Understanding prices in international government bond markets

The landscape of international bond markets has undergone significant changes in recent decades; two of them seem to be of particular importance to investors: Increased integration and the openness of global financial markets led to rising correlations between returns on financial assets in particular countries. As a result, the benefits of the diversification with international investments have fallen markedly. Diminishing opportunities for diversification have a vivid implication for market practitioners: this trend suggests the growing importance of international government bond selection strategies as part of an investment process.

The phenomenon described above was accompanied (and probably partially fueled) by a proliferation of passive investment products, which provided investors with easy access to international government bond markets. Futures markets, index funds and exchange traded funds (ETFs) offer investors liquid and cheap opportunities for investment in global markets.

Considering the abundant opportunities and large size of the global government bond market, investment tools available for investors still seem to be astonishingly modest. Stock-level investors have ample literature at their disposal dealing with cross-sectional and time-series patterns. Recent papers examined hundreds of cross-sectional stock-level effects. The research on the empirical analysis of prices in financial markets has been even acknowledged by the Nobel Memorial Prize in Economic Sciences in 2013. Many of the patterns, like value, momentum are present across numerous asset classes: stocks, indices, commodities, and corporate bonds. Nevertheless, one of the asset classes has somehow skipped the interest of researchers: government bonds. Against the background of all of the other asset classes, only small number of return patterns and predictive signals has been described so far among the international government bonds. In the field of government bonds, these types of tools largely are still waiting to be developed.

The variety of the stock-level return patterns and phenomena discovered in research papers has been employed in quantitative easy-to-implement investment strategies. These methods are utilized not only by sophisticated hedge fund managers, but they are also described in numerous books available for individual investors. Stock-level concepts such as value and growth strategies, momentum effect and technical analysis or quality and low-volatility strategies are discussed in hundreds of books available for stock investors. On the other hand, there are very few (or almost no) publications available for institutional managers and individual investors that explain and present quantitative government bond parallels of these investment strategies. The primary goal of this study therefore, is to fill the gaps described above at least partially

First it is going to be examined whether pricing effects related to value, momentum, liquidity, volatility, quality, size and non-market risk are important for variation in global government bond returns. Second, a series of specific properties of cross-sectional return premia in government bond markets will be investigated: seasonality effects, forecasting factor behavior with government bond factor spreads, or impact of taxes, transaction costs and liquidity constraints. Finally, an innovative government bond asset pricing model will be offered to explain the cross-sectional variation in returns.

The results will impact the development of financial sciences in three areas. First, they will widen the knowledge of how the pricing factors work in government markets and will allow better understanding of the sources of the cross-sectional variations of sovereign bond returns, which eventually will lead to further research. Second, the soon-to-be developed instruments from this paper can be used in economic studies. Additionally, findings are going to serve as a publicly available data base, which could be later used in practice. Third, the research will have serious implications on the practice of financial markets. It will create valuable tools for government bond. This will not only be useful for strategic and tactical asset allocation, but may also result in new investment vehicles e.g. hedge funds and “smart beta vehicles” which take into consideration specific factors. The models studied and created in this way may allow a more precise measurement of investment performance.