The Relationship between Korean-US Yield Spreads and Exchange Rate Expectations

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This paper examines whether information such as market expectations on the growth rate, inflation and risk premiums, inherent in the yield curves of individual countries, is useful in unveiling a relationship between Korea and the US in terms of their interest and exchange rates.

To this end, this paper uses the yield spreads between Korea and the US to derive a curve similar in concept to an individual country's yield curve, using the differences in interest rates between Korea and the US by maturity, and estimates the level, slope and curvature of the curve at each time based on the data of the observed differences. According to existing literature, the level of the yield curve reflects inflation expectations and the potential growth rate, while the slope reflects the short-term output gap, and the curvature reflects market expectations on economic variables including the linkages between short- and long-term interest rates.

Using the level, slope, and curvature of the derived Korean-US yield spread curve as explanatory variables to estimate exchange rate expectations in the market (the difference between forward exchange rate and spot exchange rate), the results show that the level and slope of the curve influence exchange rate expectations in a positive direction for all maturities ranging from three months to five years, and the curvature variable significantly affects expectations when maturities are one year or longer. This shows that, if policy rate hikes by the US Federal Reserve narrow the yield spreads between Korea and the US, the forward dollar-won exchange rate compared to the spot exchange rate declines.

These results imply that changes in the international financial market landscape, such as from major advanced countries' post-crisis quantitative easing policies and the recent monetary policy normalization, not only directly affect the

dollar-won exchange rate, but also change the interest rate structures of various maturities, and thus have a significant impact on exchange rate expectations. With major advanced countries expected to normalize their interest rates, short- and long-term interest rates have recently been showing different movements in the international financial markets. This paper is meaningful in that it gives a framework to analyze the impacts of not only changes in the gap between short-term interest rates in Korea and the US, but also changes in the structure of short- and long-term interest rates on exchange rate fluctuations.

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