Growth Value Two-Factor Model

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Abstract

This study developed and tested a stock return prediction model called the Growth
Value Two-Factor Model (GVM). The proposed GVM considers beginning and ending
book value-to-price ratios (BPRs) and future return on equity (ROE) during a given
period. We also used a mean-reverting process to estimate BPR and ROE at some
future point, and derived a Growth Value Indicator (GVI) able to help select stocks that
deliver better performance. The GVI includes one model coefficient, determined by
fitting actual market data. A large coefficient implies a strong mean-reverting effect on
BPR and ROE (i.e., the market is overreacting and stock returns are dominated by the
value factor). Conversely, a small coefficient implies a weak mean-reverting effect on
BPR and ROE (i.e., the market is under-reacting and stock returns are dominated by
the growth factor). The GVM provides a reasonable theory to explain the long-debated
issue of whether value stocks or growth stocks provide the best returns. We used S&P
500 component stocks to examine the effectiveness of the GVM during the period
1998-2008. Conclusions include: (1) the value and growth factor both are critical to

explaining and understanding stock return performance. As value stocks and growth
stocks are not opposites of one another, they should be treated two-dimensionally. (2)
BPR and (1+ROE) are clearly affected by mean-reverting phenomena. The
exponential-decay mean-reverting model fit well with actual stock data.
(3) GVI performed better than traditional stock selection factors for
selecting stocks with better performance, which indirectly demonstrated
the effectiveness of the GVM.