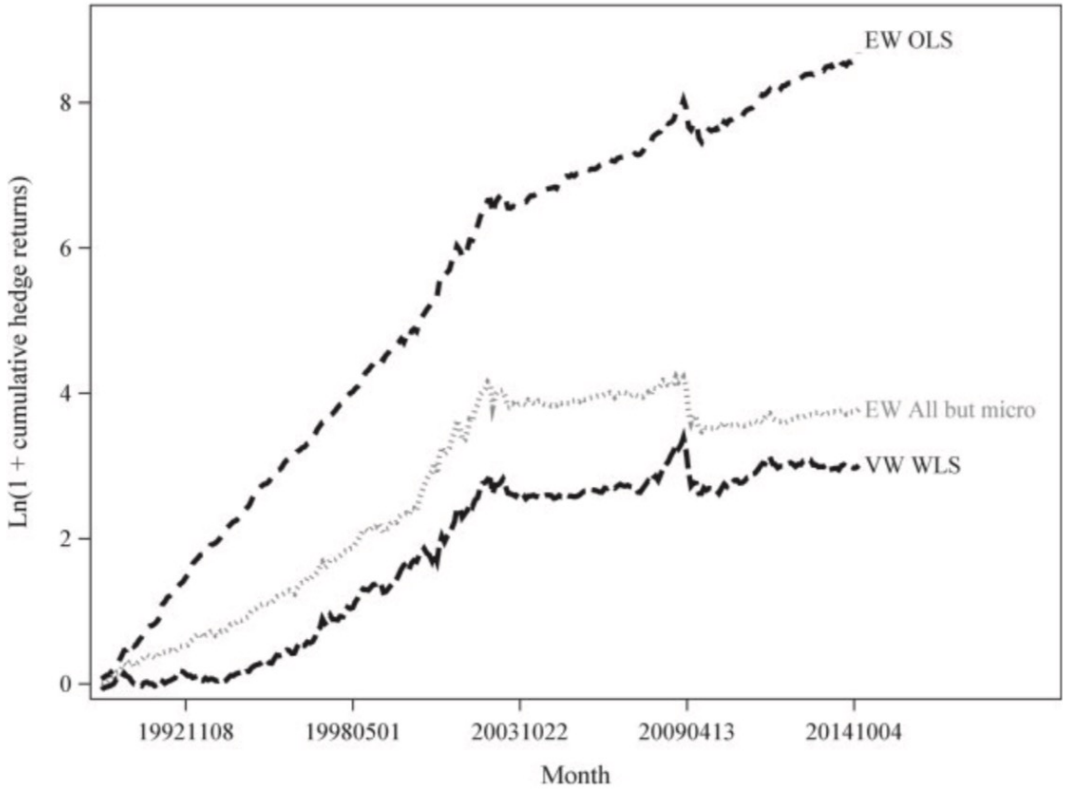

Fig 3 in Green, Hand, and Zhang RFS (2017)

Seeking larger economic magnitudes

- Instead of using $\widehat{Growth}$, perhaps can look at $\widehat{Growth} - LTG$ (analyst predicted growth)?

- La Porta (1996): firms with high analyst predicted LTG (long-term growth) have low subsequent returns
  - Bordalo et al JF (2019): results are concentrated in firms with very high LTG

2. Mechanism

There are really two separate questions.

- 1) Are investors inattentive to long-term growth?
  - Anecdotally: very much so
  - This paper presents further evidence

- 2) Do they lose much due to this?
  - If the return predictability is concentrated in small caps that are relatively illiquid, then we are not sure.

"Rational inattention"?

- If investors have limited cognitive resources, they should allocate it based on expected payoff and cost
  - Cost is high: estimating long-term growth rate is difficult
    - Of course, as we have computers, LASSO (since 1996), and this paper (since 2019), the cost goes down over time
  - Payoff may not be high:
    - Because this is about **long-term** growth rates, it is likely slow for prices to converge
- The paper **does** show that investors are leaving sizeable amount of money on the table for small cap firms.
  - A careful quantification exercise might still reveal irrationality of investors in these companies

3. Additional exercises?

- Do long-horizon active investors appear to trade on this mispricing?
  - As discussed, such a strategy may be less attractive for short-horizoned arbitrageurs such as hedge funds
  - Can infer from 13F data. Key difficulty: need to first filter out passive ones
    - Omitted varaible problem: long-horizon investors also tend to be passive

- The *other economic consequences* of long-term growth-neglect?
  - Does it drive corporate short-termism?

Summary

- This paper is interesting and well executed
- Investor inattention to long-term growth rate is ex-ante plausible
  - The authors provide further evidence
- Economic mechanism: perhaps more work can be done to differentiate between rational and irrational inattention