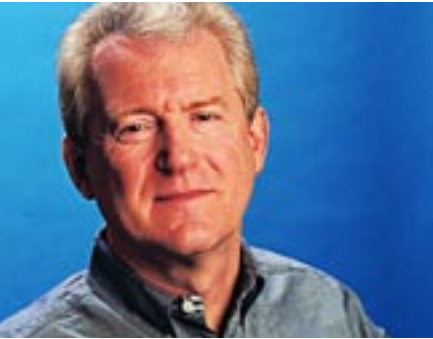


Market timing and yield spreads



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Does the U.S. yield spread contain market-timing information about international stock markets?

“Stock values are based on corporate earnings, and the business cycle is a prime determinant of those earnings,” wrote Jeremy Siegel (*Stocks for the Long Run*, 1998, p. 179), professor of finance at The Wharton School of the University of Pennsylvania. In an *ex*

post study, Siegel documents that if one can correctly predict turning points in the business cycle four months in advance, a market-timing strategy of switching out of stocks and into U.S. Treasury bills before the peak and switching from Treasury bills into stocks four months before a trough will yield an annual increase of 4.8 percentage points in returns compared with a stock-only, buy-and-hold strategy.

Estrella and Mishkin (1996, 1998) developed probit models for predicting U.S. economic recessions. Of the various financial variables they use as predictors, the best is the yield spread between the 10-year Treasury bond and the three-month Treasury bill. In out-of-sample tests, they find particularly strong results for their model to forecast an economic recession four quarters in advance. Similarly, Bernard and Gerlach (1998) report that the home country yield curve predicts future recessions in all eight of the countries they studied.

Resnick and Shoesmith (2002) extend the probit model of Estrella and Mishkin to forecast U.S. bear stock markets. They find that the value of the yield spread between the composite 10-year-plus Treasury bond yield and the three-month Treasury bill yield holds important information about the probability of a U.S. bear stock market in the following month. Their out-of-sample simulations show that a market timer switching out of stocks (or Treasury bills) into Treasury bills (or stocks) one month before a bear (or bull) stock market could have realized a compound annual return of 2.29% in excess of a buy-and-hold, stock-only strategy.

McCown (2001) finds that the *ex ante* equity risk premiums in the large economies of Germany, Japan and the U.S. are negative during periods preceded by inversion of their respective domestic government bond yield

curves. He also finds that for four of five smaller economies, the *ex ante* equity risk premium is negative in periods preceded by an inverted German or U.S. yield curve. McCown does not extend his work to show whether profitable market timing strategies are possible given a forecast of a negative *ex ante* risk premium in a particular national stock market.

An interesting empirical question is whether the size of the yield spread contains useful information for profitably timing foreign stock markets when using the probit market timing strategy developed by Resnick and Shoesmith (2002). More specifically, does the home country yield spread contain useful information to allow the local currency investor to successfully time his home country stock market? Alternatively, if U.S. interest rates lead foreign interest rates, a probit market timing strategy using the U.S. yield spread as the explanatory variable may prove more useful. On the other hand, if the information content of the home country yield spread is not completely subsumed by the U.S. yield spread, a probit market timing model utilizing both yield spreads as explanatory variables may prove to be a better forecasting tool. A stock bear market is defined as six or more consecutive months of a generally declining stock market.

We develop probit market timing models to determine if the home country yield spread, the U.S. yield spread, or both contain useful information allowing for successful market timing of eight foreign stock markets. While the simulation results are not uniform across all countries, in general it is found that the U.S. yield spread contains more important market-timing information than does the home country yield spread for profitably timing most foreign stock markets. Including both yield spreads in a probit market-timing model does not materially improve the results. These findings hold from the perspective of the local-currency investor and the U.S.-dollar investor investing in the foreign stock markets. One can surmise that important economic information contained in the U.S. yield spread is transmitted to both U.S. and foreign stock prices. ■