JOIM

www.joim.com

PRACTITIONER'S DIGEST

The "Practitioner's Digest" emphasizes the practical significance of manuscripts featured in the "Insights" and "Articles" sections of the journal. Readers who are interested in extracting the practical value of an article, or who are simply looking for a summary, may look to this section.

A NEW INDEX OF THE BUSINESS CYCLE   PAGE 4

William Kinlaw, Mark Kritzman, and David Turkington

We apply a measure of statistical similarity called the Mahalanobis distance to construct a new index of the business cycle. We measure the similarity of economic conditions throughout history to prior periods of recession and robust growth, and we compute our index values as the likelihood of recession relative to the likelihood of robust growth.

Unlike other approaches for forecasting the business cycle, which rely on a simple aggregation of economic variables or use regression analysis, our methodology distinguishes between the distribution of the economic variables that prevailed during periods of recession and the distribution that occurred during periods of growth. This feature allows us to observe changes in the relative importance of the variables that we use as inputs to our index, which yields important insights about the dynamics of the business cycle.

Our index compares favorably to other commonly used indicators of the business cycle, including the Conference Board indexes of coincident and leading indicators, the yield curve, and results generated from probit and logit models.

LONG-RUN IMPLIED MARKET FUNDAMENTALS: AN EXPLORATION   PAGE 20

Heinz Zimmermann

Market fundamentals (discount rates, growth rates, profitability, payout) extracted from widely used valuation ratios using the Gordon model provide insight into the long-run expectations implicit in stock market prices. We show that these implied parameters predict a substantially larger volatility of growth rates than most predictive models, and the growth rate is positively and occasionally extremely highly correlated with the discount rate. The first observation implies that variations of D/P-ratios should not be used as a direct proxy of revisions in long-run expected returns. The second observation suggests

a completely different interpretation of the cyclicity of risk premiums compared to, for example, conditional asset pricing models estimated with typical economic state variables. We hypothesize that our risk premium is related to long-run growth risk. Our observations suggest that information extracted from valuation ratios, using simple valuation models, differs from the estimates relying on econometric models using historical returns. We argue that implied Gordon parameters can be interpreted as empirical proxies for conditional steady-state market fundamentals.

The findings offer new insights for investors who base their decisions on fundamental valuation factors and assume a (very) long valuation horizon. Most generally, they should compute implied market fundamentals jointly from several valuation ratios using a valuation model (not necessarily Gordon), which contradicts common rules-of-thumb based on single multiples. More specifically, the results show that implied parameters are highly persistent which means that their changes are not so quickly reversed. This does not mean that actual market fundamentals are slowly changing, but their long-run expectations as reflected in stock market prices. If an investor has better information to change her long-run views, she could benefit from contrasting her views to those reflected in the implied parameters. Moreover, investors should be aware that (very) long-run return expectations are most likely to exhibit a cyclical — not countercyclical — pattern, which differs from a tactical (monthly or quarterly) view of markets. The challenge is to incorporate this finding into asset allocation decisions that are orientated towards long-term investment horizons.

ON THE USE OF THE DAILY FAMA–FRENCH RISK-FREE RATE   PAGE 39

Joshua C. Fairbanks, Mark D. Griffiths, and Drew B. Winters

A significant portion of the finance literature uses the Fama and French (1992) risk-free rate (FFRF) as a proxy for the daily risk-free rate. We detail the issues that raise concerns about its use as a benchmark and discuss viable low-cost alternatives. We suggest the use of an adjusted one-year constant maturity rate (CMTBR) for empirical analysis dating back to July 1, 1963.

Our analysis provides three essential results. First, the underlying assumptions used to construct the FFRF generate returns that are not a good proxy for market data. Second, the choice of the FFRF as the risk-free rate does not alter the results relative to an improved proxy for the risk-free rate in long-horizon asset pricing models and events studies-the lack of statistical significance results from the effect of long-run averaging. Lastly, we identify an economic difference between FFRF and CMTBR in single events and a long/short analysis.

Over the last three decades, different branches of finance have been using alternative benchmarks for the risk-free rate. We document a significant difference between the T-bill data and the FFRF. The asset pricing literature and long-run event studies use the FFRF data, while money market papers do not. In all of the money market papers of which we are aware, the FFRF is never the choice as a data source for T-bill rates. In other words, in studies where the issues with FFRF could matter, FFRF is not used. In studies where FFRF represents the risk-free rate, the problems with the construction of the data series are unlikely to change the interpretation of the results.

ADVANCES IN ESTIMATING COVARIANCE MATRICES   PAGE 66

Jose Menchero and Lei Ji

Covariance matrices in finance are used for two primary purposes: risk forecasting and portfolio optimization. To ensure accuracy of risk forecasts, the estimated correlations should deviate minimally from the sample correlation, as this is very close to optimal for predicting risk. To ensure robustness of optimized portfolios, it is crucial to have a well-conditioned covariance matrix, which the sample correlation typically is not. In this paper, we present a new method for estimating correlation matrices that yields well-conditioned correlation matrices that deviate minimally from the sample correlation.

As an application of our technique, we consider the construction of covariance matrices in multi-factor models spanning multiple asset classes. Such models typically contain a large number of factors and are widely used by asset managers for mean-variance optimization and risk forecasting. Due to the large number of factors, the sample correlation matrix is ill-conditioned and not suitable for portfolio optimization. However, we find that by shrinking the sample correlation matrix toward the PCA correlation, we obtain a well-conditioned correlation matrix that deviates minimally from the sample correlation.

We compare our technique to a widely used alternative approach, which is based on time-series regression. We show that the time-series method produces estimated correlations that often deviate greatly from the sample correlation. In particular, we show that the time-series method dramatically under-forecasts factor correlations, especially for factor-pairs across different asset classes. This under-forecasting may lead to large errors in risk forecasts and poor estimates of hedge ratios.

A MARKET SIGNAL-BASED ALTERNATIVE TO BUY-AND-HOLD INVESTING   PAGE 81

Atanu Saha and Yong Xu

In light of the recent market turbulence, it is likely that a broad swath of investors is eager to explore alternatives to the widely-used buy and hold strategy. It would be reasonable to assume that many are seeking investment strategies designed to protect the value of their investment portfolios by averting large losses.

Our paper attempts to fulfil such a need. It proposes a market timing strategy that is easy to implement, does not rely on optimization algorithms or technical indicators and is free from hindsight bias. A review of the relevant literature reveals that ours is one of the few papers to demonstrate robust and statistically significant outperformance of a market timing strategy over a buy and hold benchmark of the S&P 500 total return index. Our data sample spans the 92-year period between 1928 and March 2020. We undertake several robustness checks to confirm that our results hold in a variety of market environments and across different time periods, even after accounting for reasonable transaction costs for the in and out trades.

We believe our paper would be of interest to average as well as sophisticated investors, the readers of the Journal of Investment Management. For average investors, this paper offers a simple rule-based market timing strategy that might help them avoid large losses and boost long term portfolio performance. For sophisticated investors, the proposed strategy could be applied in alpha generation and tactical asset allocation.