EXPLORING THE SPANISH INTERBANK YIELD CURVE.

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The yield curve (a plot of interest rates as a function of maturity) plays an important role in the informative framework of the monetary policy, because it ties the short-end of the asset markets (where monetary policy is set through open market operations and lending facilities) to the long-end (where is generated most of the information relevant to economic decisions linked to investment and borrowing).

As many other financial indicators, the yield curve is also a relevant indicator for short-term monitoring due to its sensitivity to general macroeconomic conditions, their forward-looking nature, and also because of the fast availability of its data of very high frequency. Therefore, many analysts use some transformations of the yield curve as a leading indicator of economic activity, specially if central bankers follow monetary policy rules (e. g, Taylor rules).

Finally, asset managers base their strategies on the evolution of interest rates at their different maturities due to their impact on the corresponding (discounted) prices. Therefore, asset allocation and risk management depend on the behaviour of the yield curve in order to set up optimal portfolios and appropriate capital requirements to offset unexpected or extreme losses.

The above mentioned reasons suggest that a better knowledge of the yield curve is relevant for many purposes. We perform an econometric exploration of the interest rates of the Spanish interbank market and we estimate a transformation of its yield curve according to a VARMA model-based canonical and principal component analysis. We have selected this market due to its relevance in the transmission mechanism of the monetary policy, via the supply of credit of the banking system.

The transformed indicators measure different and independent sources of variability of the observed yield curve and improve the interpretation and analysis of financial conditions. The movements of the

yield curve can be explained using three common factors. The first one, called *level*, changes the interest rates of all maturities by almost identical amounts. This factor represents a common trend that synthetizes the essential conditions of the interbank market, reflecting the nominal (i.e., inflationary) influences. The second one, called *slope*, is a weighted spread between long and short rates. This stationary factor may be used as a leading indicator since it reflects the different elements which exert an influence on it: monetary impulses in the short end and expectations about the future stance of monetary policy in the long end. Finally, a third stationary factor, called *curvature*, incorporates element linked to the underlying volatility of the interest rates and may act as an indicator of "turbulence" in the market.