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INVESTMENT PUBLICATIONS HIGHLIGHTS

KING OF THE MOUNTAIN: THE SHILLER P/E AND MACROECONOMIC CONDITIONS

Robert D. Arnott, Denis B. Chaves, and Tzee-Man Chow, *The Journal of Portfolio Management*, vol 44, no 1 (Fall 2017): 55–68

The authors find that stock market valuations are highest at moderate levels of inflation and real interest rates. By adjusting the Shiller P/E ratio based on current levels of inflation and real interest rates, the authors are able to enhance short-horizon return predictability. Their results hold for US and developed ex US markets.

Based on traditional discounted cash flow valuation models, both low levels of inflation and real interest rates are associated with high stock market valuations. Empirically, however, the authors show this relationship does not hold. They find that valuations are highest when real interest rates range from 3% to 4% and when inflation ranges from 2% to 3%, observed independently. When these macroeconomic variables move in either direction, average valuations fall. Viewed together, rates between 3% and 5% and inflation between 1% and 3% support the highest valuation levels.

Inflation and real interest rates provide important information on normal valuation levels, and the authors believe these variables may improve the Shiller P/E ratio's predictive ability. Although the Shiller P/E is a robust measure for predicting long-horizon equity market returns, it is rather anemic when predicting short-term returns.

The authors develop a method of computing a conditioned Shiller P/E ratio based on current levels of inflation and real interest rates. The conditioned P/E can be thought of as the normal P/E ratio given the current macroeconomic environment. Whereas traditional methods compare current valuations to long-term averages, their goal is to compare current valuations to the valuation level supported by the macro environment.

Using conditioned P/E ratios, the authors find the predictive ability of the Shiller P/E doubles over one- and six-month subsequent return periods, with highly statistically significant results. Though the addition of macroeconomic indicators improves results, the author's regression still only explains 0.6% and 2.7% of variability in subsequent one- and six-month return periods, respectively.

Interestingly, the predictive ability of the conditioned P/E ratio falls over longer time horizons. Therefore, the authors assert that the Shiller P/E compared to its long-term average is still the most powerful long-term returns predictor. Over the short term, they show there is much to be gained by adjusting the normal valuation level to macroeconomic conditions. The authors base their model on US equity market and macroeconomic data but find that the model fits well when applied to developed ex US markets.

VALUE EFFECT AND MACROECONOMIC RISK

Cathy Xuying Cao, Chongyang Chen, and Vinay Datar, *Journal of Investing*, vol 26, no 3 (Fall 2017): 41–52

The authors examine to what extent macroeconomic factors drive the historic tendency of value stocks to outperform growth stocks. They argue that these factors have a positive and significant relationship with the level of outperformance, suggesting that the "value effect" changes with economic conditions.

The value effect is well documented, but the reasoning behind it is widely debated. Most academics offer either a risk-based or a behavioral explanation. The risk-based explanation suggests the return premium represents compensation for the inherently greater riskiness of value stocks, such as higher distress risk and cash flow uncertainty. According to the behavioral explanation, the value return premium is the result of investors systematically mispricing value stocks by overreacting to negative information.

The authors hypothesize another potential explanation for the value return premium: macroeconomic risk. To test for a connection, the authors study the sensitivities of value and growth stocks to the term premium, default premium, and growth rate of industrial production. Portfolios are constructed based on book-to-market (B/M) and earnings-to-price (E/P) ratios for companies listed on major American stock exchanges from July 1963 to June 2012, excluding financial and utility firms.

Using regression analysis, the authors confirm there are substantially higher returns for high value firms than for low value firms based on both B/M and E/P ratios. But the authors find that over 50% of value's outperformance can be attributed to macroeconomic factors, suggesting these factors largely drive value outperformance. As a result, the authors recommend investors take macroeconomic risk exposures into account when applying value versus growth portfolios.

FACTS ABOUT FORMULAIC VALUE INVESTING

U-Wen Kok, Jason Ribando, and Richard Sloan, CFA Institute, *Financial Analysts Journal*, vol 73, no 2 (Second Quarter 2017): 81–99

The authors find that quantitative investment strategies based on common price metrics have a weak relationship with equity performance. As a result, they argue investors should shy away from these simplistic strategies and instead pursue strategies with a more comprehensive approach to identifying mispriced securities.

The authors construct six cap-weighted portfolios by first dividing NYSE-listed companies into two groups by market cap; each of those two groups is then split into three groups by their B/M ratio. Using this data, the authors find that the value premium only exists during the 1963–81 period. After that period, they find no compelling evidence that value stocks have outperformed.

The authors also assess various valuation multiples—B/M, trailing E/P, and forward E/P—for their suitability to detect underpriced securities. They find that companies with higher ratios, or those typically considered value, are likely to underperform companies with moderate ratios over the next year. The authors suggest that these simple metrics often identify companies with inflated accounting numbers and/or earnings forecasts rather than companies of value.

The authors attempt to find rules to improve value investing. They find that companies with higher valuation ratios and positive momentum perform better than those companies without positive momentum. The authors suggest screening on characteristics like these would improve value strategies. ■

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