PREDICTABLE INVESTING
HISTORY LESSON – June 2007.
MEASURING RECESSION PROBABILITY.

1.0 INTRODUCTION: We hear increasing concerns from many pundits that the US stock market, as measured by the S&P500 index, is headed for a steep decline, if not a full-blown bear market. They justify this on the grounds of the deteriorating housing market, the falling dollar, large trade deficits, etc.

Without question the market has gone up significantly in the last few months and we are overdue for a correction of somewhere around a drop of 10%. Such a correction would in our opinion be a healthy development for even further gains in the market.

But is there any justification for believing that a recession and the start of another bear market, which is a drop of greater than 20%, are on the horizon?

This history lesson examines the current readings of some of our indicators, and explains our view of what they are saying about this question.

2.0 TERMINOLOGY: Before discussing the details, we need to define and become familiar with some terms.

Federal Reserve Bank: The Fed is the central bank of the USA. It sets the “Federal Funds rate” which is the very-short term interest that banks pay to borrow money from each other. Its charter is to minimize inflation while at the same time maintaining a low unemployment rate.

Treasury bills: Are ***short-term*** obligations of the US government, and are issued by the US Treasury Department with maturities of 1, 3 and 6 months.

Treasury bonds: Are ***long-term*** obligations of the US government, and are issued by the US Treasury Department with various maturities between 10 years and 30 years.

Slope of the Treasury Yield Curve: Is the difference in interest rates between the long-term Treasury-bonds and short-term Treasury-bills. It is also called “Yield Slope” or “Yield Spread”. At PI we use the difference between the 20 year bond and 3 month bill to define the “Yield Slope”.

Positive Yield Curve: Is the normal situation where the longer term bonds pay a higher rate of interest than the shorter-term bills, i.e., the slope of the yield curve is positive. In this case the longer-term bond buyer is being compensated for tying up their money for a longer time period.

Negative Yield Curve: Is an abnormal situation that can prevail for a short period of time, where the long-term interest rates are lower than the short-term ones, i.e., the slope of the yield curve is negative. This unusual condition indicates that bond buyers believe that there is high risk of an economic recession, and that the Fed will therefore have to lower short-term interest rates.

Flat Yield Curve: In the process of going from a positive to a negative yield curve or vice-versa, the yield slope passes through a flat state, where the long and short interest rates are all the same.

Gross Domestic Product (GDP): Is a measurement of the total goods and services produced by the US economy during any given quarter. The GDP increases over time during an economic expansion and decreases when the economy is contracting.

Recession: A recession is defined to have started when the GDP has dropped for more than 2 quarters in a row.

Recession Probability Index (RPI): Is the likelihood that a recession will occur in the next 12 months.

3.0 YIELD SPREAD HISTORY: The interest rate history and Slope of the yield curve for the last 8.5 years is shown in the Figure 1 below.

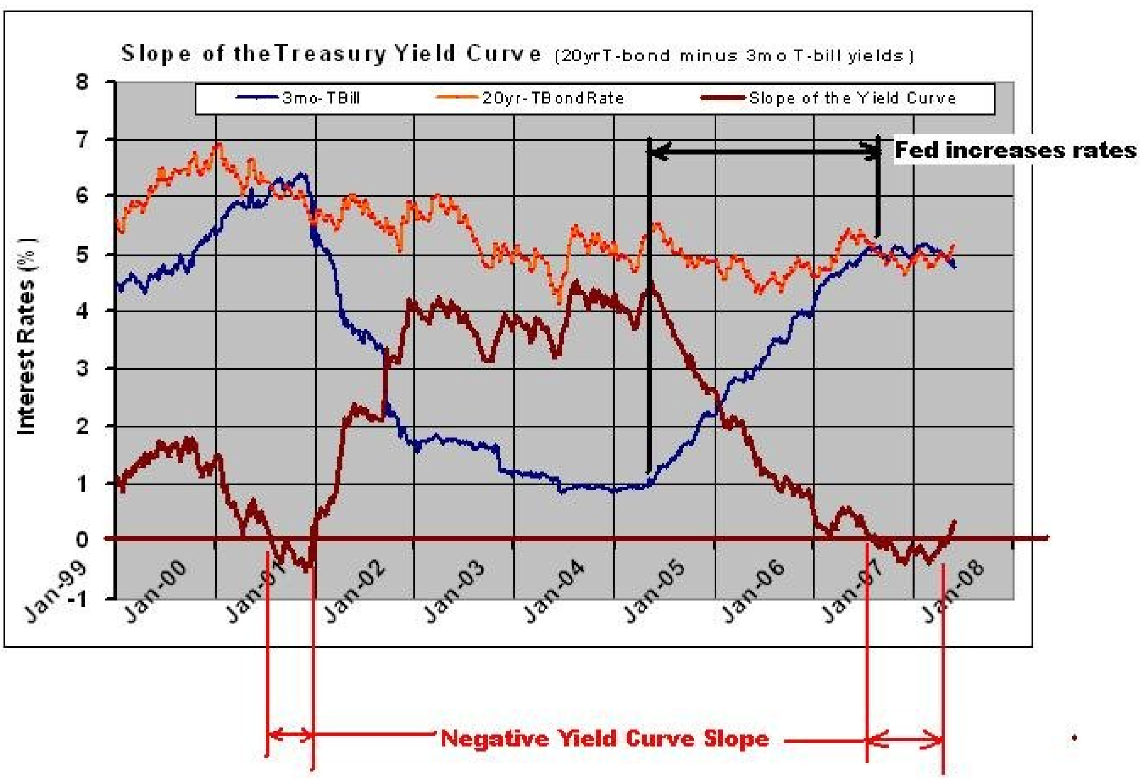

Figure 1. Slope of the Treasury Yield Curve

The blue curve is the 3 month t-bill rate, and the orange curve is the 20 year T-bond rate. The difference between these is the Slope of the Yield curve, and is shown as the dark brown curve.

The chart shows that the yield slope became negative (horizontal red arrows) on two occasions during this period; between mid and end of the year 2000, and mid-2006 through the first quarter of this year. The first negative slope resulted in the recession of 2001, which was corrected by the Fed rapidly loosening short-term rates throughout all of that year (see the sharp drop in the 3 month rate - the blue curve). But the Fed intervention came too late to prevent the recession of 2001.

More recently, the Fed raised short-term rates 11 times from April 2004 till mid-2006 at which time they stopped and have held rates steady (black horizontal arrows and legend). The Yield slope became negative again in mid-2006 (red horizontal arrows) and stayed that way for 8.5 months. It then reversed itself a few weeks ago, and has again reverted back to a normal positive yield slope.

It has been almost 1 year since the Fed stopped tightening, and the very sluggish growth today is the delayed result of those actions. The open question is whether the continued effects of this 8.5 month negative yield slope is sufficient to plunge the economy into another recession. To understand this further we explore the RPI in the next section.

4.0 RECESSION PROBABILITY INDEX: The RPI is a measure of the percent likelihood of a recession in the next 12 months. An RPI of 25% means that there is a 1 in 4 chance that the economy will fall into a recession sometime during the next year. We recall that the stock market always drops precipitously during a recession, and our models are set up to switch to a sell signal and take us out of the market during such an event.

We use the Wright model to calculate RPI (see reference10 on the Links Page). The data from this model since January 2005 is shown in Figure 2 below:

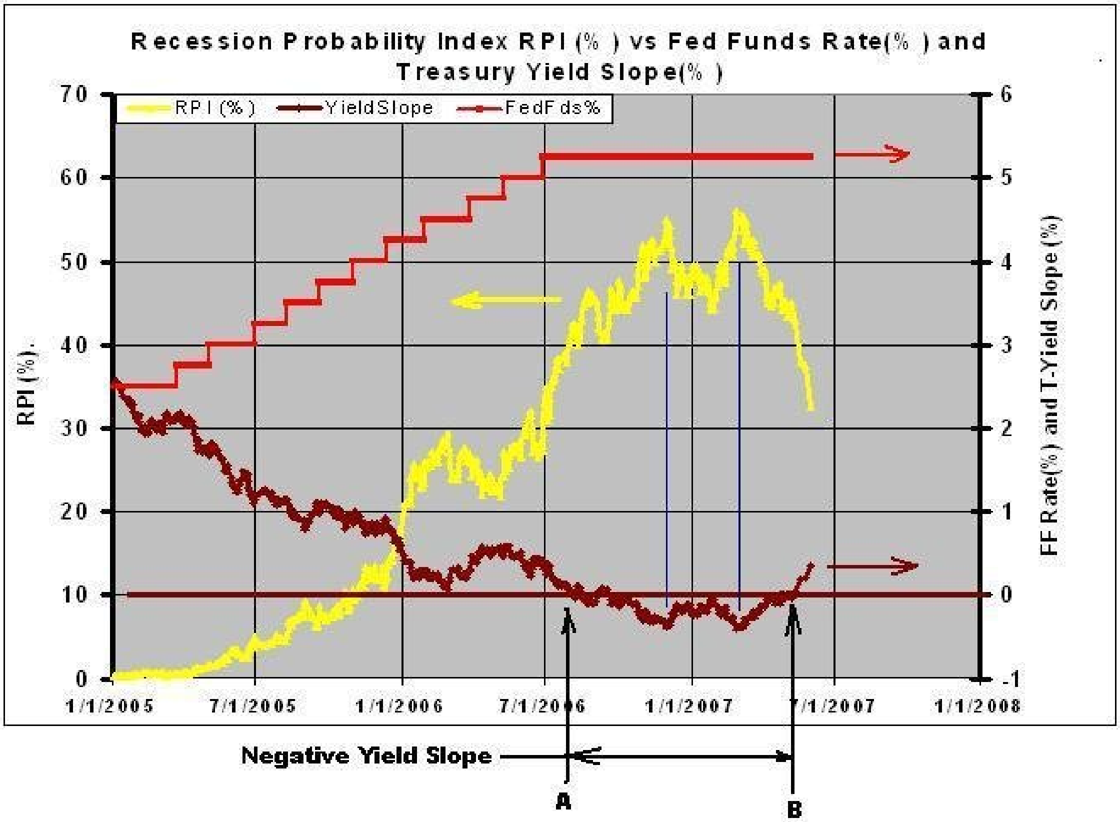

Figure 1. RPI as a function of Fed Funds Rate and Slope of the Treasury Yield Curve.

The red stair-step curve is the Fed Funds rate which was increased from 2.5% in 2005 to 5.25% in June of last year. The brown curve is the Slope of the Yield curve, which became and stayed negative from around September 2006 till just a few weeks ago (points A and B). The yellow curve is the Recession Probability Index (RPI).

As the Fed Funds rate was increased, the yield slope (brown curve) fell lower and lower, until it turned negative (point A). The corresponding RPI increased slowly at first and then its magnitude accelerated as the yield slope became negative. The two negative bumps in the yield slope correspond to the double peaks in the RPI (shown as the two vertical blue lines).

The RPI rose from almost zero as the Fed began tightening in early 2005, and climbed to a double peak value of 55% in the first quarter this year. It then started falling sharply as the yield slope became positive, and it is now down to 32% as of today. This tells us that we were headed for a recession early this year, but that this risk has recently been significantly reduced.

5.0 CONCLUSIONS: The Fed tightening of interest rates over the last few years seems to have had the effect that they were trying to achieve. It has slowed down the economy significantly, while keeping inflation under control. This week's figures bear this out with GDP growth last quarter at a very sluggish 0.6%, with a core CPI that has dropped to 2.0%.

The positive yield curve and the RPI are forecasting that the likelihood of a recession is very low and may be avoided.

4 of our 5 indicators are still positive (see Current Outlook Page) and we are looking for further gains in the market, probably after a market correction. Please remember however that forecasting economic trends is not an exact science and is notoriously unreliable.