Does the Rise in Long-Term Interest Rates Reflect the Economic Recovery?

When looking at the movements in Japan's recent long-term interest rates, we see that from the beginning of the year, they moved steadily down until they bottomed around the middle of June. Since that bottom, the rates continued to rise. After reaching a peak level of around 1.6% in early September, rates have fluctuated but remained in the neighborhood of 1.4% levels (see chart 1). Around the beginning of 2003, outlook for the Japanese economy was bleak due to global geopolitical issues such as the Iraq war, but the moderate economic recovery that was clearly visible from the GDP numbers of the April-June period has gotten a foothold. This report will focus on the background of this rise in long-term interest rates since June and consider whether or not these interest rate levels reflect the long awaited economic recovery.

1: Trends in Foreign Long-Term Interest Rates

One factor which lies behind the rise in rates since June would be the co-movements with foreign long-term interest rates. As chart 1 shows, rates in the U.S. and Europe (German government bond rate) bottomed at about the same time as those in Japan and have since been slowly rising. In the fully globalized financial markets with capital flowing without regard to national borders, it seems quite natural that interest rates in various nations would move together. In addition, from the global economic perspective, the quick end to the Iraq war brought about a lessening in global economic risk which one would assume would cause a rise in global long-term interest rates.

However, when examined closely, the movements of rates in the U.S. and Europe do not exactly coincide with those in Japan. For example, long-term interest rates in the United States were at the lowest near the beginning of the year to around March (the beginning of the war in Iraq). This can be interpreted as reflecting the “flight to quality” trend. However, soon after the beginning of the war, expectations for a quick end to the conflict dominated and this “flight to quality” movement reversed and rates began to rise and maintained their levels until the FOMC of May 6. Due to the FOMC statement in which the FRB stressed the worry of deflation (at least the market interpreted it as such), expectations of a prolonged ease of monetary policy caused long-term rates to fall quickly again. Around the middle of June, rates began to rise again as this monetary easing seemed less than certain and rates returned almost to the levels at the beginning of the year. Rates in Europe were basically moving parallel
to those in the U.S. during this period, most likely due to the influence of the same
factors, but in the “rise of the expectations for monetary ease” of the period around May
and June, the change in the monetary policy regime of ECB (again, at least the market
interpreted it as such) and actual cutting of rates seem to have been major factors.

In contrast to this long-term interest rate movement in the U.S. and Europe, rates in
Japan fell steadily from the end of the Iraq war until about the middle of June. In other
words, the movement of long-term rates in Japan cannot be fully explained by the global
events such as 1) the reversal of the flight to quality and 2) worries about deflation and
expectations for an easing of monetary policy (and their corrections).

2: The Fall in Japan’s Long-Term Interest Rates Until Mid June as a Sort of “Bubble”

It seems more appropriate instead to explain Japan’s long-term interest rates as a sort
of “bubble” in bond prices, created in an environment caused by 1) an overly pessimistic
outlook of Japan’s economic future and 2) a tendency toward excessive risk aversion by
financial institutions (especially banks).

To illustrate this point, chart 2 shows the analysis of the long-term interest rates using
the Implied Forward Rate movements derived from a yen-yen swap rates over different
maturities. First, by comparing the implied forward rate curves at the three periods
of 2002/12/16, 2003/3/14 (just before the start of the Iraq war = rebound of U.S. and
Europe rates) and 2003/6/12 (near the bottom), it can be seen that the projected rate
decrease does not fall in the predicted zone for the 2 to 3 year future time period in
which factors such as the current economic conditions and “expectations of monetary
policies” should have the greatest influence. Instead, the projected rate shifts far down
to the zone a full 9 years later. In other words, it is difficult to explain the decrease in
long-term interest rates during these periods solely in terms of slowed or stopped
recovery caused by geopolitical risks such as the Iraq war or expectations of monetary
easing to deal with these risks.

In addition, when the period of 2003/6/12 when rates were near the bottom is analyzed,
the implied one year rate for the period starting 9 years later are at around the 1% level.
If we assume that interest rates are basically tied to nominal economic growth rates,
the market expectation at that time seems to have been one of apprehension that “even
9 years in the future, Japan’s economic growth will be less than one percent.” If we
consider that 1) even if it is decreasing, Japan’s potential growth over the mid to long
term is thought to be at about the 1.5% - 2.0% level and 2) the economy will most likely
have escaped from deflation (at least the inflation rate should be safely above zero) 9
years in the future, this market apprehension does not seem logical. It seems
undeniable that the fall in long-term rates during this period contains a bubble-like
element due to overly pessimistic market expectations.
Due to this, it seems reasonable that the rebound rise in long-term rates after that period reflects a correction of these overdone expectations. The “triggers” for this correction is the rise in long-term rates in the U.S. and Europe (which makes it seem at first look that the domestic and foreign rates move in parallel) around mid-June as well as changes in market expectations due to some good economic indicators (such as the Bank of Japan’s “tankan” survey for June released in July) released during the period. However, even if we accept these factors as triggers which spurred a rate rebound, it is likely that there had been other correctional factors already at work.

3.: Overcorrection of Expectations and Excessive Rise of Rates

After rebounding in mid-June, long-term rates rose steadily until early September and reached the peak at the 1.6% level before stabilizing at around the 1.4% level. How to evaluate the rates in terms of economic outlook is a point of great interest, and the analysis of implied forward rates presented above is a useful tool in this evaluation.

In other words, from an analysis of implied forward rates in the period in early September (2003/9/2) when rates were near the peak, one important characteristic of this period when compared to that of July-August is that the implied rates of the zone for 1-5 years in the future is much higher. It might be possible to interpret this as “the long-term interest rates reflect current expectations for economic recovery,” but the fact that the implied one year rate starting 2 years out is over 1% means this is rather excessive. The Bank of Japan has announced its intention to maintain the current quantitative monetary easy policies until the consumer price index (excluding perishable goods) maintains a level of increase safely above zero, but when looking at current economic forecasts, it seems unlikely that the economy will be out of deflation 2 years in the future (around September 2005) and seems probable that zero interest rate policies will still be in place. Given this, it seems doubtful that the one year interest rate will exceed the 1% level. In other words, the rebound of long-term rates to the 1.6% level is excessive and the “excessive pessimism” correction is probably overdone in the reverse direction. When a bubble bursts (though the bubble is rather small in this case) this type of overshooting of expectation correction is not uncommon.

Later, this rise in long-term rates due to an overcorrection of expectations was itself corrected and long-term rates gradually returned to levels more in line with economic recovery. However, if we analyze the most recent period (2003/10/23), we see that the implied rates for the zone for the periods 1-5 years in the future is still excessively high (though not as high as September levels). It seems that the correction of the overshooting of expectations is not yet finished.

\[\text{the data used in this report and presented in charts are prepared by Rieko Nagamachi}\]
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If the arbitrage is fully working in the market, for example, the relationship between 1-year rates and 2-year rates is as follows.

\[(1 + 2 \text{ year rates}) = (1 + 1 \text{ year rates}) \times (1 + 1\text{-year expected rates for 1 year later})\]

Using this relationship, the implied forward rate for 1 to 9 year starting periods is calculated in chart 2. For this calculation, instead of the usual risk free government bond rates used as a representative index for long-term rates, the yen-yen swap rates were used, as it is difficult to obtain stable and appropriate data for various different maturities from the government bond market. Yen-yen swap rates are not necessarily risk free rates. But since swap is a bilateral contract, the only risk involved is interest rate risk (no risk to principal). Thus they can be regarded as the good proxy to risk-free rates. In fact, they have recently moved almost in line with the risk free government bond rates.

Chart 1: Long-Term Rates in the U.S. Europe and Japan
Chart 2  Implied Forward Rates

1year    1year    2year    3year    4year    5year    6year    7year    8year    9year
later    later    later    later    later    later    later    later    later    later