Stock Duration and Inflation Shocks

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Many authors have suggested the idea that the impact of nominal interest rate changes on stock returns may depend on the capability of firms to pass on inflation shocks to the company output prices (flow-through capability). This is one of the main explanations used to solve the so called duration paradox, that is, the difference between the theoretical stock duration (based on DDM model) and the empirical estimates of the sensitivity of stock prices with respect to interest rate changes.

The aim of this research is to test this hypothesis by estimating a sensitivity measure of this flow-through capability using data (aggregated by sectors) from those companies listed in the Spanish Stock Exchange and then comparing this estimates with the sensitivity of sector stock returns against interest rate changes.

To estimate the flow-through capability we propose a very stylised model to describe the impact of inflation on firm turnover. This is done company by company and then aggregating the outcomes by sectors and the whole market. These sectors are those considered by Madrid Stock Exchange.

We find evidence of a significant flow-through capability for set of companies listed in the Stock Exchange considered as a whole. This was an expected result. In fact, if we considered a big enough number of companies, the behaviour of the aggregate of the prices of its products and services should be close to the prices of the entire economy. However, the flow-through capability of firms may differ considerable among different sectors. For instance, we can clearly distinguish some sectors with a high flow-through capability as “Oil and energy” or “Financial and Property” sectors and others with low inflation transmission ability as “Consumer Goods” sector.

Then, we proceed to estimate the empirical stock duration by sectors, that is, the sensitivity of sectorial stock returns to changes in nominal interest rates finding also significant differences among sectors. Moreover, we find a strong negative relationship between the measure of flow-through capability and stock interest rate sensitivity. This outcome supports the hypothesis that the impact of nominal interest rate changes on stock returns depends on the ability of companies to transmit inflation shocks to the prices of its own products and services. This result may help to explain to some extent the stock duration paradox.