REITs as a Tactical Asset

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1 Introduction

In this paper, we consider REITs as a tactical asset. We will consider the usefulness in forecasting REIT prices of three potential predictor variables – REIT dividend yield spread to treasury, REIT dividend yield spread to S&P 500 dividend yield, and REIT price to book ratio. Each of these measures can be thought of as a fundamental indicator of value and will test their efficacy in forecasting returns.

2 Data Set

This report uses daily data from Bloomberg. The REIT index is the NAREIT equity REIT total return index. With respect to that index, Bloomberg has "fields" for dividend yield and price to book back to May 31, 2006. So, that is the inception date of this work providing over 2000 daily observations.

3 Price to Book

In figure 1, we show historical price to book ratios in a plot aligned with the REIT total return index. The horizontal dotted line is the mean price to book ratio.

In figure 2, we show a scatter plot with price to book as a predictor variable for the next month REIT index return. Note in this chart, the trend is generated using a localized regression method. As you can see from the scatter chart, there is clear at the extremes but somewhat of a cloud in the middle. We tried a linear regression and although the results were significant the standard error of the residual was quite large. So, the visual technique of the localized regression seems more satisfactory.

Figure 1: Price to Book

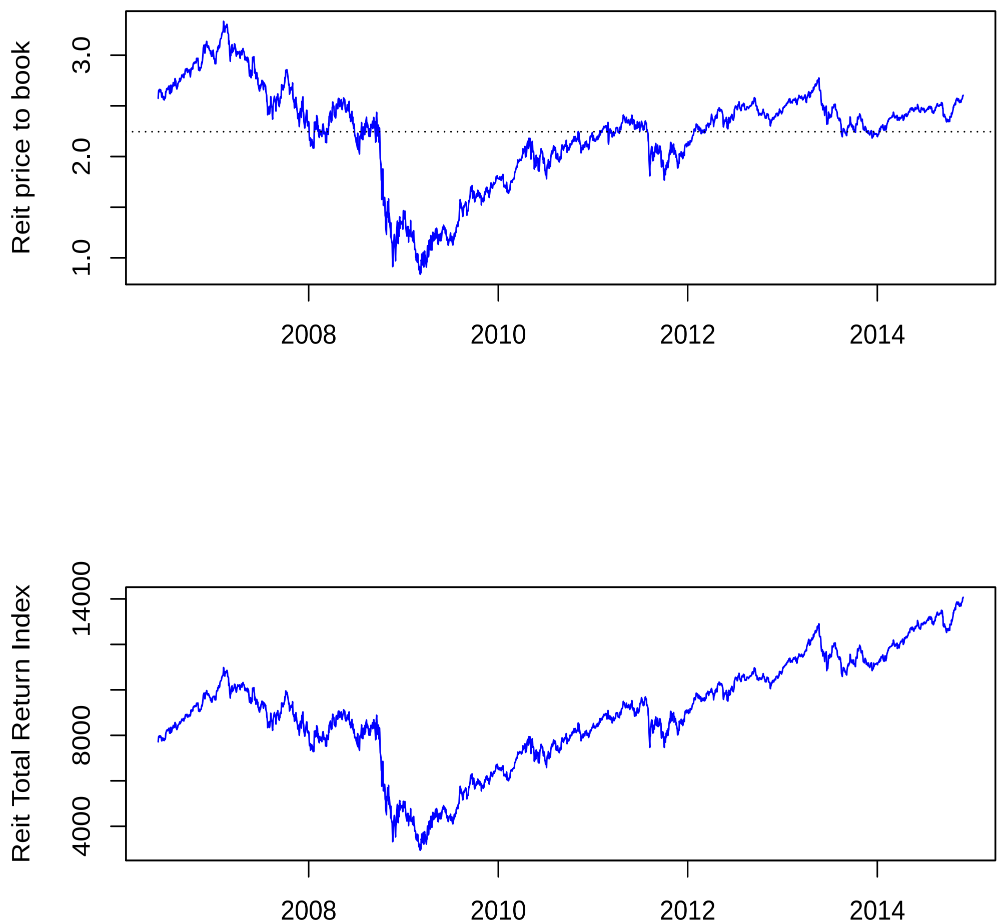


Figure 2: Price to Book as Predictor for One Month Return

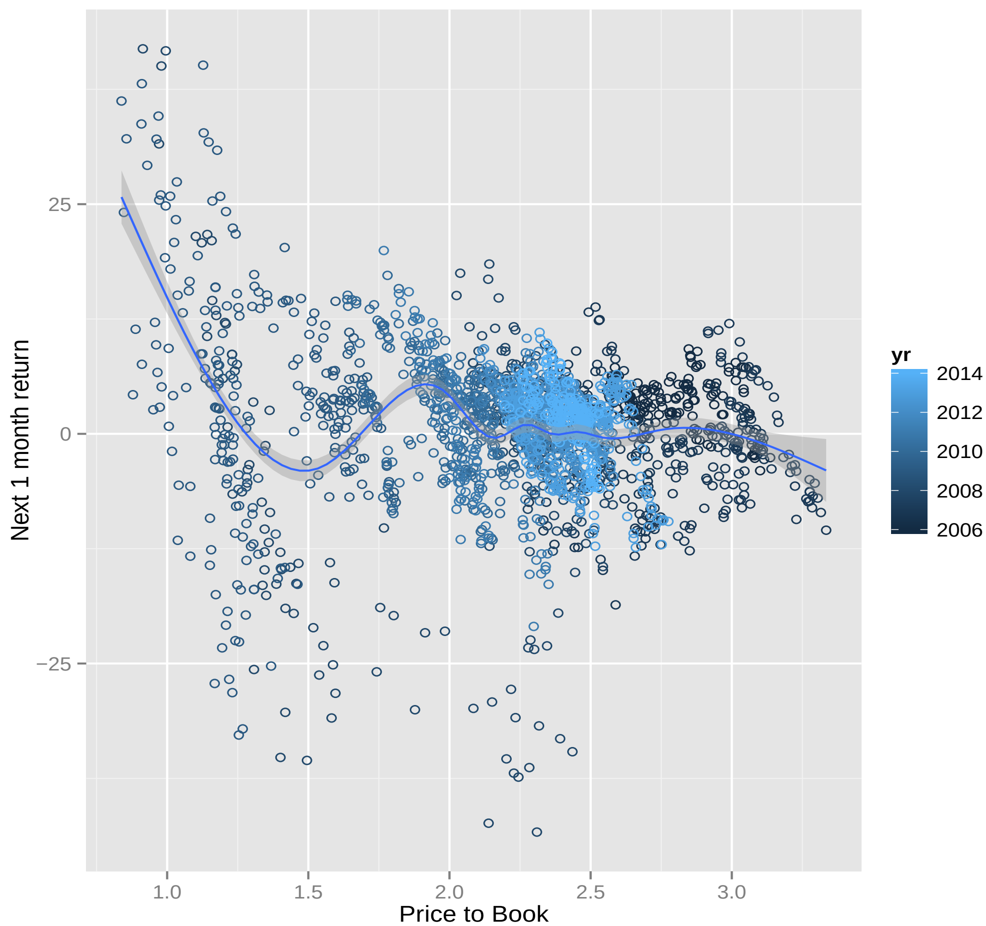


Figure 3: Price to Book as Predictor for Six Month Return

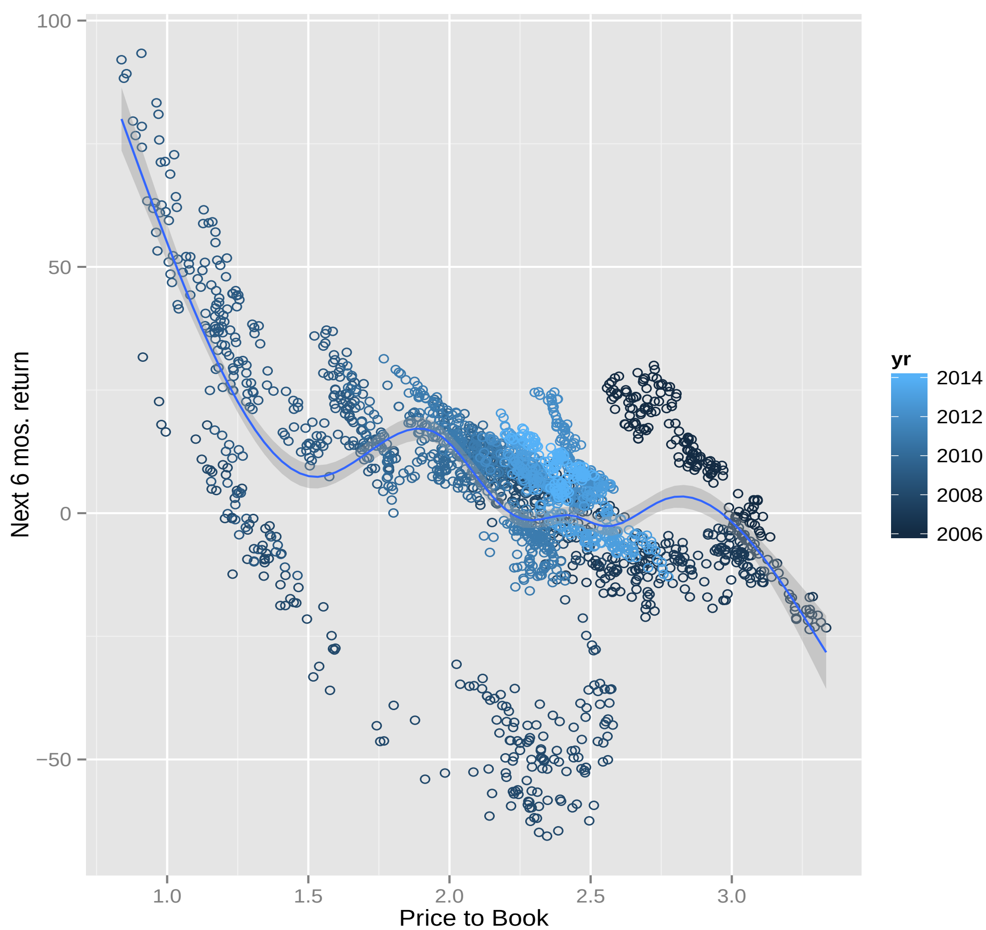
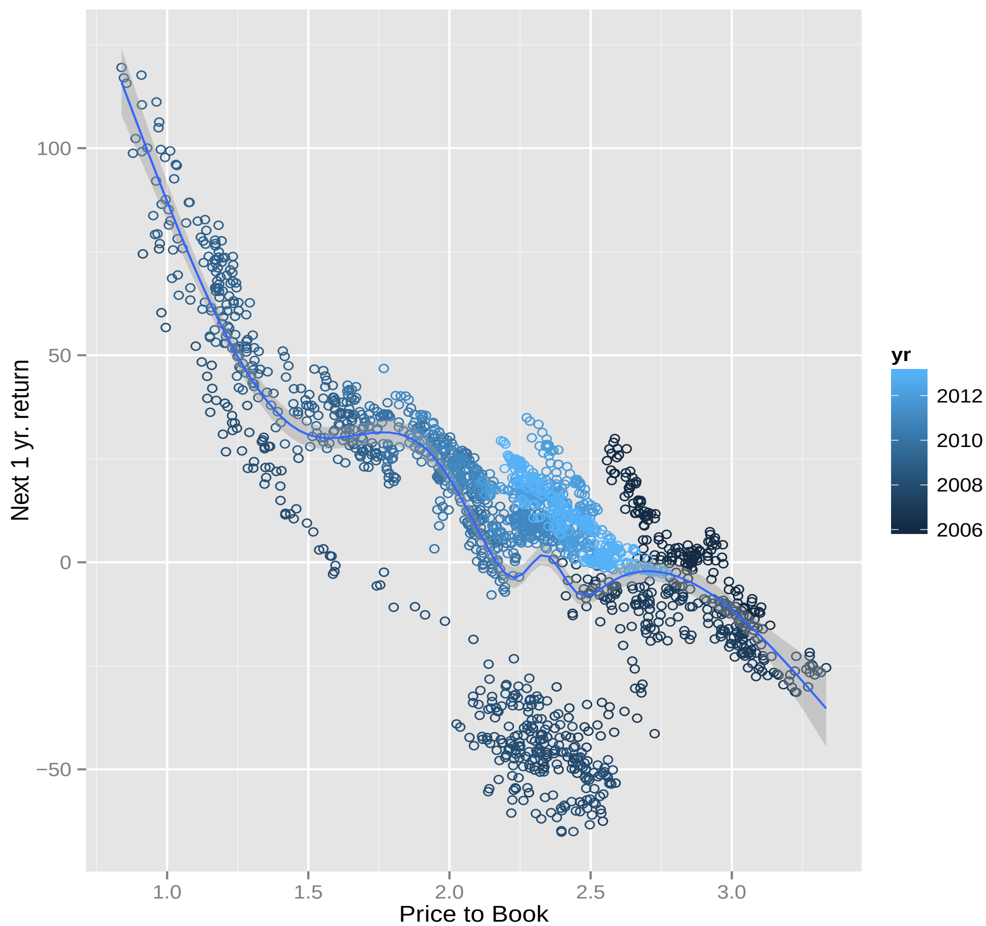


Figure 4: Price to Book as Predictor for One Year Return



4 REIT dividend yield spread to S&P500 dividend yield

Next we present the spread between the REIT dividend yield and the S&P 500 dividend yield as a predictor variable.

Figure 5: Spread to SP500 Dividend Yield

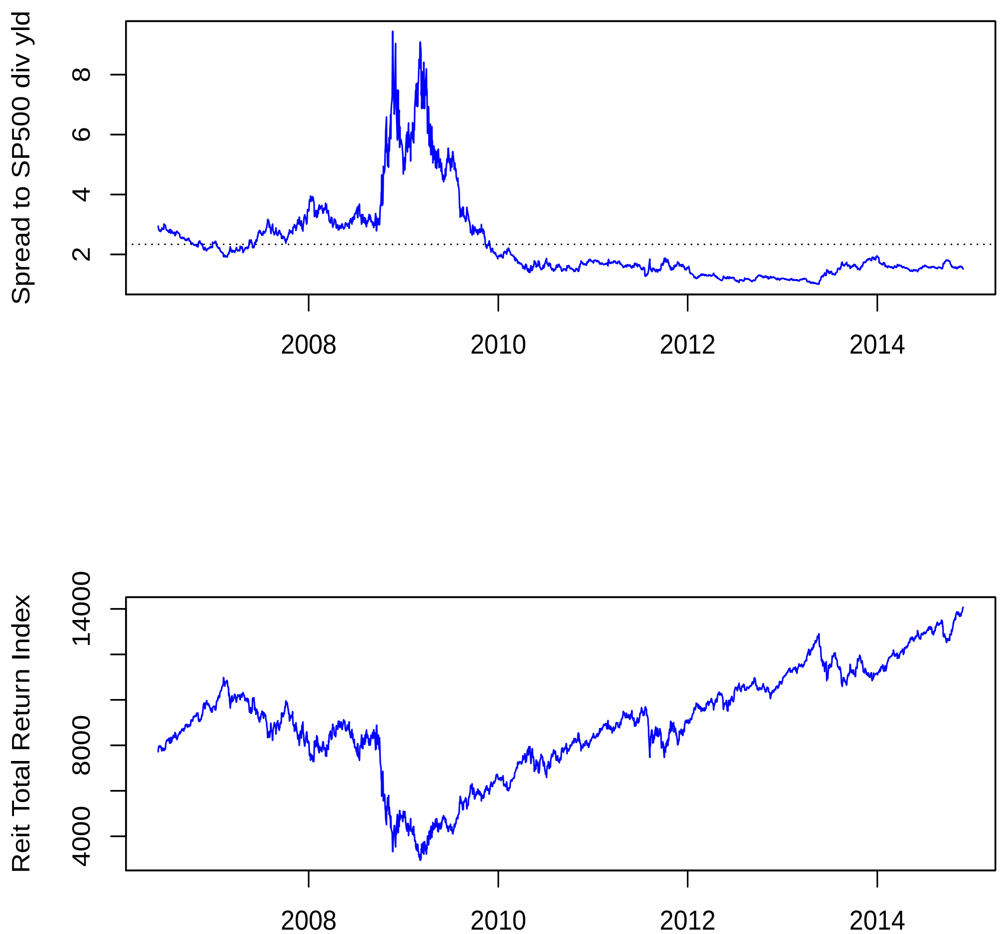


Figure 6: Spread to SP500 Dividend Yield as Predictor for One Month Return

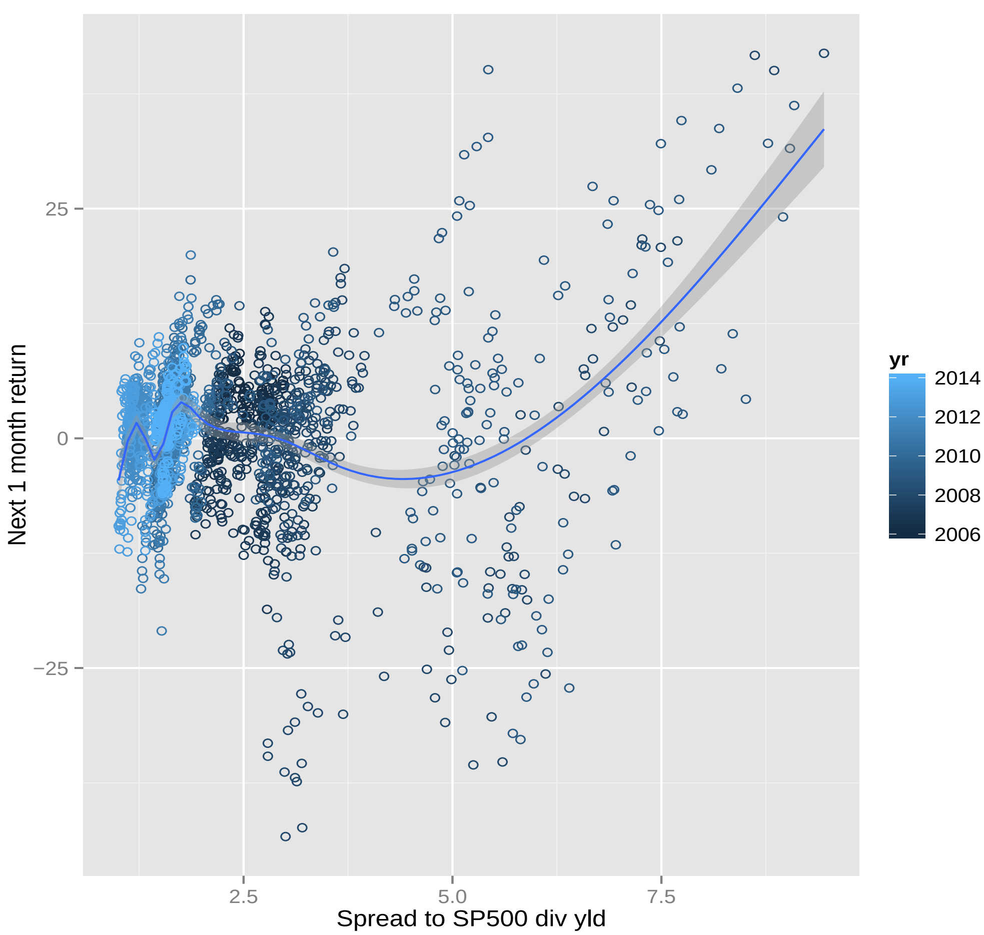


Figure 7: Spread to SP500 Dividend Yield as Predictor for Six Month Return

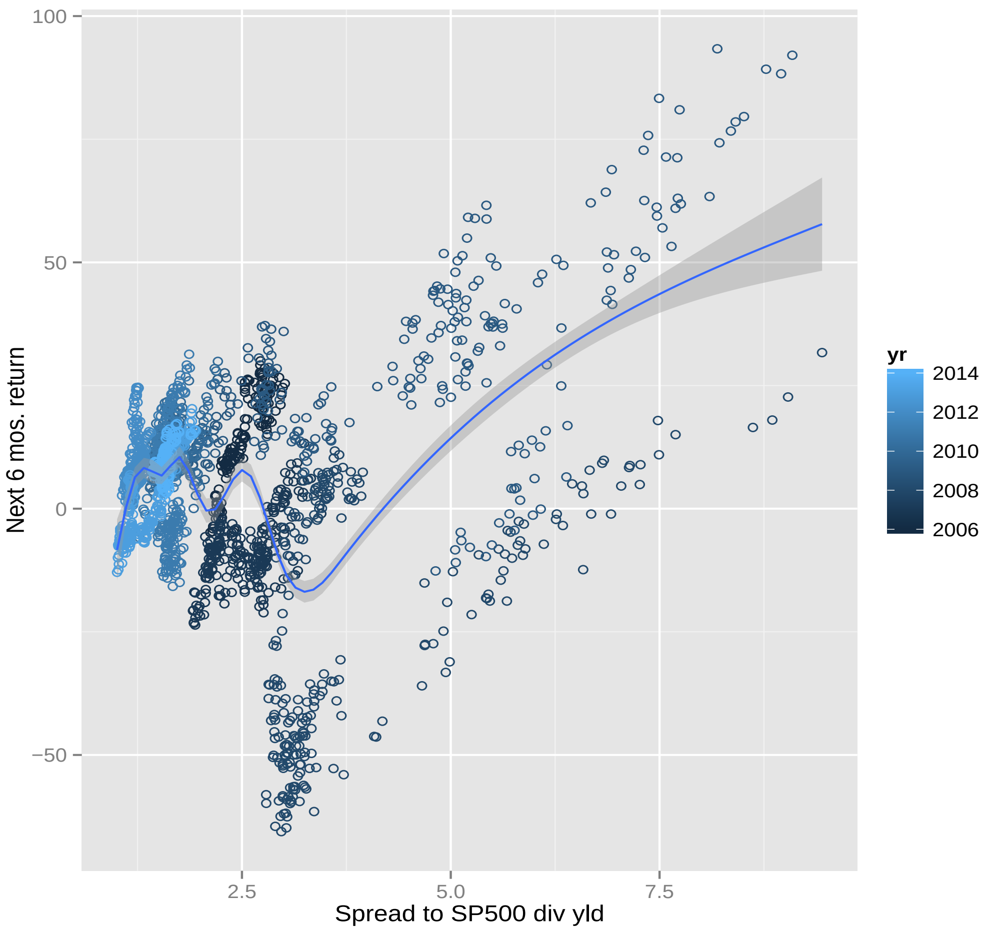
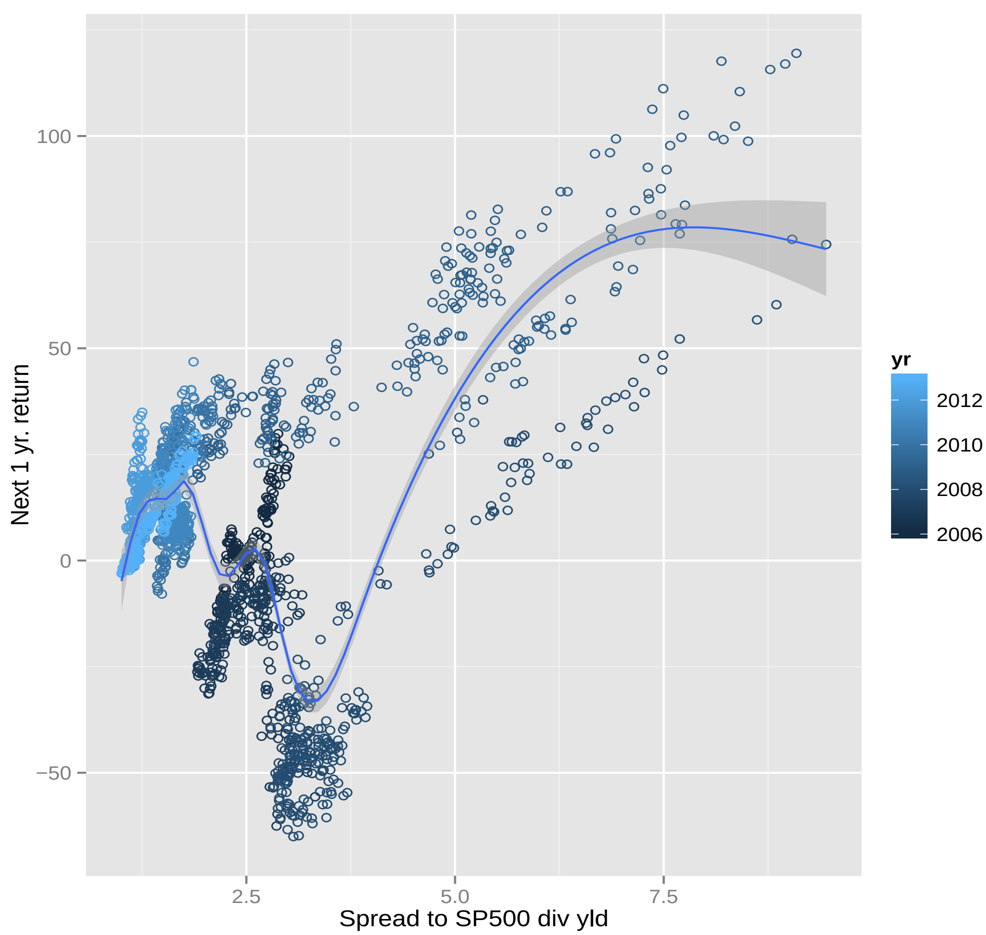


Figure 8: Spread to SP500 Dividend Yield as Predictor for One Year Return



5 REIT dividend yield spread to treasury

Now, we turn to the REIT dividend yield spread to 5 year treasury as a predictor variable.

Figure 9: Spread to 5 Yr. Treas.

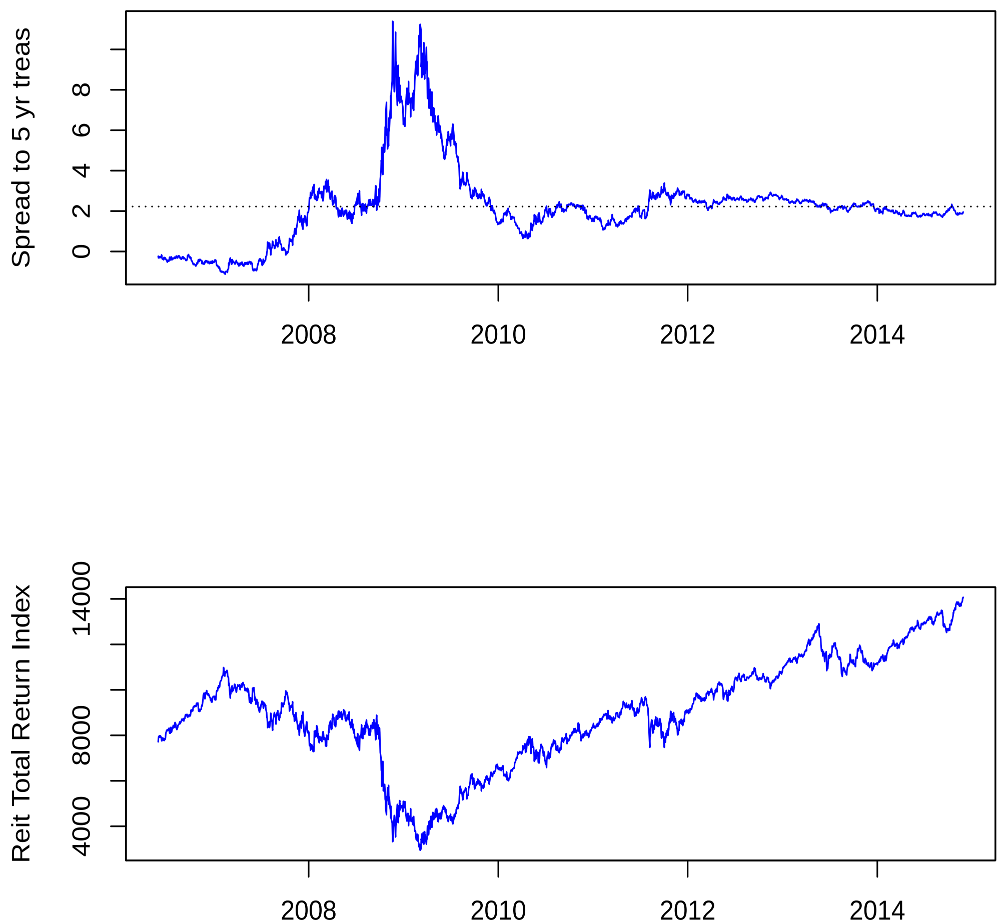


Figure 10: Spread to 5 Yr. Treas. as Predictor for One Month Return

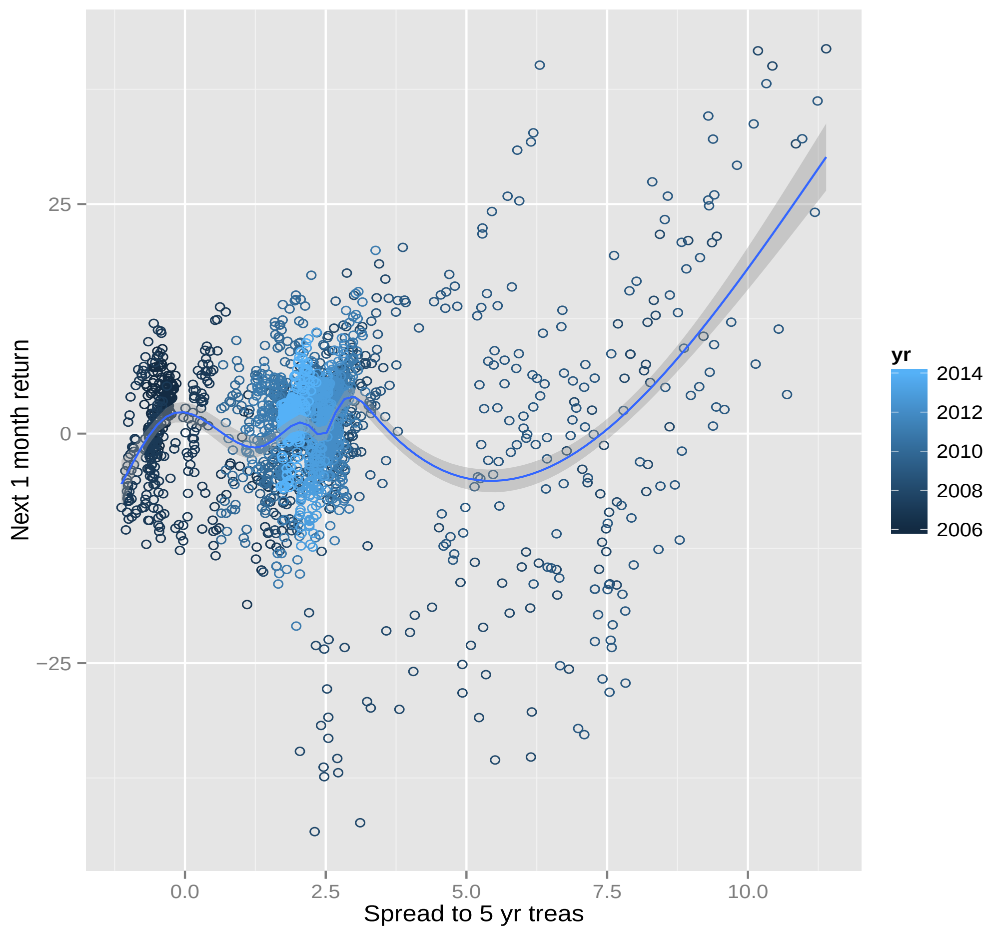


Figure 11: Spread to 5 Yr. Treas. as Predictor for Six Month Return

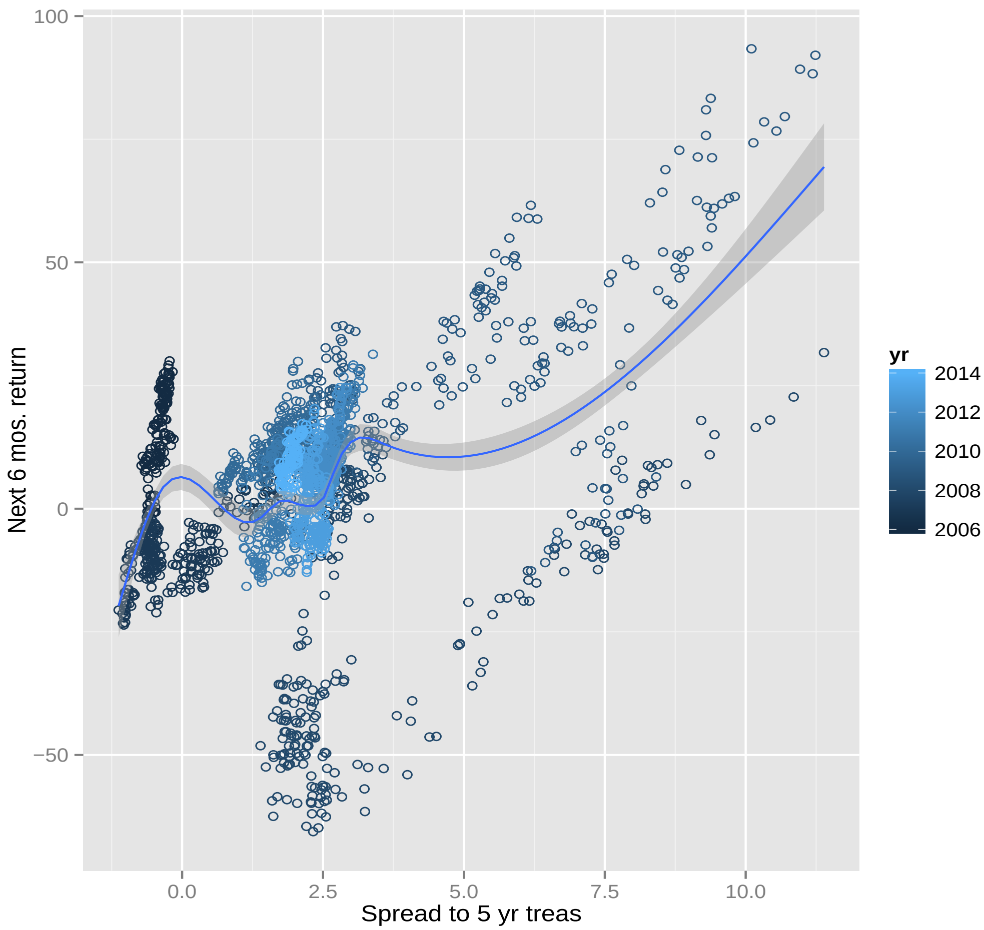
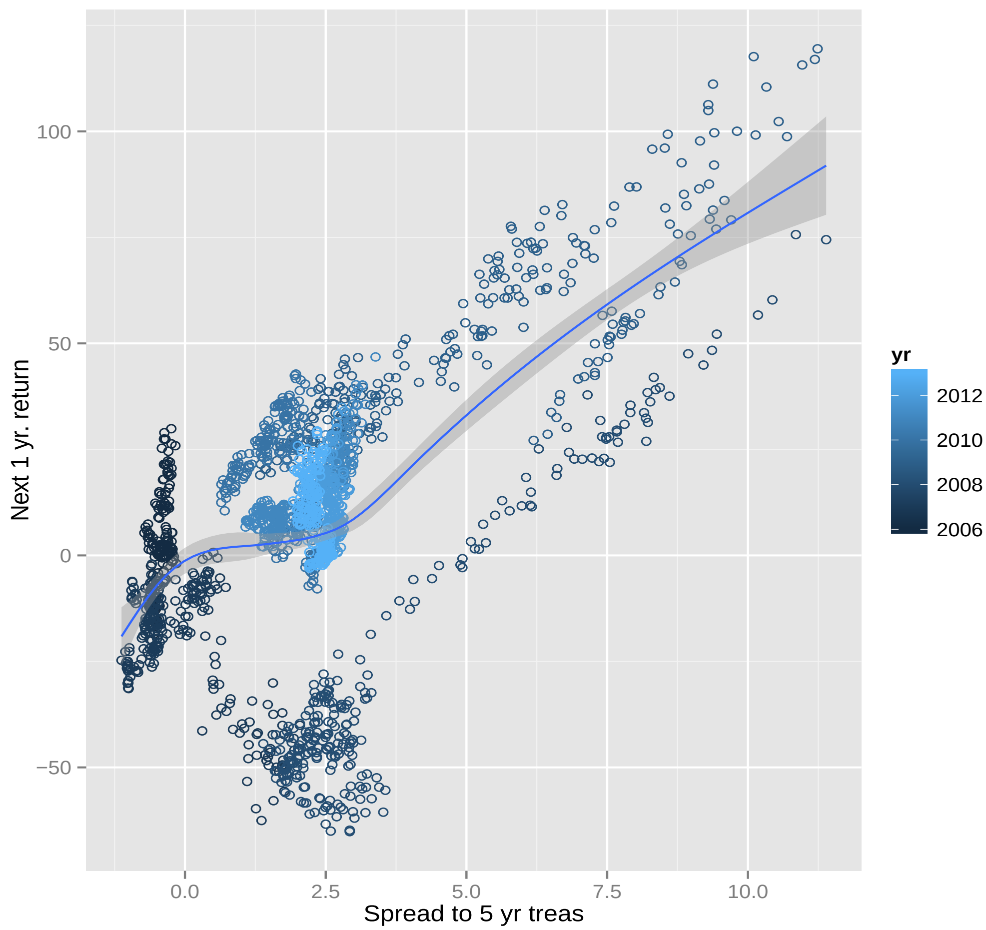


Figure 12: Spread to 5 Yr. Treas. as Predictor for One Year Return



6 Conclusion

We examined three predictor variables thought to have potential as fundamental indicators of value. None of them were unambiguously effective at projecting short term returns and the spread to S&P 500 dividend is generally ineffective. However, both the price to book ratio and spread to treasury measures both showed clear cut connection to longer run returns of 6 to 12 months.

Looking at the various charts on price to book, there is little ambiguity that price to book measures of less than 2 are an indicator of value and that a purchaser at this value stands a good chance of making favorable returns if they can wait it out 6 to 12 months. Similarly, values greater than 2.75 are a negative indicator of value. However, the picture is mixed in the middle. Quite a few observations in this middle range occurred in 2007 or 2008 and were followed by substantial losses. On the other hand, REIT values were steadily inside inside this 2 to 2.75 book to value range throughout an extended rally from 2012 through 2014. Among the 2218 observations in this data set, 69% of them were in the 2 to 2.75 range, while 10% were below 2 and 21% were above 2.75.

Not surprisingly, the patter is somewhat similar with spread to treasury. Spreads greater 3% are strongly associated with favorable ensuing returns. Spreads less than around 1% tend to be associated with negative returns, but rallies occurred in this value range in both 2006 and 2011. Once again, the mid-range is ambiguous. REITs were valued at a 1% to 3% spread to treasury in 2007 and 2008 leading up to major losses during the global financial crisis. They have been similarly valued through most of the rally that has occurred from 2012 through 2014. Sixty-eight percent of the measurements fell in the 1% to 3% range, while 19% were less than 1% and 13% were greater than 3%.

These univariate measures provide decent indicators of value at the extremes. But for the great majority of measurements in a mid-range, they do not provide a strong indication of value and likely returns during the ensuing year.

In future research we hope to explore multivariate models incorporating additional fundamental measures, market technical indicators and economic variables. We plan to employ machine learning techniques to see if they lead to additional insights.