Midterm Report

Central Bank Credibility Analysis

For my final project, I would like to investigate the central bank's credibility and its evolution over time. For a proper credibility analysis, first and foremost, the goals of central banks should be understood. Central banks' primary aim is to provide price stability. They accomplish this goal by aiming to lower inflation and inflation expectations. Low inflation expectations naturally indicate higher price stability in the long run. However, central banks only have the ability to alter the short-term interest rates and monetary supply in the market. So, their actions through primarily interest rates should give the right indications and indicate confidence to the market so that the long-term inflation expectations will be lower.

To quantify inflation expectations, many developed economies like the US have a poll system where analysts and economists record their inflation predictions about the future. This system is not functioning well in emerging markets and, naturally, in Turkey. Instead of this method, Prof. Selva Demiralp proposed another metric with a focus on long-run interest rates. Long-run interest rates are higher if the inflation expectations are higher, as the investors aim to make positive real returns. Notice that central banks only have the ability to change short-term interest rates and the long-run rates form in the market. To bring the story together, if the central bank interest rate decision increases the long-run interest rates, then we can infer that it also increased the inflation expectations and had an unwanted effect. This can happen when the actions taken by the central bank are judged to not be enough, or the central bank will be unable to continue the policy it said it will. These types of central banks are called "uncredible". This intuition is at the heart of my analysis.

In the first part of my project, I will investigate the central bank credibility of TCMB and FED. The credibility check will be done as follows: I will record the daily change in long-term interest rates and then mark the dates when the central bank convenes (FOMC) to announce their change of interest rates and their expectations for the future. As the central bank decisions can usually be predicted with frequency, I will take a one-week period. If the long-term interest rates have increased in this period, we can call the policies of the central bank as ineffective and maybe even counterproductive. If this trend continues for several interest rate decisions, then we can call that for that time period, the central bank has been uncredible.

After determining the times the central banks have been uncredible, the second part of the analysis will be done to understand whether some countries' economic fundamentals have an effect on the credibility of central banks. Several economic factors, such as exchange rates, CDS, dollar-denominated debt, etc., will be examined. If the change of one of these factors clearly coincides with the central bank getting more uncredible, then we can infer that might be the case because the central bank is compensating for that factor or the market forces feel that the central bank is unable to carry on with its policies due to those factors. Determining these factors, even broadly, can give us a clear insight into the central banks.

For data, I plan to extract economic fundamentals from the World Bank Databank in excel form. Interest rate decisions should also be available across many platforms. The tricky part will be to get daily changes in long-term interest rates. This data might not be readily available and might require further action.

Dynamic Central Bank Credibility Analysis

Given the growing importance of central banks and their decisions in international and domestic macroeconomics and business cycles, a more comprehensive analysis of their motives and actions are needed. Therefore, the economic literature has focused on central banks and their actions in different circumstances. Specifically, there has been ample discussions on the central banks` (especially FED`s) effect on leading to economic crisis and their role in fighting against crisis. Especially unconventional monetary policies such as quantitative easing have led to many debates. Due to this increasing tools under central banks` disposal and improved importance

While today`s monetary policy is much more complicated, the central bank`s usually monthly interest rate decisions and their subsequent announcements on the state of the economy have remained massively important.

Assessing the credibility of central banks have become

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Figure : US 10-Year Bond Daily Yield and FED Monetary Decisions

Chart

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Figure : Turkey 10-Year Bond Daily Yield and TCMB Monetary Decisions