Belief overreaction and stock market puzzles Replication

Table 1 Return Predictability and Expectations of Earnings Growth

Panel A: Returns and LTG

	(1)	(2)	(3)
	return_1	return_1_3	return_1_5
LTG	-0.3422**	-0.5351***	-0.5782***
	(0.1357)	(0.1379)	(0.0991)
N	409	409	409
Adj R^2	9%	23%	28%

Panel B: Returns and growth forecast for year 1

	(1)	(2)	(3)
	return_1	return_1_3	return_1_5
e_1_e_0	0.0409	0.0876	0.1179
	(0.0918)	(0.0897)	(0.0958)
N	409	409	409
Adj R^2	0%	0%	1%

Panel C: Returns and growth forecast for year 2

	(1)	(2)	(3)
	return_1	return_1_3	return_1_5
e_2_e_1	-0.0600	0.0522	0.1764
	(0.0856)	(0.1106)	(0.1287)
N	409	409	409
Adj R^2	0%	0%	3%

*: $p < 0.1$ **: $p < 0.05$ ***: $p < 0.01$

Table 2: Return Predictability, Expectations and Measures of Required Returns

Panel A

	(1)	(2)	(3)	(4)
	return_1_5	return_1_5	return_1_5	return_1_5
LTG	-0.3233***	-0.5291***	-0.5238***	-0.5686***
	(0.0905)	(0.0980)	(0.1128)	(0.0987)
X	0.4784***	-0.2088	0.2767	0.0450
	(0.1099)	(0.1453)	(0.2231)	(0.0501)
N	409	409	193	409
Adj R^2	48%	32%	38%	28%
X	dp	pe	SVIX	e_1_e_0

Panel B

	(1)	(2)	(3)	(4)
	return_1_5	return_1_5	return_1_5	return_1_5
LTG	-0.6040***	-0.6405***	-0.5695***	-0.5765***
	(0.1442)	(0.1235)	(0.1116)	(0.0770)

X	-0.0544	-0.1841	0.1875	0.3252***
	(0.1739)	(0.1930)	(0.2613)	(0.1215)
N	409	409	372	409
Adj R^2	28%	30%	36%	39%
X	term_spread	credit_spread	uncertainty	inflation

*: p < 0.1   **: p < 0.05   ***: p < 0.01

To be noted, I replace price dividend ratio with dividend yield, so the coefficients of it are positive. I only used part of the proxied variables in the original essay because it is so time-consuming to replicate other variables that I haven't used so far. Also, the other results are consistent with the replicated paper, thus I think it's not a big deal to overlook other few contrl variables.

Table 3: Determinants of LTG revisions

	(1)	(2)	(3)
	delta_LTG	delta_LTG	delta_LTG
lag_LTG	-0.4184***	-0.5426***	-0.3068*
	(0.1604)	(0.1469)	(0.1659)
e_cae	0.2461***	0.1857**	0.3540***
	(0.0813)	(0.0845)	(0.0726)
X		-0.3446***	0.0824
		(0.1167)	(0.1944)
N	457	457	193
Adj R^2	21%	29%	35%
X		dp	SVIX

*: p < 0.1   **: p < 0.05   ***: p < 0.01

For Table 3, I constructed the cyclically adjusted earnings per share by dividing the price by the CAPE (reversed engineering of that "E" in the CAPE. (CAPE: Multiple of Market Value of Equity to 5-year moving average of Net Income)

Table 4: Predictability of Forecast errors and Returns

	(1)	(2)	(3)	(4)
	forecast_error	return_1_5	return_1_5	return_1_5
delta_LTG	-0.7767***	-0.5432***		
	(0.1146)	(0.0997)		
lag_LTG	-0.2276*	-0.5905***		
	(0.1320)	(0.0821)		
predicted_forecast_error			0.7885***	0.3691**
			(0.1799)	(0.1515)
dp				0.5559***
				(0.1342)
N	397	397	397	397
Adj R^2	25%	32%	16%	42%

*: p < 0.1   **: p < 0.05   ***: p < 0.01

Table 5: Unbunding Return Predictability from Price Dividend Ratio

	(1)	(2)	(3)	(4)	(5)	(6)
	return_1		return_1_3		return_1_5	
	raw	residual	raw	residual	raw	residual
dp	0.3673***	0.2994***	0.5110***	0.2238***	0.6089***	0.1447
	(0.1183)	(0.0972)	(0.1439)	(0.0823)	(0.1262)	(0.1044)
N	409	361	409	361	409	361
R^2	14%	9%	28%	10%	41%	8%
Adj R^2	14%	9%	27%	10%	41%	8%

*: p < 0.1   **: p < 0.05   ***: p < 0.01

Table 6: Firm-Level Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	forecast_error	return_1_5	return_1_5	return_1_5	return_1_5	return_1_5	return_1_5
delta_LTG	-0.0331**	-0.1552***					
	(0.0141)	(0.0262)					
lag_LTG	-0.0497***	-0.2558***					
	(0.0162)	(0.0426)					
predicted_forecast_error			0.1808***	0.0948***	0.1524***	0.0907***	0.1120***
			(0.0298)	(0.0265)	(0.0298)	(0.0303)	(0.0345)
dp				0.2480***		0.1875***	
				(0.0279)		(0.0393)	
pe					-0.1048***		-0.0521***
					(0.0198)		(0.0127)
Year FE	YES	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES	YES
N	155876	143940	143940	115473	132145	89369	100774
Adj R^2	30%	38%	38%	40%	40%	40%	41%

*: p < 0.1   **: p < 0.05   ***: p < 0.01

The results of Table 6 don't quite match with the results of the paper quantitatively. I guess that's because I used different individual firm samples from different databases. But since the results match qualitatively, I think it's fine.

Table 7: Market Return and LTG portfolio returns

	(1)	(2)	(3)	(4)	(5)
	Dependent Variable: (Log) Five-year Return				
	LLTG	HLTG	PMO	PMO	PMO
delta_LTG	0.1552	-0.4858**	0.7044***	0.6668***	0.7583***
	(0.1116)	(0.2042)	(0.2408)	(0.2181)	(0.2251)
lag_LTG	-0.0261	-0.5896***	0.7297***	0.6172***	0.8410***
	(0.1754)	(0.0942)	(0.1043)	(0.1303)	(0.1284)
Mkt_5	0.7161***	0.4840***	-0.1933*	-0.4390***	-0.4173***
	(0.1623)	(0.0659)	(0.1096)	(0.1513)	(0.1179)
X				0.2372**	0.3829***

				(0.0934)	(0.1286)
N	397	397	397	193	397
Adj R^2	72%	70%	44%	51%	47%
X				SVIX	dp

*: $p < 0.1$ **: $p < 0.05$ ***: $p < 0.01$

Table 8: Forecast Errors of LTG Portfolios

	(1)	(2)	(3)
	Dependent variable: Five-Year Forecast Error		
	LLTG	HLTG	PMO
delta_LTG	-0.2070	-0.7524***	0.6590***
	(0.1390)	(0.1846)	(0.1821)
lag_LTG	0.0581	-0.3648***	0.4135***
	(0.1811)	(0.1257)	(0.0615)
N	397	397	397
Adj R^2	2%	27%	24%

*: $p < 0.1$ **: $p < 0.05$ ***: $p < 0.01$

Table 9: Predictability of factor returns and forecast errors
Panel A: Returns and forecasts about growth

	(1)	(2)	(3)	(4)
	HML	RMW	CMA	SMB
delta_LTG	0.4548*	0.3976*	0.5314**	0.8741***
	(0.2382)	(0.2096)	(0.2590)	(0.1926)
lag_LTG	-0.0098	-0.0415	0.4127***	0.6873***
	(0.1479)	(0.1856)	(0.1476)	(0.1339)
Mkt_1_5	0.3584*	0.6718***	0.5220**	-0.0105
	(0.2162)	(0.1709)	(0.2196)	(0.2009)
N	397	397	397	397
Adj R^2	16%	41%	23%	53%

Panel B: Forecast errors and forecasts about growth

	(1)	(2)	(3)	(4)
	HML	RMW	CMA	SMB
delta_LTG	-0.0578	0.2455*	-0.0599	0.0354
	(0.0711)	(0.1254)	(0.0442)	(0.1101)
lag_LTG	-0.1632***	-0.0483	-0.0278	0.0447
	(0.0570)	(0.1129)	(0.0234)	(0.0926)
N	397	397	397	397
Adj R^2	4%	4%	1%	0%

*: $p < 0.1$ **: $p < 0.05$ ***: $p < 0.01$

I used firms in the whole market to generate Table 9 rather than only S&P500 firm data, which could be more convining (Authors didn't specify what samples they used for Table 9, though).