RIR RESEARCH BRIEF

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Selecting Among High Growth Expectation Stocks

Issue

Growth stocks have enjoyed a 12-year run of outperformance, challenging the arguments of respected market commentators (e.g., Bogle, Grantham, Shiller) that mean reversion is one of the most powerful forces in finance. While trees still can't grow to the sky, perhaps recent growth stock excess returns reflect an evolving economy that increasingly rewards firms benefiting from scale and network effects.

Is buying stocks with high growth rates a simple way to build a portfolio that delivers excess returns? Are the expert opinions of forward-looking industry analysts the only way to discern among high growth stocks, or can quantitative analysis also be useful? Are growth and momentum factors the most effective criteria for screening growth stocks, or can fundamental, valuation and risk metrics provide further discrimination?

Research Approach

Since stock prices reflect future expectations, we used mean brokerage analyst 5-Year EPS growth forecasts as our primary measure of each stocks' 'growthiness'. Each month from December 2003 – June 2019, we separately ranked MSCI U.S. IMI members (~2300 names) and ACWI Ex-US members (~1700 names) by their forecasted EPS growth rates, and defined those ranked in top 20% as "growth stocks".

Using a survey approach, we tested about 60 diverse criteria from RIR's Factor Library for their ability for separating winners from losers *within* our U.S. and international growth stock universes. We evaluated each factor's effectiveness over subsequent 12-month holding periods using four performance measures: Information Coefficient (correlation between factor ranks and subsequent returns), average returns vs. growth stock universe returns, standard deviation of returns, and hit ratios (% of stocks outperforming the universe average).

Results

Table 1 shows average returns, volatility, and hit ratios of cohort portfolios formed by ranking stocks according to consensus EPS growth forecasts within our U.S. and international universes. Perhaps contrary to expectations, future 12-month returns (on an equal-weighted basis) have had little correlation to forecasted

EPS growth rates around the world over the last 18+ years. In the U.S., stocks with the highest forecasted EPS growth (Quintile 1) have slightly underperformed with much greater volatility than the average stock. Furthermore, the high growth portfolio's hit ratio was far below 50%, meaning that some big winners lifted the portfolio's average return well above the median return of its member stocks. Note also that the U.S. high growth portfolio *underperformed* the international high growth portfolio, an interesting result in a time period recognized for U.S. economic and technology stock leadership (more on this later).

Table 1: Stock Performance by EPS Growth Quintile					
Performance Statistic	1 (hi)	2	3	4	5 (low)
US Avg 12M Ret%	11.5	12.7	12.7	12.3	11.5
US Stdev 12M Ret%	46.5	37.6	34.4	34.3	38.6
US Avg HitRatio%	43.7	46.2	47.9	47.0	45.8
Intl Avg 12M Ret%	14.7	13.6	12.9	12.5	13.0
Intl Stdev 12M Ret%	38.3	33.6	30.2	28.3	32.7
Intl Avg HitRatio%	45.4	46.0	45.8	46.3	45.5

Low hit ratios indicate positive skewness in growth stock returns, and that creates a challenging stock selection task for investors. Active growth managers need to buy and hold at least some big winners to have much chance of beating their benchmarks over time. Latching onto the FANGs has worked in recent years, but such sustained momentum in a highly recognized set of stocks is unprecedented and probably can't be relied upon as a strategy for future investment success.

Fortunately, our factor testing within the U.S. and international growth stock universes suggests that finding growth winners is possible, but the criteria for doing so may be surprising. For example, by virtue of their ability to look forward and apply specialized industry expertise, brokerage firm analysts might be expected to have valuable insight into which growth stocks are most likely to live up to their potential. But we found that future growth stock returns were uncorrelated with analysts' 5-year EPS growth forecasts and with their buy/hold/sell ratings in the U.S. and internationally. Another intuitive strategy might be to focus on stocks with strong recent sales or EPS growth as a way of validating high forecasts of future growth.

But we found that 1-3 year sales and EPS growth rates were among the *worst* factors for selecting among high growth expectation stocks in the U.S., and were only modestly useful internationally.

The good news for growth investors is that our quantitative testing did reveal distinct factor reward patterns that were consistent across U.S. and international markets. In general, we found factors that capture sentiment change, profitability, valuation, and risk were quite effective in discriminating future relative returns among high growth expectation stocks. Tables 2 and 3 summarize several factors that were effective both in the U.S. and internationally.

Table 2: 12M Excess Return% on U.S. Gth Stks						
Factor	Avg IC	Qn1	Qn2	Qn3	Qn4	Qn5
FY1 EPS/Price	0.039	0.55	-0.26	0.21	0.90	-1.51
Free CF/Price	0.080	1.49	1.79	0.88	0.36	-4.86
ROE	0.051	0.83	0.87	-0.33	-0.58	-1.95
CapEx/Sales	0.030	0.30	0.91	1.16	1.09	-3.17
3M PriceChg	0.045	1.08	1.11	0.64	0.31	-3.14
3M EPS Revisions	0.049	2.38	0.85	-0.69	-0.84	-1.95
FY1 EPS Dispersion	0.065	1.15	1.71	0.37	-1.39	-1.94
12M PriVolatility	0.103	1.60	0.80	1.00	-0.18	-3.28
Average	0.058	1.17	0.97	0.40	-0.04	-2.72

Table 3: 12M Excess Return% on Intl Gth Stks						
Factor	Avg IC	Qn1	Qn2	Qn3	Qn4	Qn5
FY1 EPS/Price	0.075	6.56	0.74	-0.94	-2.29	-3.93
Free CF/Price	0.082	4.60	0.53	-0.73	-2.75	-1.80
ROE	0.033	1.97	0.33	0.09	-2.10	-2.00
CapEx/Sales	0.065	1.29	1.96	0.59	0.04	-4.10
3M PriceChg	0.032	2.00	0.23	-0.28	-1.11	-0.76
3M EPS Revisions	0.071	2.92	2.06	0.19	-2.43	-2.78
FY1 EPS Dispersion	0.053	0.81	-0.06	0.67	-0.13	-0.99
12M PriVolatility	0.039	-1.91	0.29	-0.02	1.22	0.44
Average	0.056	2.28	0.76	-0.05	-1.19	-1.99

The strength of valuation and risk aversion factors within high growth expectation stocks was impressive. Though growth stocks tend to be expensive and volatile, valuation and risk are evidently important criteria for separating winners from losers within the growth stock universe. Tables 2 and 3 also show that profitable growth stocks with lower capital expenditures have generally performed best, suggesting that stock market success of firms/industries employing high investment profit-foregoing business models has historically been the exception, not the rule. While we weren't surprised to see sentiment change factors such as price momentum and EPS forecast revisions have been useful for picking among growth stocks, their efficacy in return prediction over a longer 12-month horizon was notable. Finally, we found (results not shown) that the factors in Tables 2 and 3 were also negatively correlated to volatility, i.e.,

better-ranked growth stocks had lower future volatility, while worse-ranked growth stocks had higher volatility accompanying their lower returns.

Market capitalization was one key factor that performed very differently within U.S. and international growth stocks over our 15½ year test period. Table 4 shows that the very largest growth stocks performed best in the U.S., while the largest international growth stocks significantly lagged their peers. While many large U.S. growth stocks have arguably benefitted from first mover advantages, scale, and network effects, it's interesting to observe that size has been a headwind to growth stock returns internationally. Again, we caution investors against drawing conclusions too quickly from recent U.S. history about the long-term drivers of firm and market success. Maybe the FANGs are more exceptional than we already appreciate!

Table 4: 12M Excess Return% of Mktcap Factor						
Universe	Avg IC	Qn1	Qn2	Qn3	Qn4	Qn5
U.S. Growth Stks	0.061	1.23	0.74	-0.58	0.60	-2.03
Int'l Growth Stks	-0.026	-3.16	-1.90	-0.46	2.13	3.44

Conclusions

Similar to what we documented in RIR's May 2019 Research Brief focusing on cheap value stocks, this study shows that stocks with high growth expectations are also an interesting hunting ground for stock pickers with a few big winners lurking among many smaller losers.

Stocks with the highest forecasted EPS growth often are younger firms creating or employing disruptive technology or business models to serve customers. One might expect that industry experts such as brokerage firm analysts would be invaluable for helping investors determine which growth stocks have the right stuff to succeed. But this study revealed that brokerage analyst EPS growth forecasts and stock ratings have been of little value in predicting relative growth stock returns. Focusing on actual sales or EPS growth instead of forecasts also has been of little use.

Fortunately, we have shown that quantitative factors can be effective discriminators of future return and risk within high growth expectation stocks. Perhaps surprisingly, we found that valuation and risk aversion factors have been quite effective in predicting relative growth stock returns and even more effective in predicting relative volatility. Combining these more defensive factors with profitability and sentiment change measures is a solid start toward building an alpha-generating growth stock selection model.