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European bond ETFs - tracking errors and sovereign debt crisis

Abstract

We examine effects of the new risk and return paradigm in the Euro sovereign bond market on the tracking performance of 31 Euro zone sovereign debt exchange traded index funds (ETFs), during 2007-2010. The tracking performance was examined using traditional, OLS, and cointegration tracking error models. Overall, ETFs underperform their respective benchmarks. There are, however, some important differences across families of sample ETFs. In particular, ETFs with the highest tracking errors estimated using short term correlations tend to have lowest tracking errors based on cointegration metric. The results of our panel data analysis document significant changes in the sample ETFs' tracking performance during sovereign debt crisis. Our results also confirm that, as a result of the crisis, credit risk considerations have become an important determinant of the ETFs' tracking performance. We also find evidence for the importance of ETFs' replication methods and volatility of underlying indices for the tracking performance, irrespective of the error metric. In an environment of widening sovereign credit default swap (CDS) spreads and divergent yield trends, understanding the credit quality of various issuers together with the selection rules of benchmark indices is, therefore, crucial for understanding ETFs' performance.