

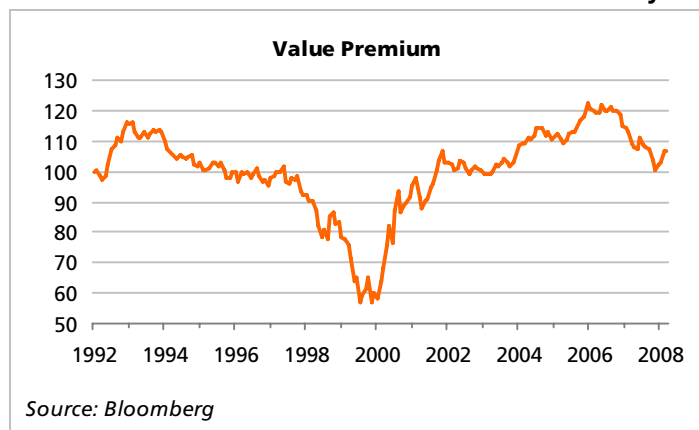
Does the Current Macroeconomic Environment Favor Value?

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There is extensive empirical evidence that the performance of value and growth equity portfolios or the excess return of value over growth (value premium), is related to the current state of the economy. (see R. Bird and L. Casavecchia, "Conditional Style Rotation Model on Enhanced Value and Growth Portfolios: The European Experience." The Paul Woolley Centre at UTS May 2008).

The fact that growth stocks under-perform value stocks on average over the long run is well documented and it forms the basis for many quant strategies. But there is evidence that growth stocks outperform value stocks during periods of strength in the business cycle. Thus, the ability to dynamically over/under weight styles has the obvious potential to add value to a quantitative investment process.

Value Has Exceeded Growth in Weak Phases of Business Cycles



The diagram shows the cumulative return of the value premium (Russell 1000 Value minus Russell 1000 Growth) from 1992 to the present. Periods during which value outperforms growth are those where the above curve increases.

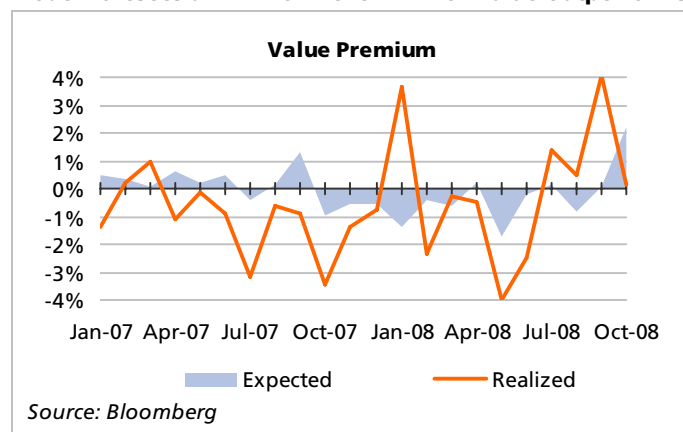
The last recession was the period from April 2001 to November 2001. During that recession value outperformed growth. A regression model based on four proxies for the fluctuations in the business cycle is proposed here in an effort to test the relationship between the value premium and the phase of the business cycle. Specifically, I use three macro economic signals and lagged values of the dependent variable:

1. **Yield curve slope** (monthly change). The lower the yield curve slope (long minus short yield) the more restrictive monetary policy is and the higher the chance of a recession. The relationship between the yield curve slope and real GDP growth has been found to be positive.
2. **The Dollar Index**. This is the Federal Reserve trade-weighted dollar index. An increase is an appreciation of the dollar relative to a basket of currencies of the primary U.S. trading partners.
3. **Leading Indicators**. This is the Conference Board Index of 10 leading economic indicators for the United States.
4. **Lagged values** of the value premium.

I use the above business cycle proxies as factors in a weighted least squares predictive regression of the value premium. Observations are exponentially weighted over a 36 month rolling window such that more recent data get higher weights. Current values of the factors are used to predict next month's value premium.

The estimated relationship between the value premium and our factors is negative for the yield curve slope and Leading economic indicators and positive for the U.S. dollar and lagged values of the value premium. The performance of this model exhibits a 54% directional accuracy over the entire period 11/1995-10/2008 and an average R-square of about 30%. The chart below shows realized and forecasted values of the value premium since January 2007. During this period the directional accuracy is 59%.

Model Foresees an Environment in Which Value Outperforms



As of November 2008 the model favors value over growth even though the expected premium is small. A flattening of the yield curve (currently pretty steep at 3.5%) would, according to the model, be good for value.

A further worsening of Leading Economic Indicators would also be good for value, as would be a continuation in the recent appreciation of the dollar.

Finally it seems that high value premia tend to be followed by high value premia. The combination of the current values of these macroeconomic signals is consistent with an environment during which value outperforms growth. ■