JUST HOW BAD ARE ECONOMISTS AT PREDICTING INTEREST RATES? (AND WHAT ARE THE IMPLICATIONS FOR INVESTORS?)

KEVIN STEPHENSON

has taught courses in economics and finance at Middlebury College in Middlebury, Vermont, since 1992. He holds a Ph.D. in economics from Cornell University.

On January 2, 1997, the *Wall Street Journal* published its semiannual survey of economists. Most of the fifty-seven economists surveyed predicted that the yield on the thirty-year Treasury bond, then at 6.64%, would drop by July 1. The consensus estimate for this yield was 6.52%.

Fears of inflation, however, have recently caused interest rates to rise. The yield at the time of this writing in mid-April is over 7%. Thus, barring a major downward shift in interest rates, economists will have wrongly predicted the direction of interest rates.

Some readers will not be surprised by this result, for economists have a notoriously bad reputation for huge forecasting errors. But just how bad are economists at predicting interest rates? And if these experts, whose careers often depend on the accuracy of their predictions, cannot predict interest rates, what are the implications for actively managed bond funds?

I address these questions by analyzing the *Wall Street Journal* survey of economists.

THE DATA AND RESULTS

Economists are employed in nearly all segments of the economy. One of the primary duties of economists in the financial sector is to forecast the economy, or, more specifically, to forecast important economic data such as GDP growth, inflation, and interest rates. Every six months, in late December and late June, the *Wall Street Journal* surveys a group of economists, asking for their forecasts of interest rates, GDP growth, inflation, and the value of the dollar against the yen. The forecasts are published in the first week of January and July.

The participating economists work primarily in the financial sector, most notably investment banks and commercial banks. Only three of the fifty-seven economists participating in the December 1996 survey were then in academia. The number of economists participating has increased steadily from twelve in 1981 to about sixty in the mid-1990s.

The economists have been predicting, six months in advance, the yield on three-month Treasury bills and thirty-year Treasury bonds since December 1981. Each economist provides an estimate for each interest rate, and then a consensus estimate is calculated, which is simply the arithmetic mean of all the estimates.

Can economists predict interest rates? The answer is emphatically "no," regardless of the measure used.

There have been thirty six-month surveys completed since December 1981. The Exhibit provides the consensus estimate and the actual yield for the three-month and thirty-year Treasury securities.

Rates on three-month Treasury bills moved in the *opposite* direction of the consensus prediction in sixteen of these contests (53%). That economists predicted the direction of short-term interest rates correctly almost half of the time is the good news. The bad news is that the consensus estimate for the thirty-year Treasury bond has been in *the wrong direction* in twenty of the thirty contests (67%).

The average error for the consensus estimate is 79 basis points for the Treasury bill, and 86 basis points for the thirty-year bond. Assuming interest rates would stay the same each period yields average errors of 74 and 78 basis points, respectively. Thus, investors who assumed interest rates would remain constant were more accurate than the consensus estimate.

Incorrectly forecasting the direction of interest rates is not very costly for investors if rates move very little. In fact, economists have been least accurate when interest rate changes were largest! The rates on the three-month Treasury bill moved 100 basis points or more on ten occasions. The consensus estimate was in the right direction on six of these occasions, yet the consensus underestimated the move by an average of 99 basis points.

EXHIBIT
WALL STREET JOURNAL CONSENSUS INTEREST RATE FORECAST

	3-MONTH TREASURY BILL			30-YEAR TREASURY BOND		
DATE PUBLISHED	CONSENSUS FORECAST (%)	ACTUAL YIELD (%)	CORRECT DIRECTION?	CONSENSUS FORECAST (%)	ACTUAL YIELD (%)	CORRECT DIRECTION? (%)
Jan-82	11.06	12.43	Wrong	13.05	13.92	Wrong
Jul-82	11.61	11.08	Right	13.27	13.62	Right
Jan-83	7.37	8.75	Right	10.11	10.98	Right
Jul-83	8.60	8.95	Wrong	10.59	11.87	Wrong
Jan-84	8.72	9.90	Wrong	11.39	13.64	Wrong
Jul-84	10.64	7.84	Wrong	13.78	11.53	Wrong
Jan-85	8.56	6.83	Wrong	11.60	10.44	Wrong
Jul-85	7.31	7.08	Right	10.51	9.27	Wrong
Jan-86	6.96	5.98	Right	9.45	7.28	Wrong
Jul-86	6.14	5.66	Wrong	7.63	7.49	Right
Jan-87	4.98	5.73	Wrong	7.05	8.50	Wrong
Jul-87	5.91	5.67	Wrong	8.45	8.98	Wrong
Jan-88	5.70	6.54	Right	8.65	8.83	Right
Jul-88	6.77	8.09	Right	9.36	8.99	Right
Jan-89	8.29	7.98	Wrong	9.25	8.04	Wrong
Jul-89	7.76	7.79	Right	8.12	7.97	Wrong
Jan-90	7.03	7.98	Wrong	7.62	8.40	Wrong
Jul-90	7.56	6.62	Right	8.16	8.24	Right
Jan-91	6.14	5.62	Right	7.65	8.41	Wrong
Jul-91	5.84	3.93	Wrong	8.22	7.39	Right
Jan-92	3.80	3.63	Right	7.30	7.78	Wrong
Jul-92	3.54	3.15	Right	7.61	7.39	Right
Jan-93	3.41	3.07	Wrong	7.44	6.67	Wrong
Jul-93	3.34	3.05	Wrong	6.84	6.34	Wrong
Jan-94	3.40	4.15	Right	6.26	7.61	Wrong
Jul-94	4.67	5.70	Right	7.30	7.87	Wrong
Jan-95	6.50	5.44	Wrong	7.94	6.62	Wrong
Jul-95	5.45	5.08	Wrong	6.62	5.94	Wrong
Jan-96	4.90	5.15	Wrong	6.00	6.89	Right
Jul-96	5.31	5.19	Right	6.86	6.64	Right
Jan-97	5.10	?	?	6.52	?	?

Again, this is the good news. The yield on the thirty-year bond has moved more than 100 basis points on ten occasions. The consensus estimate was in the *wrong direction* on eight of these occasions. One of the two correct guesses was a consensus estimate of a 19-basis point drop when rates dropped 102 basis points. Economists therefore essentially missed on nine of the ten biggest interest rate movements in the last fourteen years.

The survey data from the *Wall Street Journal* clearly show that economists a group cannot predict interest rates. Might there be some individual economists, however, who can successfully predict interest rates? Further analysis suggests everyone is almost equally inaccurate.

Forty-four economists have participated in ten or more contests. Of these, only thirteen participants guessed the right direction of long-term interest rates more than 50% of the time; none of these professionals exceeded a 60% accuracy rate.[1] The median accuracy rate is 44%. The figures are only slightly better for the three-month rate, with twenty-four economists above 50%, and one expert actually getting the direction right two-thirds of the time.

For a final test, I examined future predictions of the economists with the most accurate predictions to determine if success could continue for the short term. The three economists in each survey with the closest prediction for the thirty-year bond were examined, although ties cause as many as seven economists to be included in this winner's bracket. Only 44% of these economists (48 of 108) were in the top half of the next survey, suggesting that economists with the closest forecasts cannot repeat their performance.

IMPLICATIONS FOR INVESTORS

The inability of economists to forecast interest rates has important implications for investors. Bond prices depend almost entirely on two factors: default risk and interest rates.[2] To earn above-market returns in the bond market, one needs to be able to predict default risk or interest rates better than the market. Bond rating agencies like Moody's and Standard & Poor's do an outstanding job at predicting default risk. Consequently, it is improbable that fixed-income fund managers can predict default risk better than the market consensus.

The ability to earn above-market returns in bonds then boils down to predicting interest rates correctly, but my analysis of the *Wall Street Journal* survey clearly shows that economists working for top investment banks, commercial banks, money management firms, and investment newsletters have no ability in this department.

If fund managers cannot accurately predict interest rates, actively managed bond funds have no edge over passively managed funds. Once management fees are factored in, the advantage goes to index funds. Indeed, there is overwhelming evidence that the bond market is brutally efficient, and the performance of bond managers reflects this efficiency.

For example, as of June 1, 1996, only 23.4% of taxable bond funds and 33.9% of tax-free bond funds had a one-year record better than the relevant bond index, compared with 44.1% of general equity funds and 58.5% of aggressive growth funds. In a longer-term study, Firman [1994] observes that only 128 of 800 fixed-income pension managers (16%) have a ten-year record better than the relevant bond index.[3]

CONCLUSION

Economists participating in the *Wall Street Journal* forecasting survey have no ability to predict interest rates. Since interest rates cannot be predicted, bond managers have no reliable method with which to earn above-market returns. Instead, actively managed bond funds, shackled by management fees, and with no superior ability to predict interest rates, have generally underperformed the relevant bond index. Bond index funds should appeal to investors for this reason.

ENDNOTES

[1]Six participants in the most recent survey predicted the yield on the thirty-year Treasury bond out to the second decimal point (e.g., 6.79% instead of rounding to 6.8%).

[2]Some bonds are also subject to changes in the tax code, as the inverse relationship between the price of municipal bonds and the popularity of flat tax proposals clearly indicates.

[3]See Blake, Elton, and Gruber [1993] for further evidence. For an overview on the efficiency of capital markets, see Fama [1991].

REFERENCES

Blake, Christopher R., Edwin J. Elton, and Martin J. Gruber. "The Performance of Bond Mutual Funds." *Journal of Business*, 66 (July 1993), pp. 371–403.

Fama, Eugene F. "Efficient Capital Markets: II." *Journal of Finance*, 46 (December 1991), pp. 1575–1617.

Firman, Jaclyn. "The Coming Investor Revolt." *Fortune*, October 31, 1994, pp. 66–76.